



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091
OWNER: Nuna Logistics
LOCATION: Baffinland NU

PROJECT TITLE: Baffinland MRP Milne Port Faeel Upgrade Phase 2
CONTRACTOR: Nuna Logistics

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 14 July, 2013

SHEET NUMBER: 2

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 7	PANEL LOCATION REFERENCE NUMBER 8	PANEL LOCATION REFERENCE NUMBER 9
PANEL/ROLL NUMBER	3006922	(5 of 7) 257273	3006901
DEPLOYMENT LENGTH	60.96m x 14.3	60.96m x 14.6m	60.96m x 14.4m
AMBIENT AIR TEMP.	4C	4C	4C
VISUAL OBSERVATION	Good	Good	Delivery damage
OBSERVED OVERLAP	5"	5"	5"
CHECKED BY	Y.E	Y.E	Y.E
ADJACENT PANEL	N= Trench S= 15,16 E= 6 W= 8	N= Trench S= 16,17 E= 7 W= 9	N= Trench S= 17,26 E= 8 W= Trench

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: Y.E

DATE: 14 July, 2013



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OWNER: Nuna Logistics
LOCATION: Baffinland NU

PROJECT TITLE: Baffinland MRP Milne Port Fael Upgrade Phase 2
CONTRACTOR: Nuna Logistics

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER _____

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 16 July, 2013

SHEET NUMBER: 3

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 10	PANEL LOCATION REFERENCE NUMBER 11	PANEL LOCATION REFERENCE NUMBER 12
PANEL/ROLL NUMBER	3006893	3006894	300689
DEPLOYMENT LENGTH	60.35m x 14.52m	60.35m x 14.52m	60.35m x 14.52m
AMBIENT AIR TEMP.	8c	9c	8c
VISUAL OBSERVATION	Good	Good	Good
OBSERVED OVERLAP	5"	5"	5"
CHECKED BY	Y.E	Y.E	Y.E
ADJACENT PANEL	N= 1,2 S= 28 E= 19,20,21 W= 11	N= 2,3 S= 29 E= 10 W= 12	N= 3,4 S= 30 E= 11 W= 13

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: Y.E

DATE: 16 July, 2013



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

PROJECT TITLE: Baffinland MRP Milne Port Fauel Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 17 July 2013

SHEET NUMBER: 4

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER	3006903		
DEPLOYMENT LENGTH	60.96 m x 14.52 m		
AMBIENT AIR TEMP.	8c		
VISUAL OBSERVATION	good		
OBSERVED OVERLAP	5"		
CHECKED BY	Y.E		
ADJACENT PANEL	N= 4,5 S= 31 E= 12 W= 14	N= S= E= W=	N= S= E= W=
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: Y.E

DATE: 19-Jul-13



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER _____

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE): _____

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 18 July, 2013

SHEET NUMBER: 5

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER <u>14</u>	PANEL LOCATION REFERENCE NUMBER <u>15</u>	PANEL LOCATION REFERENCE NUMBER <u>16</u>
PANEL/ROLL NUMBER	<u>3006903</u>	<u>3006902</u>	<u>3006882</u>
DEPLOYMENT LENGTH	<u>60.96m X 14.33</u>	<u>69.96m X 14.63m</u>	<u>60.96m X 14.48</u>
AMBIENT AIR TEMP.	<u>5c</u>	<u>5c</u>	<u>5c</u>
VISUAL OBSERVATION	<u>Good</u>	<u>Good</u>	<u>Good</u>
OBSERVED OVERLAP	<u>5"</u>	<u>5"</u>	<u>5"</u>
CHECKED BY	<u>Y.E</u>	<u>Y.E</u>	<u>Y.E</u>
ADJACENT PANEL	N= <u>5,6</u> S= <u>32</u> E= <u>13</u> W= <u>15</u>	N= <u>6,7</u> S= <u>33</u> E= <u>14</u> W= <u>16</u>	N= <u>7,8</u> S= <u>34</u> E= <u>15</u> W= <u>17</u>

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER <u>17</u>	PANEL LOCATION REFERENCE NUMBER _____	PANEL LOCATION REFERENCE NUMBER _____
PANEL/ROLL NUMBER	<u>3006882</u>		
DEPLOYMENT LENGTH	<u>60.96m X 14.63m</u>		
AMBIENT AIR TEMP.	<u>5c</u>		
VISUAL OBSERVATION	<u>Good</u>		
OBSERVED OVERLAP	<u>5"</u>		
CHECKED BY	<u>Y.E</u>		
ADJACENT PANEL	N= <u>8,9</u> S= <u>35</u> E= <u>16</u> W= <u>32,36</u>	N= _____ S= _____ E= _____ W= _____	N= _____ S= _____ E= _____ W= _____

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER _____	PANEL LOCATION REFERENCE NUMBER _____	PANEL LOCATION REFERENCE NUMBER _____
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= _____ S= _____ E= _____ W= _____	N= _____ S= _____ E= _____ W= _____	N= _____ S= _____ E= _____ W= _____

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER _____	PANEL LOCATION REFERENCE NUMBER _____	PANEL LOCATION REFERENCE NUMBER _____
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= _____ S= _____ E= _____ W= _____	N= _____ S= _____ E= _____ W= _____	N= _____ S= _____ E= _____ W= _____

SUBMITTED BY: Y.E

DATE: 18 July, 2013



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

OWNER: Nuna Logistics

LOCATION: Baffinland NU

PROJECT TITLE: Baffinland MRP Milne Port Favel Upgrade Phase 2

CONTRACTOR: Nuna Logistics

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 22 July,2013

SHEET NUMBER: 6

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 18	PANEL LOCATION REFERENCE NUMBER 19	PANEL LOCATION REFERENCE NUMBER 20
PANEL/ROLL NUMBER	3006854	3006891	3006851
DEPLOYMENT LENGTH	60.96m X 14.63m	60.96m X 10.82m	14.53m X 7.31m
AMBIENT AIR TEMP.	8c	8c	8c
VISUAL OBSERVATION	Good	Good	Good
OBSERVED OVERLAP	5"	5"	5"
CHECKED BY	Y.E	Y.E	Y.E
ADJACENT PANEL	N= Trench S= 27 E= Trench W= 19	N= 20,Trench S= 27 E= 18 W= 10,28	N= 21 S= 19 E= Trench W= 10

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER 21	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER	3006891		
DEPLOYMENT LENGTH	7.31m X 3.6m		
AMBIENT AIR TEMP.	8c		
VISUAL OBSERVATION	Good		
OBSERVED OVERLAP	5"		
CHECKED BY	Y.E		
ADJACENT PANEL	N= I S= 20 E= Trench W= 10	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: Y.E

DATE: 27-07-13



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

PROJECT TITLE: Baffinland MRP Milne Port Fauel Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazzard 535 and geotextile LP 12 over lay

DATE: 23 July, 2013

SHEET NUMBER: 7

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 22	PANEL LOCATION REFERENCE NUMBER 23	PANEL LOCATION REFERENCE NUMBER 24
PANEL/ROLL NUMBER	3006892	3006864	3006864
DEPLOYMENT LENGTH	60.96m X 57.9m	57.9m X 9.29m	4.8m X 7.62m
AMBIENT AIR TEMP.	12c	12c	12c
VISUAL OBSERVATION	Good	Good	Good
OBSERVED OVERLAP	5"	5"	5"
CHECKED BY	Y.E	Y.E	Y.E
ADJACENT PANEL	N= Trench S= Trench E= 23 W= Trench	N= 24 S= 36 E= 35,17 W= 22	N= 25 S= 23 E= 17 W= Trench

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER 25	PANEL LOCATION REFERENCE NUMBER 26	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER	3006864	3006864	
DEPLOYMENT LENGTH	5.7m X 7.62m	5.51m X 7.62m	
AMBIENT AIR TEMP.	12c	12c	
VISUAL OBSERVATION	Good	Good	
OBSERVED OVERLAP	5"	5"	
CHECKED BY	Y.E	Y.E	
ADJACENT PANEL	N= 26 S= 24 E= 17 W= Trench	N= 9 S= 25 E= 17 W= Trench	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: _____

DATE: _____



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

PROJECT TITLE: Baffinland MRP Milne Port Fazel Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 24 July,2013

SHEET NUMBER: 8

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 27	PANEL LOCATION REFERENCE NUMBER 28	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER	3006851	3006851	
DEPLOYMENT LENGTH	25.29m X 10.60m	14.63m X 26.21m	
AMBIENT AIR TEMP.	12c	12c	
VISUAL OBSERVATION	Good	Good	
OBSERVED OVERLAP	5"	5"	
CHECKED BY	Y.E	Y.E	
ADJACENT PANEL	N= 18,19 S= :h, Existing line E= Trench W= 28	N= 10 S= xisting Liner E= W= 29	N= S= E= W=
DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=
DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=
DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: _____

DATE: _____



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

PROJECT TITLE: Baffinland MRP Milne Port Foul Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay, Hazgard 535 and geotextile LP 12 over lay

DATE: 25 July, 2013

SHEET NUMBER: 9

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 29	PANEL LOCATION REFERENCE NUMBER 30	PANEL LOCATION REFERENCE NUMBER 31
PANEL/ROLL NUMBER	257273 (3 of 7)	3006884	257273 (2 of 7)
DEPLOYMENT LENGTH	26.21m X 14.53m	25.35m X 14.53m	25.35m X 14.53m
AMBIENT AIR TEMP.	8c	8c	8c
VISUAL OBSERVATION	good	good	good
OBSERVED OVERLAP	5"	5"	5"
CHECKED BY	Y.E	Y.E	Y.E
ADJACENT PANEL	N= 11 S= EXT Liner E= 28 W= 30	N= 12 S= EXT Liner E= 29 W= 31	N= 13 S= EXT Liner E= 30 W= 32

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER 32	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER	257273 (3 of 7)		
DEPLOYMENT LENGTH	25.3m X 14.53m		
AMBIENT AIR TEMP.	8c		
VISUAL OBSERVATION	good		
OBSERVED OVERLAP	5"		
CHECKED BY	Y.E		
ADJACENT PANEL	N= 14 S= EXT Liner E= 31 W= 33	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: Y.E

DATE: 31-Jul-13



GEOMEMBRANE DEPLOYMENT LOG

PROJECT NUMBER: 14C-091

PROJECT TITLE: Baffinland MRP Milne Port Fawel Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

GEOMEMBRANE SECONDARY PRIMARY CLOSURE OTHER

SUBGRADE CONDITION (SURFACE COMPACTION, PROTRUSIONS, DESICCATION, EXCESSIVE MOISTURE):

REMARKS: Installation of Geo textile LP 12 under lay , Hazgard 535 and geotextile LP 12 over lay

DATE: 26 July, 2013

SHEET NUMBER: 10

DEPLOYMENT EQUIPMENT: Bobcat and spreader bar

	PANEL LOCATION REFERENCE NUMBER 33	PANEL LOCATION REFERENCE NUMBER 34	PANEL LOCATION REFERENCE NUMBER 35
PANEL/ROLL NUMBER	257273 (2 of 7)	3006848	3006904
DEPLOYMENT LENGTH	25.9m X 14.0 m	25.9m X 14.41m	25.9m X 14.34m
AMBIENT AIR TEMP.	7c	7c	7c
VISUAL OBSERVATION	Good	Good	Good
OBSERVED OVERLAP	5"	5"	5"
CHECKED BY	Y.E	Y.E	Y.E
ADJACENT PANEL	N= 15 S= Ext Liner E= 32 W= 34	N= 16 S= Ext Liner E= 33 W= 35	N= 17 S= Ext Liner E= 34 W= 36,23

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER 36	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER	3006904		
DEPLOYMENT LENGTH	7.31m X 14.14m		
AMBIENT AIR TEMP.	7c		
VISUAL OBSERVATION	Good		
OBSERVED OVERLAP	5"		
CHECKED BY	Y.E		
ADJACENT PANEL	N= 23 S= Ext Liner E= 35 W= Trench	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

DESCRIPTION	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER	PANEL LOCATION REFERENCE NUMBER
PANEL/ROLL NUMBER			
DEPLOYMENT LENGTH			
AMBIENT AIR TEMP.			
VISUAL OBSERVATION			
OBSERVED OVERLAP			
CHECKED BY			
ADJACENT PANEL	N= S= E= W=	N= S= E= W=	N= S= E= W=

SUBMITTED BY: Y.E

DATE: 26-Jul-13



GEOMEMBRANE TRIAL SEAM LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fauel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinlan NU SHEET NUMBER: 1

X TF - # FUSION

TX - # = EXTRUSION

TS - # = SOLVENT

SAMPLE NUMBER	APPROX. TIME & DATE	WELDING MACHINE NUMBER	WELD TECH.	TEMPERATURES				TEST RESULTS												PASS OR RE- TEST	CHK'D BY	REMARKS				
				AMBIENT AIR TEMP.	PREHEAT OR MACHINE SPEED	EXTRUDER	WEDGE TEMP. Deg F	INSIDE PEEL MODE				OUTSIDE PEEL MODE				SHEAR MODE										
								STRENGTH				STRENGTH				STRENGTH										
TF 1	12:00 13-Jul-13	ESL	P.H	5C	47%	N/A	850																			
TF2	13:50 14-Jul-13	ESL 37 PW	P.H	4C	45%	N/A	760	81	91	83	82		85	82	87	85		89	88		PASS	Y.E				
													86	90	88	79		84	89	84	86		89	91		PASS
TF 3	10:46 16-Jul-13	ESL 37 PW	P.H	8C	45%	N/A	760																			
													78	74	80	75		73	70	73	74		80	88		PASS
TF 4	17:00 17-Jul-13	ESL 37 PW	P.H	8c	45%	N/A	760																			
													63	65	79	70		63	76	75	69		83	67		PASS
TF 5	9:16 18-Jul-13	ESL 37 PW	P.H	5c	45%	N/A	760																			
													78	89	75	80		81	77	81	77		89	88		PASS
TF 6	10:45 22-Jul-13	ESL 37 PW	P.H	5c	45%	N/A	760																			
													73	69	73	72		68	65	65	64		79	82		PASS
TF 7	13:35 23-Jul-13	ESL 37 PW	P.H	12c	45%	N/A	760																			
													67	64	66	71		65	68	66	65		80	72		PASS
TF 8	16:40 24-Jul-13	ESL 37 PW	P.H	10c	45%	N/A	760																			
													61	63	67	68		59	67	59	63		68	67		PASS
TF 9	11:45 25-Jul-13	ESL 37 PW	P.H	13c	45%	N/A	760																			
													67	61	59	62		67	62	63	62		70	74		PASS
TF10	8:19 26-Jul-13	ESL 37 PW	P.H	7c	45%	N/A	760																			
													63	61	60	65		66	62	64	63		68	73		PASS



GEOMEMBRANE TRIAL SEAM LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fazel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinlan NU SHEET NUMBER: 1

TF - # FUSION

X TX - # = EXTRUSION

TS - # = SOLVENT

SAMPLE NUMBER	APPROX. TIME & DATE	WELDING MACHINE NUMBER	WELD TECH.	TEMPERATURES				TEST RESULTS												PASS OR RE- TEST	CHKD BY	REMARKS				
				AMBIENT AIR TEMP.	PREHEAT OR MACHINE SPEED	EXTRUDER	WEDGE TEMP. Deg F	INSIDE PEEL MODE				OUTSIDE PEEL MODE				SHEAR MODE										
								STRENGTH				STRENGTH				STRENGTH										
TX 1	13:50 13-Jul-13	ESL 24 PX	R.R	8C	460	460	N/A																			
TX 2	8:36 14-Jul-13	ESL 24 PX	R.R	4C	460	460	N/A	93	90	86	87							89	82	PASS	Y.E					
	12:30 16-Jul-13	ESL 24 PX	R.R	8C	470	450	N/A	90	87	92	90							88	84	PASS	Y.E					
TX 3	13:44 17-Jul-13	ESL 24 PX	R.R	8c	470	450	N/A	75	85	85	73							92	107	PASS	Y.E					
	14:12 18-Jul-13	ESL 24 PX	R.R	5c	470	450	N/A	99	89	87	89							102	110	PASS	Y.E					
TX 4	8:25 19-Jul-13	ESL 24 PX	R.R	4c	470	450	N/A	84	90	81	82							86	84	PASS	Y.E					
	16:35 22-Jul-13	ESL 24 PX	R.R	10c	470	450	N/A	101	89	89	93							95	89	PASS	Y.E					
TX 5	9:50 23-Jul-13	ESL 24 PX	R.R	8c	470	450	N/A	102	88	87	87							90	94	PASS	Y.E					
	9:00 24-Jul-13	ESL 24 PX	R.R	7c	470	450	N/A	85	89	72	82							81	80	PASS	Y.E					
TX 6	9:10 25-Jul-13	ESL 24 PX	R.R	8c	470	450	N/A	83	80	89	82							75	77	PASS	Y.E					
	15:47 26-Jul-13	ESL 24 PX	R.R	7c	470	450	N/A	77	72	68	75							79	80	PASS	Y.E					
TX 11								73	72	68	65							69	72	PASS	Y.E					

LS FORM 3

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 31-Jul-13



PROJECT NUMBER:	<u>14C - 091</u>	PROJECT TITLE:	<u>Baffinland MRP Milne Port Fuel Upgrade</u>
OWNER:	<u>Nuna Logistics</u>	CONTRACTOR:	<u>Nuna Logistics</u>
LOCATION:	<u>Baffinlan NU</u>	SHEET NUMBER:	<u>2</u>

TF - # FUSION

X TX - # = EXTRUSION

TS - # = SOLVENT

[illegible]

LS FORM 3

Layfield Environmental Systems

SUBMITTED BY: Y.E
DATE: 31-Jul-13



GEOMEMBRANE SEAM LOG

PROJECT NUMBER:

14C - 091

PROJECT TITLE:

Baffinland MRP Milne Port Fuel Upgrade Phase 2

OWNER:

Nuna Logistics

CONTRACTOR:

Nuna logistics

LOCATION:

Baffinlan NU

PASSING TRIAL SEAMS

☒ FUSION

☐ EXTRUSION

☐ SOLVENT

NO.	TIME	TECH ID
TF 1	12:00:00 PM	P.H

SHEET NUMBER: 1

DATE: 13 July, 2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHKD BY	REMARKS	NON- DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
1 / 2	NEOS TO SEOS	12:30	5C	P.H	47%	850	850	60.9		Y.E		13-July, 213	P.H
2 / 3	NEOS TO SEOS	14:10	5C	P.H	47%	850	850	60.9		Y.E		13-July, 213	
3 / 4	NEOS TO SEOS	15:56	8C	P.H	47%	850	850	60.9	DT 1	Y.E		13-July, 213	
4 / 5	NEOS TO SEOS	16:31	8C	P.H	47%	850	850	60.9		Y.E		13-July, 213	
5 / 6	NEOS TO SEOS	17:40	8C	P.H	47%	850	850	60.9	DT 2	Y.E		13-July, 213	
/													
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/													
/													
/													
DAILY TOTAL								304.5m					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

DATE: 13 July, 2013

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS



GEOMEMBRANE SEAM LOG

PROJECT NUMBER:

14C - 091

PROJECT TITLE:

Baffinland MRP Milne Port Fauel Upgrade Phase 2

OWNER:

Nuna Logistics

CONTRACTOR:

Nuna logistics

LOCATION:

Baffinlan NU

PASSING TRIAL SEAMS

☒ FUSION

☐ EXTRUSION

☐ SOLVENT

NO.	TIME	TECH ID
TF 2	13:50	P.H

SHEET NUMBER: 2

DATE: 14-Jul-13

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHK'D BY	REMARKS	NON- DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
6 / 7	SEOS TO NEOS	14:20	4C	P.H	45%	760 F	760 F	60.9m		Y.E			
7 / 8	SEOS TO NEOS	16:59	4C	P.H	45%	760 F	760 F	60.9m		Y.E			
P-8	WEST TO EAST	17:52	4C	P.H	45%	760 F	760 F	10.6m		Y.E	WRINKLE		
8 / 9	SEOS TO NEOS	18:55	4C	P.H	45%	760 F	760 F	60.9m	DT 3	Y.E		15-Jul-13	Y.E
/													
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/													
DAILY TOTAL								193.3m					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

DATE: 14-Jul-13



GEOMEMBRANE SEAM LOG

PROJECT NUMBER:

14C - 091

PROJECT TITLE:

Baffinland MRP Milne Port Fauel Upgrade Phase 2

OWNER:

Nuna Logistics

CONTRACTOR:

Nuna logistics

LOCATION:

Baffinlan NU

PASSING TRIAL SEAMS

☒ FUSION

☐ EXTRUSION

☐ SOLVENT

NO.	TIME	TECH ID
TF 3	10:46	P.H

SHEET NUMBER: 3

DATE: 16-Jul-13

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET WEDGE OR BARREL	INDICATOR WEDGE OR BARREL					TEST DATE	CHECKED BY
10 / 11	SEOS TO NEOS	11:07	8	P.H	45%	760 F	760 F	60.35m		Y.E			
11 / 12	SEOS TO NEOS	12:39	8	P.H	45%	760 F	760 F	60.35m	DT-4	Y.E			
0,11,1 / 1,2,3,4	WEOS TO EEOS	15:00	9	P.H	45%	760 F	760 F	43.58m		Y.E	TIE-IN		
/													
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/													
DAILY TOTAL								164.28m					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

DATE: 17-July, 2013

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS



PROJECT NUMBER:

14C - 091

PROJECT TITLE:

Baffinland MRP Milne Port Fuel Upgrade Phase 2

OWNER:

Nuna Logistics

CONTRACTOR:

Nuna logistics

LOCATION:

Baffinlan NU

PASSING TRIAL SEAMS

X FUSION

EXTRUSION

SOLVENT

[illegible]

SHEET NUMBER: 4

DATE: 17 July, 2013

SEAM NUMBER	SEAM SECTION *		APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHK'D BY	REMARKS	NON- DESTRUCTIVE	
	START POINT	FINISH POINT					DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
							WEDGE OR BARREL	WEDGE OR BARREL						
13 / 12	SEOS TO NEOS		17:19	8c	P.H	45%	760	760	61.0		Y.E			
/														
/														
/														
/														
/														
/														
/														
/														
/														
/														
/														
DAILY TOTAL														

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY:

DATE:

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS



LAYFIELD GEOMEMBRANE SEAM LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fauel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna logistics
 LOCATION: Baffinlan NU

PASSING TRIAL SEAMS

X FUSION
 _____ EXTRUSION
 _____ SOLVENT

NO.	TIME	TECH ID
TF 5	9:16	P.H

SHEET NUMBER: 5

DATE: 18 July, 2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
13 / 14	SEOS TO NEOS	9:38	5c	P.H	45%	760	760	60.96m	DT6	Y.E		23-Jul-13	P.H
14 / 15	SEOS TO NEOS	10:07	5c	P.H	45%	760	760	60.96m		Y.E			
13 /	SEOS TO NEOS	12:24	5c	P.H	45%	760	760	60.96m	DT5	Y.E		23-Jul-13	P.H
13 /	SEOS TO NEOS	12:55	5c	P.H	45%	760	760	60.96m		Y.E			
15 /	NEOS TO SEOS	11:50	5c	P.H	45%	760	760	60.96m		Y.E			
3,14,1 / 4,5,6,7	EEOS TO WEOS	13:27	5c	P.H	45%	760	760	43.4m		Y.E			
15 / 16	SEOS TO NEOS	16:06	5c	P.H	45%	760	760	60.96m	DT7	Y.E		23-Jul-13	P.H
16 / 17	SEOS TO NEOS	17:41	5c	P.H	45%	760	760	60.96m		Y.E			
16,17 / 7,8,9	EEOS TO WEOS	18:13	5c	P.H	45%	760	760	29.06m	DT8	Y.E		23-Jul-13	P.H
/													
/													
DAILY TOTAL								498.76m					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

DATE: 18-Jul-13



LAYFIELD GEOMEMBRANE SEAM LOG

PROJECT NUMBER:

14C - 091

PROJECT TITLE:

Baffinland MRP Milne Port Fuel Upgrade Phase 2

OWNER:

Nuna Logistics

CONTRACTOR:

Nuna logistics

LOCATION:

Baffinlan NU

PASSING TRIAL SEAMS

☒ FUSION

☐ EXTRUSION

☐ SOLVENT

NO.	TIME	TECH ID
TF6	10:45	P.H

SHEET NUMBER: 6

DATE: 22 July, 2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHKT BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
18 / 19	SEOS TO NEOS	12:58	10c	P.H	45%	760	760	60.96m		Y.E			
19 / 20	WEOS TO ESOS	14:20	10c	P.H	45%	760	760	7.20m		Y.E			
20 / 21	WEOS TO ESOS	14:04	10c	P.H	45%	760	760	7.20m		Y.E			
1 / 21	WEOS TO ESOS	13:53	10c	P.H	45%	760	760	7m		Y.E			
9,20,2 / 10	SEOS TO NEOS	14:35	10c	P.H	45%	760	760	60.96m	DT 9	Y.E		23-Jul-13	
/													
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/													
DAILY TOTAL								143.32m					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E

DATE: 22-Jul-13



LAYFIELD GEOMEMBRANE SEAM LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fauel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna logistics
 LOCATION: Baffinlan NU

PASSING TRIAL SEAMS

☒ FUSION
☐ EXTRUSION
☐ SOLVENT

NO.	TIME	TECH ID
TF7	13:25	P.H

SHEET NUMBER: 7

DATE: 23 July,2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHKD BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
22 / 23	SEOS TO NEOS	16:00	10c	P.H	45%	760	760	57.9 m		Y.E			
23 / 24	EEOS TO WEOS	17:26	10c	P.H	45%	760	760	7.62 m		Y.E			
24 / 25	EEOS TO WEOS	17:16	10c	P.H	45%	760	760	7.62m		Y.E			
25 / 26	EEOS TO WEOS	17:05	10c	P.H	45%	760	760	7.62m		Y.E			
26 / 9	EEOS TO WEOS	17:11	10c	P.H	45%	760	760	7.62m		Y.E			
24,25, / 17	NEOS TO SEOS	17:38	10c	P.H	45%	760	760	60.96m	DT10	Y.E		23-Jul-13	P.H
/													
/													
/													
/													
/													
DAILY TOTAL								149.34m					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

DATE: 23-Jul-13



LAYFIELD MEMBRANE SEAM LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miine Port Fauel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna logistics
 LOCATION: Baffinlan NU

PASSING TRIAL SEAMS

X FUSION
 _____ EXTRUSION
 _____ SOLVENT

NO.	TIME	TECH ID
TP8	16:40	P.H

SHEET NUMBER: 8

DATE: 24 July, 2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHKD BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
27 / 18,19	WEOS TO EEOS	17:01	12c	P.H	45%	760	760	25.3					
28 / 18,19,1	SEOS TO NEOS	17:23	12c	P.H	45%	760	760	40.7					
28 /	NEOS TO SEOS	17:44	12c	P.H	45%	760	760	2.5			wrinkle		
KT Lin / 28	WEOS TO EEOS	18:20	12c	P.H	45%	760	760	18.0					
/													
/													
/													
/													
/													
/													
/													
DAILY TOTAL								86.5					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

DATE: 24-Jul-13



LAYFIELD MEMBRANE SEAM LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna logistics
 LOCATION: Baffinian NU

PASSING TRIAL SEAMS

☒ FUSION
☐ EXTRUSION
☐ SOLVENT

NO.	TIME	TECH ID
TF9	11:45	P.H

SHEET NUMBER: 9

DATE: 25 July, 2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
28 / 29	SEOS TO NEOS	13:29	8c	P.H	45%	760	760	26.2		Y.E			
29 / 30	NEOS TO SEOS	13:43	8c	P.H	45%	760	760	25.4		Y.E			
30 / 31	NEOS TO SEOS	14:00	8c	P.H	45%	760	760	25.4	DT11	Y.E		28-Jul-13	P.H
31 / 32	NEOS TO SEOS	14:29	8c	P.H	45%	760	760	25.4		Y.E			
12,13, / 30,31	EEOS TO WEOS	15:46	8c	P.H	45%	760	760	58.1		Y.E			
XT line / 32 to 29	WEOS TO EEOS	0:00	8c	P.H	45%	760	760	58.1	DT12	Y.E		28-Jul-13	PH
/													
/													
/													
/													
/													
DAILY TOTAL								218.5					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

DATE: 25-Jul-13



LAYFIELD ANE SEAM LOG

PROJECT NUMBER:

14C - 091

PROJECT TITLE:

Baffinland MRP Milne Port Fauel Upgrade Phase 2

OWNER:

Nuna Logistics

CONTRACTOR:

Nuna Logistics

LOCATION:

Baffinian NU

PASSING TRIAL SEAMS

X FUSION

 EXTRUSION

 SOLVENT

NO.	TIME	TECH ID
TF10	8:19	P.H

SHEET NUMBER: 10

DATE: 26 July, 2013

SEAM NUMBER	SEAM SECTION * START POINT FINISH POINT	APPROX. START TIME	AMB. AIR TEMP.	WELD TECH.	PREHEAT OR MACH. SPEED	MACHINE TEMPERATURES		APPROX. LENGTH WELDED (M)	DESTR. NUMBER	CHK'D BY	REMARKS	NON-DESTRUCTIVE	
						DIGITAL SET	INDICATOR					TEST DATE	CHECKED BY
						WEDGE OR BARREL	WEDGE OR BARREL						
32 / 33	SEOS TO NEOS	8:47	6c	P.H	45%	760	760	25.9		Y.E			
33 / 34	NEOS TO SEOS	9:10	6c	P.H	45%	760	760	25.9		Y.E			
34 / 35	NEOS TO SEOS	10:29	6c	P.H	45%	760	760	25.9		Y.E			
36 / 23	NEOS TO SEOS	10:45	6c	P.H	45%	760	760	7.3		Y.E			
35 / 23,36	NEOS TO SEOS	10:53	6c	P.H	45%	760	760	25.9	DT12	Y.E		28-Jul-13	P.H
33,34 / 15,16	EEOS TO WEOS	9:40	6c	P.H	45%	760	760	28.4		Y.E			
35 / 17	EEOS TO WEOS	11:08	6c	P.H	45%	760	760	14.3		Y.E			
XT line / 36 to 33	WEOS TO EEOS	14:17	6c	P.H	45%	760	760	50.9		Y.E			
/													
/													
/													
DAILY TOTAL								204.5					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR, OR A POINT LOCATION ON THE SEAM.

SUBMITTED BY: Y.E

LS FORM 4

LAYFIELD ENVIRONMENTAL SYSTEMS

DATE: 26-Jul-13



GEOMEMBRANE DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU SHEET NUMBER: 1

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
1 A	13-Jul-13	P-1 /	2.4m Seam 1,2 NEOS TO SEOS 3.6m west	T	G&	R.R		14-Jul-13		14-Jul-13	Y.E
1 B	13-Jul-13	1 / 2	NEOS TO SEOS	T	G&	R.R		14-Jul-13		14-Jul-13	Y.E
1 C	13-Jul-13	1 / 2	11.5m NEOS TO SEOS	BO	P G&W	R.R		14-Jul-13		14-Jul-13	Y.E
1 D	13-Jul-13	3 / 4	30m SEOS TO NEOS	DS	P G&W	R.R		13-Jul-13		13-Jul-13	Y.E
1 E	17-Jul-13	8 /	3.8m west of 1F	WR	P G&W	R.R		16-Jul-13		16-Jul-13	Y.E
1 F	17-Jul-13	8 /	3.8m west of 1G	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 G	17-Jul-13	8 /	3.35m West of 1H	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 H	17-Jul-13	8 / 9	16.76m from SEOS TO NEOS	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 I	17-Jul-13	8 /	3.5m West of 1J	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 J	17-Jul-13	8 / 9	3m from NEOS TO SEOS	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 K	17-Jul-13	8 /	3.6m East of 1K	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 L	17-Jul-13	8 /	S-7/8, 2m From SEOS TO NEOS 3.6m East	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 M	17-Jul-13	2,3,4 / 10,11	3.35m from WEOS TO EEOS	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 N	17-Jul-13	2,3,4 / 10,11	3.5m East of 1M	T		R.R		16-Jul-13	TIE-IN	16-Jul-13	Y.E
1 O	17-Jul-13	2,3,4 / 10,11	3.5m East of 1N	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 P	17-Jul-13	2,3,4 / 10,11	3.5m East of 1O	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 Q	17-Jul-13	2,3,4 / 10,11	3.5m East of 1P	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 R	17-Jul-13	2,3,4 / 10,11	3.5m East of 1Q	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 S	17-Jul-13	2,3,4 / 10,11	3.5m East of 1R	T		R.R		16-Jul-13		16-Jul-13	Y.E
1 T	17-Jul-13	2,3,4 / 10,11	3.5m East of 1S	T		R.R		16-Jul-13		16-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

B - UNDISPERSED RESIN BEAD

BO - FUSION WELDER BURN

BS - ROOTS/ROOT FROM FMC PENETRATION

CO - CHANGE OF OVERLAP

CR - CREASE

D - INSTALLATION DAMAGE

DS - DESTRUCTIVE TEST NUMBER

RE - EARTHWORK EQUIPMENT DAMAGE

EXT - EXTENSION

FM - FIBROUS

FS - FALLOUT SEAM LENGTH

FTS - FIELD TEST STRIP

HT - HEAT TACK BURN

IO - INSUFFICIENT OVERLAP (UNDER SPEC.)

MD - MANUFACTURE/DELIVERY DAMAGE

PT - PRESSURE TEST CUT

SI - SOIL SURFACE IRREGULARITY

SL - SLAG ON TEXTURED SURF

T - THREE PANEL INTERSECTION

VL - VACUUM TEST LEAK

WR - WRINKLE

WS - WELDER RUST/ART

OTHER:

REPAIR TYPE: P - PATCH, C - CAP, RS - RECONSTRUCTED SEAM, G&W - GROUNDWELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX 1	13:50	R.R
TX 2	8:30	R.R
TX3	12:30	R.R

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.

LPL FORM 7

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY:

DATE:



GEOMEMBRANE DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistcis
 LOCATION: Baffinland NU SHEET NUMBER:

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
2 A		12 / 11	3.04 m SEOS	DS-4	PG&W	R.R.		16-Jul-13			
2 B		1,2,3,4 / 10,11	3.5m West of 1T	T	G&W	R.R.		16-Jul-13		16-Jul-13	Y.E
2 C		1,2,3,4 / 10,11	3.5m West of 2B	T	G&W	R.R.		16-Jul-13		16-Jul-13	Y.E
2 D		1,2,3,4 / 10,11	3.5m West of 2C	T	G&W	R.R.		16-Jul-13		16-Jul-13	Y.E
2 E		1,2,3,4 / 10,11	3.5m West of 2D	T	G&W	R.R.		16-Jul-13		16-Jul-13	Y.E
2 F		4,5 / 13	3.5m West of 2E	T	G&W	R.R.		16-Jul-13		16-Jul-13	Y.E
2 G		4,5 / 13	3.5m West of 2F	T	G&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 H		4,5 / 13	3.5m West of 2G	T	G&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 I		13 / 14	13m Neos to Seos	DS-6	PG&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 J		4,5 / 13	3.5m West of 2H	T	G&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 K		5 / 14	3.5m West of 2I	T	G&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 L		14 / 5,6	3.5m West of 2K	T	G&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 M		6 / 14	3.5m West of 2L	T	G&W	R.R.		17-Jul-13		17-Jul-13	Y.E
2 N		6 / 14,15	3.5m West of 2M	T	G&W	R.R.		18-Jul-13		18-Jul-13	Y.E
2 O		6 / 15	3.5m West of 2N	T	G&W	R.R.		18-Jul-13		18-Jul-13	Y.E
2 P		7,6 / 15	3.5m West of 2O	T	G&W	R.R.		18-Jul-13		18-Jul-13	Y.E
2 Q		7 / 15	3.5m West of 2P	T	G&W	R.R.		18-Jul-13		18-Jul-13	Y.E
2 R		7 / 15,17	3.5m West of 2Q	HT	P G&W	R.R.		18-Jul-13		18-Jul-13	Y.E
2 S		7 / 16	3.5m West of 2R	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
2 T		7,8 / 16	3.5m West of 2S	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

B - UNDIFFUSED RESIN BOND

BO - FUSION WELDER BURN

BS - BOOT/SKIRT FROM FUEL PENETRATION

CO - CHANGE OF OVERLAP

CR - CREASE

D - INSTALLATION DAMAGE

DS - DESTRUCTIVE TEST NUMBER

EE - EARTHWORK EQUIPMENT DAMAGE

EXT - EXTENSION

FM - FISHMOUTH

FS - RAILED SEAM LENGTH

FIS - FIELD TEST STRIP

HT - HEAT TACK BURN

ID - INSUFFICIENT OVERLAP (UNDER SPEC.)

MD - MANUFACTURING/DELIVERY DAMAGE

PT - PRESSURE TEST CUT

SI - SOIL SURFACE IRREGULARITY

SL - SLAG ON TEXTURED SHEET

T - THREE PANEL INTERSECTION

VL - VACUUM TEST LEAK

WR - WRINKLE

WS - WELDER RESTART

OTHER:

REPAIR TYPE: P - PATCH, C - CAP, RS - RECONSTRUCTED SEAM, G&W - GROUNDWELD

PASSING TRIAL SEAMS		
NO.	TIME	TECHID.
TX3	12:30	R.R.
TX4	13:44	R.R.
TX5	14:12	R.R.

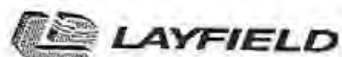
** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.

LPL FORM 7

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY:

DATE:



GEOMEMBRANE DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU SHEET NUMBER:

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
3 A	19-Jul-13	8 / 16	3.5m West of 2T	T	G&W	R.R.		19-Jul-13			
3 B	19-Jul-13	8 / 16,17	3.5m West of 3A	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 C	19-Jul-13	17 /	3.5m West of 3B	D	P G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 D	19-Jul-13	8 / 17	3.5m West of 3C	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 E	19-Jul-13	9,8 / 17	3.5m West of 3D	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 F	19-Jul-13	9 / 17	3.5m West of 3E	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 G	19-Jul-13	17,9 / 26	3.5m West of 3F	DS-8	P G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 H	19-Jul-13	12 / 13	2.4m From SEOS TO NEOS	T	G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 I	19-Jul-13	13 /	3.4m West of 3H	T	G&W	R.R.		19-Jul-13	SHOP CROSS SEAM	19-Jul-13	Y.E
3 J	19-Jul-13	13 /	17m From SEOS TO NEOS	DS-5	P G&W	R.R.		19-Jul-13	SHOP CROSS SEAM	19-Jul-13	Y.E
3 K	19-Jul-13	15 / 16	17m From SEOS TO NEOS	DS-7	P G&W	R.R.		19-Jul-13		19-Jul-13	Y.E
3 L	22-Jul-13	19 /	3.0m South of P-18,P-19 3.6m West	T	G&W	R.R.		22-Jul-13	SHOP CROSS SEAM	22-Jul-13	Y.E
3 M	22-Jul-13	19 /	3.6m West of 3L	T	G&W	R.R.		22-Jul-13	SHOP CROSS SEAM	22-Jul-13	Y.E
3 N	22-Jul-13	19 / 20	3.0m North of 3M	T	G&W	R.R.		22-Jul-13	SHOP CROSS SEAM	22-Jul-13	Y.E
3 O	22-Jul-13	10 / 19,20	7.31m From EEOS TO WEOS	T	G&W	R.R.		22-Jul-13		22-Jul-13	Y.E
3 P	22-Jul-13	10 / 20	3.4m North of 3O	T	G&W	R.R.		22-Jul-13		22-Jul-13	Y.E
3 Q	22-Jul-13	10 / 20	3.6m North of 3P	T	G&W	R.R.		22-Jul-13		22-Jul-13	Y.E
3 R	22-Jul-13	10 / 20	3.6m North of 3Q	T	G&W	R.R.		22-Jul-13		22-Jul-13	Y.E
3 S	22-Jul-13	21,20 / 10	3.6m North of 3R	T	G&W	R.R.		22-Jul-13		22-Jul-13	Y.E
3 T	22-Jul-13	21 / 10	3.4m North of 3S	DS-9	P G&W	R.R.		22-Jul-13		22-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE
 B - UNDISPERSED SPILL/LEAK
 BC - FUSION WELDER BURN
 BS - FOOTPRINT FROM FUEL PENETRATION
 CD - CHANGE OF OVERLAP
 CE - CRACK
 DI - INSTALLATION DAMAGE
 DS# - DESTRUCTIVE TEST MARKER
 EE - EARTHWORK EQUIPMENT DAMAGE
 EXT - EXTENSION
 FM - FISHMOUTH
 FS - FAILED SEAM LENGTH
 FTS - FIELD TEST STOP
 HT - HEAT TACK BURN
 NI - INSUFFICIENT OVERLAP (UNDER SPEC.)
 ND - MANUFACTURING/DELIVERY DAMAGE
 PT - PRESSURE TEST CUT
 SI - SOIL SURFACE IRREGULARITY
 SL - SLIP ON TEXTURED SURF
 T - THREE FAVEL INTERSECTION
 VL - VACUUM TEST LEAK
 WK - WOUND
 WS - WELDER RESTART
 OTHER:

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX6	8:25	R.R.
TX7	16:35	R.R.

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 02-Aug-13



LAYFIELD MEMBRANE DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091

PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logisteis

LOCATION: Baffinland NU

SHEET NUMBER:

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
4 A	22-Jul-13	21 / 1	3.5m East of 3T	T	W&G	R.R.		22-Jul-13		22-Jul-13	Y.E
4 B	24-Jul-13	24 / 23	WEOS	SI	P G&W	R.R.		24-Jul-13		24-Jul-13	Y.E
4 C	24-Jul-13	24 / 23	1.5m East From 4B	T	W&G	R.R.		24-Jul-13		24-Jul-13	Y.E
4 D	24-Jul-13	24 / 23	3.6m East from 4C	T	W&G	R.R.		24-Jul-13		24-Jul-13	Y.E
4 E	24-Jul-13	23-24 / 17	1.6m East From 4D	T	W&G	R.R.		24-Jul-13		24-Jul-13	Y.E
4 F	24-Jul-13	24 / 17	0.9m North of 4E	T	W&G	R.R.		23-Jul-13		23-Jul-13	Y.E
4 G	24-Jul-13	24,25 / 17	3.6m North From 4F	T	W&G	R.R.		23-Jul-13		23-Jul-13	Y.E
4 H	24-Jul-13	25 / 17	1.8m North of 4G	T	W&G	R.R.		23-Jul-13		23-Jul-13	Y.E
4 I	24-Jul-13	25 /	2.28m Weast of 4H	T	W&G	R.R.		24-Jul-13		24-Jul-13	Y.E
4 J	24-Jul-13	25 / 26	2.1m Weast of 4k	T	W&G	R.R.		24-Jul-13		24-Jul-13	Y.E
4 K	24-Jul-13	25,26 / 17	3.6m North of 4H	T	W&G	R.R.		23-Jul-13		23-Jul-13	Y.E
4 L	24-Jul-13	26 / 17	1.8m North of 4K	T	W&G	R.R.		23-Jul-13		23-Jul-13	Y.E
4 M	24-Jul-13	26 / 9	3.6m WEOS TO EEOS	T	W&G	R.R.		24-Jul-13		23-Jul-13	Y.E
4 N		28,10 / 19	42.83m South of 3O	T	W&G	R.R.		24-Jul-13		24-Jul-13	Y.E
4 O		28 / 10	3.4m West of 4N	T	W&G	R.R.		24-Jul-13		23-Jul-13	Y.E
4 P		28 / 10	3.4m West of 4O	T	W&G	R.R.		24-Jul-13		23-Jul-13	Y.E
4 Q		10,11 / 28,29	3.4m West of 4P	T	W&G	R.R.		24-Jul-13		23-Jul-13	Y.E
4 R		28 / 11	3.4m West of 4Q	IO	P G&W	R.R.		25-Jul-13		25-Jul-13	Y.E
4 S		28 / 11	3.4m West of 4R	T	W&G	R.R.		25-Jul-13		25-Jul-13	Y.E
4 T		28 / 11	3.4m West of 4S	T	W&G	R.R.		25-Jul-13		25-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

SE - EARTHWORK SOFTSPOT DAMAGE

PT - PRESSURE TEST CUT

IF - DISPERSED RESIN ROAD

EXT - EXTENSION

SI - SOIL SURFACE IRREGULARITY

IS - FUSION WELDER BURN

IX - ITSDHOUTH

SL - SLAG ON TEXTURED SHEET

IS - FOOT SKIRT FROM P.M. PENETRATION

YS - FAILED GRAM LENGTH

T - THREE PANEL INTERSECTION

OD - CHANGE OF OVERLAP

PTS - FIELD TEST STRIP

VL - VACUUM TEST LEAK

CR - CREASE

HT - HEAT TACK BURN

WR - WRENCH

DI - INSTALLATION DAMAGE

IS - INSUFFICIENT OVERLAP (UNDER SPEC)

WS - WELDER RESTART

DSF - DESTRUCTIVE TEST NUMBER

MD - MANUFACTURE/DELIVERY DAMAGE

OTHER:

REPAIR TYPE: P - PATCH C - CAR, RS - RECONSTRUCTED SEAM, GW - GRINDWELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX8	9:50	R.R.
TX9	9:00	R.R.
TX10	9:10	R.R.

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.

LPL FORM 7

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E

DATE: 02-Aug-13



LAYFIELD MEMBRANE DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU SHEET NUMBER: 5

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
5 A	25-Jul-13	11,12 / 29,30	3.4m West of 4T	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 B	25-Jul-13	12 / 30	3.4m West of 5A	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 C	25-Jul-13	12 / 30	3.4m West of 5B	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 D	25-Jul-13	12 / 30	3.4m West of 5C	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 E	25-Jul-13	30 / 31	13.99m From NEOS to SEOS	DT-11	P G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 F	25-Jul-13	12,13 / 30,31	3.4m West of 5D	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 G	25-Jul-13	13 / 31	3.4m West of 5F	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 H	25-Jul-13	13 / 31	3.4m West of 5G	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 I	25-Jul-13	13 / 31	3.4m West of 5H	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 J	25-Jul-13	13,14 / 31,32	3.4m West of 5I	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 K	25-Jul-13	14 / 32	3.4m West of 5J	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 L	25-Jul-13	14 / 32	3.4m West of 5K	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 M	25-Jul-13	14 / 32	3.4m West of 5L	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 N	25-Jul-13	14,15 / 32,33	3.4m West of 5M	T	G&W	RR		25-Jul-13		25-Jul-13	Y.E
5 O	26-Jul-13	15 / 33	3.4m West of 5N	T	G&W	RR		26-Jul-13		26-Jul-13	Y.E
5 P	26-Jul-13	15 / 33	3.4m West of 5O	T	G&W	RR		26-Jul-13		26-Jul-13	Y.E
5 Q	26-Jul-13	15 / 33	3.4m West of 5P	T	G&W	RR		26-Jul-13		26-Jul-13	Y.E
5 R	26-Jul-13	15,16 / 33,34	3.4m West of 5Q	T	G&W	RR		26-Jul-13		26-Jul-13	Y.E
5 S	26-Jul-13	16 / 34	3.4m West of 5R	T	G&W	RR		26-Jul-13		26-Jul-13	Y.E
5 T	26-Jul-13	16 / 34	3.4m West of 5S	T	G&W	RR		26-Jul-13		26-Jul-13	Y.E

DEFECT TYPE: AU - ANIMAL RELATED DAMAGE

B - UNDESIRABLE RESIN BEAD

BQ - FUSION WHEEL MARK

BS - BOOT SKIRT FROM PAUL PENETRATION

CD - CHANGE OF OVERLAP

CR - CRACK

D - INSTALLATION DAMAGE

DSD - DESTRUCTIVE TEST RESULTS

EE - EARTHWORK EQUIPMENT DAMAGE

EXT - EXTENSION

FM - FISHMOUTH

FL - FAILED SEAM LENGTH

FTS - FIELD TEST STRIP

HT - HEAT TACK MARK

IS - INSUFFICIENT OVERLAP (UNDER SPEC)

MD - MANUFACTURE/DELIVERY DAMAGE

PT - PRESSURE TEST CLIP

SF - SOIL SURFACE IRREGULARITY

SL - SLAG ON TEXTURED SURF

T - THREE PASEL INTERSECTION

VL - VACUUM TEST LEAK

WR - WELD LINE

WS - WELD RESTART

OTHER:

REPAIR TYPE: P - PATCH, C - CAP, RS - RECONSTRUCTED SEAM, G&W - GROUNDWELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX10	9:10	R.R
TX11	15:47	R.R

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 02-Aug-13



LAYFIELD DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU SHEET NUMBER: 6

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
6 A	26-Jul-13	16 / 34	3.4m West of 5T	T	G&W	R.R		26-Jul-13		26-Jul-13	Y.E
6 B	26-Jul-13	16,17 / 34,35	3.4m West of 6A	T	G&W	R.R		26-Jul-13		26-Jul-13	Y.E
6 C	26-Jul-13	17 / 35	3.4m West of 6B	T	G&W	R.R		26-Jul-13		26-Jul-13	Y.E
6 D	26-Jul-13	17 / 35	3.4m West of 6C	T	G&W	R.R		26-Jul-13		26-Jul-13	Y.E
6 E	26-Jul-13	17 / 35	3.4m West of 6D	T	G&W	R.R		26-Jul-13		26-Jul-13	Y.E
6 F	26-Jul-13	17,35 / 23	3.4m West of 6E	DT-10	P G&W	Y.E		26-Jul-13		26-Jul-13	Y.E
6 G	27-Jul-13	23 / 36	3.6m West of 6H	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 H	27-Jul-13	23 / 36	0.6m West of 6I	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 I	27-Jul-13	23,36 / 35	12.92m south of 6F	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 J	27-Jul-13	35 / 36	3.6m South of 6I	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 K	27-Jul-13	35 / 36	3.6m South of 6J	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 L	27-Jul-13	35 / 36	3.6m South of 6K	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 M	27-Jul-13	19,27 / 28	18m south of 4N	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 N	27-Jul-13	19 / 27	3.5m East of 6M	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 O	27-Jul-13	19 / 27	3.6m East of 6N	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 P	27-Jul-13	18,19 / 27	3.6m East of 6O	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 Q	27-Jul-13	18 / 27	3.6m East of 6P	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 R	27-Jul-13	18 / 27	3.6m East of 6Q	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 S	27-Jul-13	18 / 27	3.6m East of 6R	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
6 T	27-Jul-13	27 / 28	3.4m South of 6M	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

BI - INDISPERSSED RESIN BEAD
 BO - FISHON WELDER BURN
 BS - BUCKLE/RIOT FROM PML PERFORATION
 CO - CHANGE OF OVERLAP
 CR - CRACK
 D - INSTALLATION DAMAGE
 DS - DESTRUCTIVE TEST NUMBER

EE - EQUIPMENT/EQUIPMENT DAMAGE

EXT - EXTENSION
 FM - FISHMOUTH
 FS - FAILED SEAM LENGTH
 FTS - FIELD TEST STRIP
 ITI - HEAT TACK BURN
 IO - INSUFFICIENT OVERLAP (UNDER SPEC.)
 MN - MANUFACTURING/DELIVERY DAMAGE

PT - PRESSURE TEST CUT

SM - SOIL SURFACE IRREGULARITY
 SL - SLAG ON TEXTURED SHEET
 T - TWIGS/PINEL INTERSECTION
 VL - VACUUM TEST LEAK
 WR - WRINKLE
 WS - WELDER RESTART
 OTHER:

REPAIR TYPE: P - PATCH, C - CAP, IS - RECONSTRUCTED SEAM, G&W - GRIND/WELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX11	15:47	R.R
TX12	9:42	R.R

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: _____
 DATE: _____



LAYFIELD DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logisteis
 LOCATION: Baffinland NU SHEET NUMBER: _____

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.	REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION							
7 A	28-Jul-23	27 / 28	3.6 m South of 6T	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 B	28-Jul-23	27 / EXG	EEOS	SI	P G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 C	28-Jul-23	27 / EXG	0.91m West of 7B	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 D	28-Jul-23	27,28 / EXG	3.5m east of 7C	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 E	28-Jul-23	EXG /	1.2 m East of 7D 0.30 South	EE	P G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 F	28-Jul-23	28 / EXG	2.4m West of 7D	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 G	28-Jul-23	28 / EXG	0.91m West of 7F	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 H	28-Jul-23	28 / EXG	2.4m West of 7G	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 I	28-Jul-23	28 / EXG	0.60m West of 7H	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 J	28-Jul-23	28 /	2.1m North of 7I	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 K	28-Jul-23	28 / EXG	1.5m West of 7I	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 L	28-Jul-23	28 / EXG	0.60m West of 7K	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 M	28-Jul-23	28 / EXG	2.4m West of 7L	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 N	28-Jul-23	29,28 / EXG	0.60 m West 7M	DT-12	P G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 O	28-Jul-23	29 / EXG	1.6m West of 7N	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 P	28-Jul-23	29 / EXG	0.60 West of 7O	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 Q	28-Jul-23	29 / EXG	2.4 West of 7P	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 R	28-Jul-23	29 / EXG	0.60 West of 7Q	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 S	28-Jul-23	29 / EXG	2.4 West of 7R	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E
7 T	28-Jul-23	29 / EXG	0.60 West of 7S	T	G&W	R.R.	27-Jul-13		27-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

R - IMPERFECT RESIN HEAD
 SO - FUSION WELDER BURN
 RS - ROOT SKIRT FROM FML PENETRATION
 CO - CHANGE OF OVERLAP
 CR - CRACK
 D - INSTALLATION DAMAGE
 DS - DESTRUCTIVE TEST NUMBER

BT - EARTHWORK EQUIPMENT DAMAGE

EXT - EXTENSION
 FM - PERMOUTH
 FS - FALLING SEAM LENGTH
 FTS - FIELD TEST RESULT
 HT - HEAT TACK BURN
 IS - INSUFFICIENT OVERLAP (UNDER SPEC.)
 MD - MANUFACTURING/DELIVERY DAMAGE

PT - PRESSURE TEST CLUT

SI - SOIL SURFACE IRREGULARITY
 SL - SLAG ON TEXTURED SHEET
 T - THREE PANEL INTERSECTION
 VL - VACUUM TEST LEAK
 WE - WRENKLE
 WS - WELDER RESTART
 OTHER:

REPAIR TYPE: P - PATCH; C - UNF; AS - RECONSTRUCTED SEAM; G&W - GRIND WELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX12	9:42	R.R.

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 02-Aug-13



LAYFIELD DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistcis
 LOCATION: Baffinland NU SHEET NUMBER: 8

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
8 A	28-Jul-13	29 / EXG	2.4m West of 7T	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 B	28-Jul-13	29,30 / EXG	0.60m West of 8A	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 C	28-Jul-13	30 / EXG	2.4m West of 8B	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 D	28-Jul-13	30 / EXG	0.30m West of 8C	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 E	28-Jul-13	30 / EXG	1.5m West of 8D	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 F	28-Jul-13	30 / EXG	1.21m West OF 8E	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 G	28-Jul-13	30 / EXG	1.9m West of 8F	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 H	28-Jul-13	30 / EXG	1.21m West OF 8G	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 I	28-Jul-13	30 / EXG	2.13m West of 8H	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 J	28-Jul-13	30,31 / EXG	1.21m West OF 8I	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 K	28-Jul-13	31 / EXG	2.13m West of 8J	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 L	28-Jul-13	31 / EXG	1.21m West OF 8K	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 M	28-Jul-13	31 / EXG	2.13m West of 8L	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 N	28-Jul-13	31 / EXG	1.21m West OF 8M	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 O	28-Jul-13	31 / EXG	2.13m West of 8N	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 P	28-Jul-13	31 / EXG	1.21m West OF 8O	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 Q	28-Jul-13	31 / EXG	1.8m West of 8P	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 R	28-Jul-13	31,32 / EXG	1.21m West OF 8Q	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 S	28-Jul-13	32 / EXG	1.8m West of 8R	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
8 T	28-Jul-13	32 / EXG	1.21m West OF 8S	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E

DEFECT TYPE: AD - ANOMAL RELATED DAMAGE

BU - UNDISPERSED PRESH BEAN
 RO - FUSION WELDER BEHN
 RS - ROOTSKIRT FROM TML PENETRATION
 CD - CHANGE OF OVERLAP
 CR - CREASE
 ID - INSTALLATION DAMAGE
 DS - DESTRUCTIVE TEST NUMBER

FR - BAKTWORK EQUIPMENT DAMAGE
 EXT - EXTENSION
 FM - FISHMOUTH
 FS - FAILED SEAM LENGTH
 FTS - FIELD TEST STRIP
 HT - HEAT TACK BURN
 ID - INSUFFICIENT OVERLAP (UNDER SPEC.)
 MD - MANUFACTURE/DELIVERY DAMAGE

PT - PRESSURE TEST CUT
 SI - SOIL SURFACE IRREGULARITY
 SL - SLAG ON TEXTURED SHEET
 T - THREE PANEL INTERSECTION
 VL - VACUUM TEST LEAK
 WR - WRENKLE
 WS - WELDER RESTART
 OTHER:

REPAIR TYPE: F - PATCH, C - CAP, RS - RECONSTRUCTED SEAM, G&W - GROUNDWELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX12	9:42	R.R

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 02-Aug-13



LAYFIELD DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU SHEET NUMBER: 9

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
9 A		32 / EXG	1.98m West of 8T	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
9 B		32 / EXG	1.21m West of 9A	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
9 C		32 / EXG	1.8m West of 9B	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
9 D		32 / EXG	1.21m West of 9C	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
9 E		32 / EXG	2.33m West of 9D	T	G&W	R.R		27-Jul-13		27-Jul-13	Y.E
9 F		32 /	0.91m North of 8R	D	P G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 G		32,33 / EXG	1.21m West of 9E	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 H		33 / EXG	0.60 m West of 9G	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 I		33 / EXG	0.76m West of 9H	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 J		33 / EXG	2.4m West of 9I	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 K		33 / EXG	0.91m West of 9J	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 L		33 / EXG	2.33m West of 9K	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 M		33 / EXG	0.91m West of 9L	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 N		33 / EXG	1.98m West of 9M	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 O		33,34 / EXG	0.97m West of 9N	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 P		34 / EXG	1.06m West of 9O	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 Q		34 / EXG	1.21m West of 9P	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 R		34 / EXG	2.33m West of 9Q	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 S		34 / EXG	1.21m West of 9R	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E
9 T		34 / EXG	2.33m West of 9S	T	G&W	R.R		28-Jul-13		28-Jul-13	Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

B - UNDISPERSED RUSH BRUSH
 BO - FLUXION WELDER BURN
 BS - NOOK/SKIRT FROM FHL PENETRATION
 CO - CHANGE OF OVERLAP
 CR - CRACK
 D - INSTALLATION DAMAGE
 DS - DESTRUCTIVE TEST NUMBER

DE - PARTHWORK EQUIPMENT DAMAGE

EXT - EXTENSION
 FM - FISHMOUTH
 FS - FAILED SEAM LENGTH
 FTS - FIELD TEST SURF
 HT - HEAT TACK BURN
 IO - INSUFFICIENT OVERLAP (BINDER SPEC.)
 MD - MANUFACTURING/DELIVERY DAMAGE

PT - PRESSURE TEST CUT

SI - SOIL SURFACE IRREGULARITY
 SL - SLAG ON TEXTURED SHEET
 T - THREE PANEL INTERSECTION
 VL - VACUUM TEST LEAK
 WR - WINDHOLE
 WS - WELDING RESISTANT
 OTHER:

REPAIR TYPE: P - PATCH/C - CAP, RS - RECONSTRUCTED SEAM, G&W - GRIND/WELD

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX12	9:42	R.R
TX13	8:45	R.R

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 02-Aug-13



LAYFIELD DEFECT / REPAIR LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU SHEET NUMBER: 10

DEFECT CODE	LOG DATE	DEFECT LOCATION		DEFECT TYPE	REPAIR TYPE	WELD TECH.		REPAIR DATE	REMARKS **	TEST DATE	CHECKED BY
		SEAM OR PANEL NO.	DEFECT LOCATION DESCRIPTION								
10 A		34 / EXG	1.21m West of 9T	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 B		34 / EXG	1.8m West of 10A	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 C		334,35 / EXG	1.21m West of 10B	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 D		35 / EXG	2.1m West of 10C	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 E		35 / EXG	0.91m West of 10D	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 F		35 / EXG	2.1m West of 10E	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 G		35 / EXG	0.91m West of 10F	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 H		35 / EXG	2.1m West of 10G	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 I		35 / EXG	0.60m West of 10H	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 J		35 / EXG	1.52m West of 10I	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 K		35,36 / EXG	1.21m West of 10J	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 L		36 / EXG	1.21m West of 10K	T	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 M		EXG /	1.21m West of 10L 0.60m South	EE	P G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 N		EXG LINER /	0.6 East of 7H 0.30 South	EE	P G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 O		34 / 35	3.0m North of 10C	FM	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 P		EXG LINER /	0.30 m south of 7I	CR	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 Q		EXG LINER /	0.91m West of 7L 0.30 South	CR	G&W	R.R		28-JUL013		28-Jul-13	Y.E
10 R		/								28-Jul-13	Y.E
10 S		/									Y.E
10 T		/									Y.E

DEFECT TYPE: AD - ANIMAL RELATED DAMAGE

BU - UNDISPERSED BUSH GRASS
 BO - FUSION WELDER BURN
 BS - BOOTSKIRT FROM FM, PENETRATION
 CO - CHANGE OF OVERLAP
 CR - CRACK
 DI - INSTALLATION DAMAGE
 DS - DESTRUCTIVE TEST MARKER

EE - EARTHWORK EQUIPMENT DAMAGE

EXT - EXTENSION
 FM - FISHMOUTH
 FS - FAILED SEAM LENGTH
 FTB - FIELD TEST STAMP
 HT - HEAT TACK BURN
 IO - INSUFFICIENT OVERLAP (UNDER SPEC.)
 MD - MANUFACTURE/DELIVERY DAMAGE

PT - PRESSURE TEST CUT

SI - SOIL SURFACE IRREGULARITY
 SL - SLAG ON TEXTURED SHEET
 T - THREE PANEL INTERSECTION
 VL - VACUUM TEST LEAK
 WE - WRENCH
 WS - WELDER RESTART
 OTHER:

REPAIR TYPE: P - PATCH, C - CAP, RS - RECONSTRUCTED SEAM, GA W - GROUNDWELL

PASSING TRIAL SEAMS		
NO.	TIME	TECH ID.
TX13	8:45	R.R

** COLUMNS TO BE USED BY THE PROJECT SUPERVISOR OR LEAD TECHNICIAN ONLY.
 LPL FORM 7 LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 02-Aug-13

LAYFIELD GEOMEMBRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Milne Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU

VACUUM BOX _____ **AIR LANCE** X **SHEET NUMBER:** 1

SEAMS									REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **		DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
1 / 2	SEOS - NEOS	13-Jul-13	P.H						0A					
2 / 3	SEOS - NEOS	13-Jul-13	P.H						0B					
3 / 4	SEOS - NEOS	13-Jul-13	P.H						0C					
4 / 5	SEOS - NEOS	13-Jul-13	P.H						0D					
5 / 6	SEOS - NEOS	13-Jul-13	P.H						0E					
6 / 7	SEOS - NEOS	14-Jul-13	P.H						0F					
7 / 8	SEOS - NEOS	14-Jul-13	P.H						0G					
8 / 9	SEOS - NEOS	14-Jul-13	P.H						0H					
/ 8	EEOS - WEOS	16-Jul-13	P.H						0I					
10 / 11	SEOS - NEOS	16-Jul-13	P.H						0J					
11 / 12	SEOS - NEOS	16-Jul-13	P.H						0K					
0,11,1 / ,2,3,	WEOS - EEOS	16-Jul-13	P.H				TIE-IN		0L					
13 / 12	SEOS - NEOS	17-Jul-13	P.H						0M					
13 / 14	SEOS - NEOS	18-Jul-13	P.H						0N					
14 / 15	SEOS - NEOS	18-Jul-13	P.H						0O					
13 /	SEOS - NEOS	18-Jul-13	P.H						0P					
13 /	SEOS - NEOS	18-Jul-13	P.H						0Q					
15 /	NEOS - SEOS	18-Jul-13	P.H						0R					
3,14,1 / ,5,6,	WEOS - EEOS	18-Jul-13	P.H						0S					
15 / 16	SEOS - NEOS	18-Jul-13	P.H						0T					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX _____ AIR LANCE X SHEET NUMBER: 2

SEAMS									REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **		DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
16 / 17	SEOS - NEOS	18-Jul-13	P.H						2A					
16,17 / 7,8,9	WEOS - EEOS	18-Jul-13	P.H						2B					
18 / 19	SEOS - NEOS	19-Jul-13	P.H						2C					
19 / 20	WEOS - EEOS	19-Jul-13	P.H						2D					
20 / 21	WEOS - EEOS	19-Jul-13	P.H						2E					
1 / 21	WEOS - EEOS	19-Jul-13	P.H						2F					
9,20,2 / 10	SEOS - NEOS	19-Jul-13	P.H						2G					
18 / 19	SEOS - NEOS	22-Jul-23	P.H						2H					
19 / 20	WEOS - EEOS	22-Jul-23	P.H						2I					
20 / 21	WEOS - EEOS	22-Jul-23	P.H						2J					
1 / 21	WEOS - EEOS	22-Jul-23	P.H						2K					
9,20,2 / 10	SEOS - NEOS	22-Jul-23	P.H						2L					
22 / 23	SEOS - NEOS	23-Jul-13	P.H						2M					
23 / 24	EEOS - WEOS	23-Jul-13	P.H						2N					
24 / 25	EEOS - WEOS	23-Jul-13	P.H						2O					
25 / 26	EEOS - WEOS	23-Jul-13	P.H						2P					
26 / 9	EEOS - WEOS	23-Jul-13	P.H						2Q					
24,25 / 17	SEOS - NEOS	23-Jul-13	P.H						2R					
27 / 18,19	WEOS - EEOS	24-Jul-13	P.H						2S					
28 / 1,19,	SEOS - NEOS	24-Jul-13	P.H						2T					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: _____
 DATE: _____



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade Phase 2
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX _____ AIR LANCE X SHEET NUMBER: 3

SEAMS									REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO		TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
28 / 29	SEOS	-	NEOS	25-Jul-13	P.H				3 A					
29 / 30	NEOS	-	SEOS	25-Jul-13	P.H				3 B					
30 / 31	NEOS	-	SEOS	25-Jul-13	P.H				3 C					
31 / 32	NEOS	-	SEOS	25-Jul-13	P.H				3 D					
12,13 / 30,31	EEOS	-	WEOS	25-Jul-13	P.H				3 E					
32 / 33	SEOS	-	NEOS	26-Jul-13	P.H				3 F					
33 / 34	NEOS	-	SEOS	26-Jul-13	P.H				3 G					
34 / 35	NEOS	-	SEOS	26-Jul-13	P.H				3 H					
36 / 23	NEOS	-	SEOS	26-Jul-13	P.H				3 I					
35 / 23,36	NEOS	-	SEOS	26-Jul-13	P.H				3 J					
33,34 / 15,16	EEOS	-	WEOS	26-Jul-13	P.H				3 K					
35 / 17	EEOS	-	WEOS	26-Jul-13	P.H				3 L					
XT Lin / 28	WEOS	-	EEOS	24-Jul-13	P.H				3 M					
XT lin / 2 to 2	WEOS	-	EEOS	25-Jul-13	P.H				3 N					
XT lin / 5 to 3	WEOS	-	EEOS	26-Jul-13	P.H				3 O					
/	-	-							3 P					
/	-	-							3 Q					
/	-	-							3 R					
/	-	-							3 S					
/	-	-							3 T					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: _____
 DATE: _____



LAYFIELD GEOMEMBRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091

PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

VACUUM BOX X

AIR LANCE

SHEET NUMBER: 1

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							1 A	14-Jul-13	P.H		Y.E	
/	-							1 B	14-Jul-13	P.H		Y.E	
/	-							1 C	14-Jul-13	P.H		Y.E	
/	-							1 D	13-Jul-13	P.H		Y.E	
/	-							1 E	16-Jul-13	P.H		Y.E	
/	-							1 F	16-Jul-13	P.H		Y.E	
/	-							1 G	16-Jul-13	P.H		Y.E	
/	-							1 H	16-Jul-13	P.H		Y.E	
/	-							1 I	16-Jul-13	P.H		Y.E	
/	-							1 J	16-Jul-13	P.H		Y.E	
/	-							1 K	16-Jul-13	P.H		Y.E	
/	-							1 L	16-Jul-13	P.H		Y.E	
/	-							1 M	16-Jul-13	P.H		Y.E	
/	-							1 N	16-Jul-13	P.H		Y.E	
/	-							1 O	16-Jul-13	P.H		Y.E	
/	-							1 P	16-Jul-13	P.H		Y.E	
/	-							1 Q	16-Jul-13	P.H		Y.E	
/	-							1 R	16-Jul-13	P.H		Y.E	
/	-							1 S	16-Jul-13	P.H		Y.E	
/	-							1 T	16-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX X AIR LANCE SHEET NUMBER: 2

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							2A	16-Jul-13	P.H		Y.E	
/	-							2B	16-Jul-13	P.H		Y.E	
/	-							2C	16-Jul-13	P.H		Y.E	
/	-							2D	16-Jul-13	P.H		Y.E	
/	-							2E	16-Jul-13	P.H		Y.E	
/	-							2F	17-Jul-13	P.H		Y.E	
/	-							2G	17-Jul-13	P.H		Y.E	
/	-							2H	17-Jul-13	P.H		Y.E	
/	-							2I	17-Jul-13	P.H		Y.E	
/	-							2J	17-Jul-13	P.H		Y.E	
/	-							2K	17-Jul-13	P.H		Y.E	
/	-							2L	17-Jul-13	P.H		Y.E	
/	-							2M	18-Jul-13	P.H		Y.E	
/	-							2N	18-Jul-13	P.H		Y.E	
/	-							2O	18-Jul-13	P.H		Y.E	
/	-							2P	18-Jul-13	P.H		Y.E	
/	-							2Q	18-Jul-13	P.H		Y.E	
/	-							2R	19-Jul-13	P.H		Y.E	
/	-							2S	19-Jul-13	P.H		Y.E	
/	-							2T	19-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 2 AUG.2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091

PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

VACUUM BOX X

AIR LANCE

SHEET NUMBER:

3

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							3 A	19-Jul-13	P.H		Y.E	
/	-							3 B	19-Jul-13	P.H		Y.E	
/	-							3 C	19-Jul-13	P.H		Y.E	
/	-							3 D	19-Jul-13	P.H		Y.E	
/	-							3 E	19-Jul-13	P.H		Y.E	
/	-							3 F	19-Jul-13	P.H		Y.E	
/	-							3 G	19-Jul-13	P.H		Y.E	
/	-							3 H	19-Jul-13	P.H		Y.E	
/	-							3 I	19-Jul-13	P.H		Y.E	
/	-							3 J	19-Jul-13	P.H		Y.E	
/	-							3 K	19-Jul-13	P.H		Y.E	
/	-							3 L	22-Jul-13	P.H		Y.E	
/	-							3 M	22-Jul-13	P.H		Y.E	
/	-							3 N	22-Jul-13	P.H		Y.E	
/	-							3 O	22-Jul-13	P.H		Y.E	
/	-							3 P	22-Jul-13	P.H		Y.E	
/	-							3 Q	22-Jul-13	P.H		Y.E	
/	-							3 R	22-Jul-13	P.H		Y.E	
/	-							3 S	22-Jul-13	P.H		Y.E	
/	-							3 T	22-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E

DATE: 2 AUG, 2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX X AIR LANCE SHEET NUMBER: 4

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							4 A	22-Jul-13	R.R		Y.E	
/	-							4 B	24-Jul-13	R.R		Y.E	
/	-							4 C	24-Jul-13	R.R		Y.E	
/	-							4 D	24-Jul-13	R.R		Y.E	
/	-							4 E	23-Jul-13	R.R		Y.E	
/	-							4 F	23-Jul-13	R.R		Y.E	
/	-							4 G	23-Jul-13	R.R		Y.E	
/	-							4 H	23-Jul-13	R.R		Y.E	
/	-							4 I	24-Jul-13	R.R		Y.E	
/	-							4 J	24-Jul-13	R.R		Y.E	
/	-							4 K	23-Jul-13	R.R		Y.E	
/	-							4 L	23-Jul-13	R.R		Y.E	
/	-							4 M	24-Jul-13	R.R		Y.E	
/	-							4 N	23-Jul-13	R.R		Y.E	
/	-							4 O	23-Jul-13	R.R		Y.E	
/	-							4 P	23-Jul-13	R.R		Y.E	
/	-							4 Q	25-Jul-13	R.R		Y.E	
/	-							4 R	25-Jul-13	R.R		Y.E	
/	-							4 S	25-Jul-13	R.R		Y.E	
/	-							4 T	25-Jul-13	R.R		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E

DATE: 2 AUG,2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX X AIR LANCE SHEET NUMBER: 5

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHKD BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHKD BY	REMARKS **
/	-							5A	25-Jul-13	P.H		Y.E	
/	-							5B	25-Jul-13	P.H		Y.E	
/	-							5C	25-Jul-13	P.H		Y.E	
/	-							5D	25-Jul-13	P.H		Y.E	
/	-							5E	25-Jul-13	P.H		Y.E	
/	-							5F	25-Jul-13	P.H		Y.E	
/	-							5G	25-Jul-13	P.H		Y.E	
/	-							5H	25-Jul-13	P.H		Y.E	
/	-							5I	25-Jul-13	P.H		Y.E	
/	-							5J	25-Jul-13	P.H		Y.E	
/	-							5K	25-Jul-13	P.H		Y.E	
/	-							5L	25-Jul-13	P.H		Y.E	
/	-							5M	25-Jul-13	P.H		Y.E	
/	-							5N	25-Jul-13	P.H		Y.E	
/	-							5O	26-Jul-13	P.H		Y.E	
/	-							5P	26-Jul-13	P.H		Y.E	
/	-							5Q	26-Jul-13	P.H		Y.E	
/	-							5R	26-Jul-13	P.H		Y.E	
/	-							5S	26-Jul-13	P.H		Y.E	
/	-							5T	26-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM
 ** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 2 AUG,2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091

PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade

OWNER: Nuna Logistics

CONTRACTOR: Nuna Logistics

LOCATION: Baffinland NU

VACUUM BOX

X

AIR LANCE

SHEET NUMBER:

6

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							6A	26-Jul-13	P.H		Y.E	
/	-							6B	26-Jul-13	P.H		Y.E	
/	-							6C	26-Jul-13	P.H		Y.E	
/	-							6D	26-Jul-13	P.H		Y.E	
/	-							6E	26-Jul-13	P.H		Y.E	
/	-							6F	26-Jul-13	P.H		Y.E	
/	-							6G	27-Jul-13	P.H		Y.E	
/	-							6H	27-Jul-13	P.H		Y.E	
/	-							6I	27-Jul-13	P.H		Y.E	
/	-							6J	27-Jul-13	P.H		Y.E	
/	-							6K	27-Jul-13	P.H		Y.E	
/	-							6L	27-Jul-13	P.H		Y.E	
/	-							6M	27-Jul-13	P.H		Y.E	
/	-							6N	27-Jul-13	P.H		Y.E	
/	-							6O	27-Jul-13	P.H		Y.E	
/	-							6P	27-Jul-13	P.H		Y.E	
/	-							6Q	27-Jul-13	P.H		Y.E	
/	-							6R	27-Jul-13	P.H		Y.E	
/	-							6S	27-Jul-13	P.H		Y.E	
/	-							6T	27-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E

DATE: 2 AUG, 2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX X AIR LANCE SHEET NUMBER:

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							7A	27-Jul-13	P.H		Y.E	
/	-							7B	27-Jul-13	P.H		Y.E	
/	-							7C	27-Jul-13	P.H		Y.E	
/	-							7D	27-Jul-13	P.H		Y.E	
/	-							7E	27-Jul-13	P.H		Y.E	
/	-							7F	27-Jul-13	P.H		Y.E	
/	-							7G	27-Jul-13	P.H		Y.E	
/	-							7H	27-Jul-13	P.H		Y.E	
/	-							7I	27-Jul-13	P.H		Y.E	
/	-							7J	27-Jul-13	P.H		Y.E	
/	-							7K	27-Jul-13	P.H		Y.E	
/	-							7L	27-Jul-13	P.H		Y.E	
/	-							7M	27-Jul-13	P.H		Y.E	
/	-							7N	27-Jul-13	P.H		Y.E	
/	-							7O	27-Jul-13	P.H		Y.E	
/	-							7P	27-Jul-13	P.H		Y.E	
/	-							7Q	27-Jul-13	P.H		Y.E	
/	-							7R	27-Jul-13	P.H		Y.E	
/	-							7S	27-Jul-13	P.H		Y.E	
/	-							7T	27-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM
 ** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 2 AUG, 2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX X AIR LANCE SHEET NUMBER: 8

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							8A	27-Jul-13	P.H		Y.E	
/	-							8B	27-Jul-13	P.H		Y.E	
/	-							8C	27-Jul-13	P.H		Y.E	
/	-							8D	27-Jul-13	P.H		Y.E	
/	-							8E	27-Jul-13	P.H		Y.E	
/	-							8F	27-Jul-13	P.H		Y.E	
/	-							8G	27-Jul-13	P.H		Y.E	
/	-							8H	27-Jul-13	P.H		Y.E	
/	-							8I	27-Jul-13	P.H		Y.E	
/	-							8J	27-Jul-13	P.H		Y.E	
/	-							8K	27-Jul-13	P.H		Y.E	
/	-							8L	27-Jul-13	P.H		Y.E	
/	-							8M	27-Jul-13	P.H		Y.E	
/	-							8N	27-Jul-13	P.H		Y.E	
/	-							8O	27-Jul-13	P.H		Y.E	
/	-							8P	27-Jul-13	P.H		Y.E	
/	-							8Q	27-Jul-13	P.H		Y.E	
/	-							8R	27-Jul-13	P.H		Y.E	
/	-							8S	27-Jul-13	P.H		Y.E	
/	-							8T	27-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM
 ** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 2 AUG,2013



LAYFIELD BRANE VACUUM / AIR LANCE TEST LOG

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade
 OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
 LOCATION: Baffinland NU

VACUUM BOX X AIR LANCE SHEET NUMBER: 9

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-							9A	27-Jul-13	P.H		Y.E	
/	-							9B	27-Jul-13	P.H		Y.E	
/	-							9C	27-Jul-13	P.H		Y.E	
/	-							9D	27-Jul-13	P.H		Y.E	
/	-							9E	27-Jul-13	P.H		Y.E	
/	-							9F	28-Jul-13	P.H		Y.E	
/	-							9G	28-Jul-13	P.H		Y.E	
/	-							9H	28-Jul-13	P.H		Y.E	
/	-							9I	28-Jul-13	P.H		Y.E	
/	-							9J	28-Jul-13	P.H		Y.E	
/	-							9K	28-Jul-13	P.H		Y.E	
/	-							9L	28-Jul-13	P.H		Y.E	
/	-							9M	28-Jul-13	P.H		Y.E	
/	-							9N	28-Jul-13	P.H		Y.E	
/	-							9O	28-Jul-13	P.H		Y.E	
/	-							9P	28-Jul-13	P.H		Y.E	
/	-							9Q	28-Jul-13	P.H		Y.E	
/	-							9R	28-Jul-13	P.H		Y.E	
/	-							9S	28-Jul-13	P.H		Y.E	
/	-							9T	28-Jul-13	P.H		Y.E	

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E
 DATE: 2 AUG, 2013



PROJECT TITLE: Baffinland MRP Milne Port Fuel Upgrade

CONTRACTOR: Nuna Logistics

VACUUM BOX

X

AIR LANCE

SHEET NUMBER:

10

SEAMS								REPAIRS					
SEAM NUMBER	SEAM SECTION * FROM TO	TEST DATE	TECH ID	DEFECTS **	COMPLETE NO YES	CHK'D BY	REMARKS **	DEFECT CODE	TEST DATE	TECH ID	DEFECTS **	CHK'D BY	REMARKS **
/	-												
/	-							10A	28-Jul-13	P.H		Y.E	
/	-							10B	28-Jul-13	P.H		Y.E	
/	-							10C	28-Jul-13	P.H		Y.E	
/	-							10D	28-Jul-13	P.H		Y.E	
/	-							10E	28-Jul-13	P.H		Y.E	
/	-							10F	28-Jul-13	P.H		Y.E	
/	-							10G	28-Jul-13	P.H		Y.E	
/	-							10H	28-Jul-13	P.H		Y.E	
/	-							10I	28-Jul-13	P.H		Y.E	
/	-							10J	28-Jul-13	P.H		Y.E	
/	-							10K	28-Jul-13	P.H		Y.E	
/	-							10L	28-Jul-13	P.H		Y.E	
/	-							10M	28-Jul-13	P.H		Y.E	
/	-							10N	28-Jul-13	P.H		Y.E	
/	-							10O	28-Jul-13	P.H		Y.E	
/	-							10P	28-Jul-13	P.H		Y.E	
/	-							10Q	28-Jul-13	P.H		Y.E	
/	-							10R					
/	-							10S					
/	-							10T					

* REFERENCE SEAM ENDPOINTS FROM AN END OF SEAM (EOS), A REPAIR NUMBER, OR A POINT LOCATION ON THE SEAM

** RECORD QUANTITY OF LEAKS DETECTED AND REFERENCE NEW DEFECT CODE IN REMARKS

LS FORM 6

LAYFIELD ENVIRONMENTAL SYSTEMS

SUBMITTED BY: Y.E

DATE: 2 AUG, 2013



GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
LOCATION: Baffinland NU SHEET NUMBER: 1
DESTRUCTIVE TEST NUMBER*: DT # 1 TEST DATE: 13-Jul-13
SEAM NUMBER: 3/4 ARCHIVE LAYFIELD OWNER ENGINEER
SAMPLE LOCATION: 30m SEOS TO NEOS 3RD PARTY YES NO WHO?
DATE SEAMED / SAMPLED: 12-Jul-13 DATE FORWARDED TO LAB
TYPE OF SEAM: FUSION DATE LAB TEST RESULTS REC'D

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	88	SE1	2	80	SE1	84	SE1
3	83	SE1	4	79	SE1	83	SE1
5	85	SE1	6	76	SE1	79	SE1
7	83	SE1	8	83	SE1	80	SE1
9	89	SE1	10	82	SE1	85	SE1
11			12	80	SE1	78	SE1

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS

NOTES: _____

CHECKED BY: Y.E
DATE: 13-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
LOCATION: Baffinland NU SHEET NUMBER: 2
DESTRUCTIVE TEST NUMBER*: DT #2 TEST DATE: 13-Jul-13
SEAM NUMBER: 5/6 ARCHIVE LAYFIELD OWNER ENGINEER
SAMPLE LOCATION: SEOS 3RD PARTY YES NO WHO?
DATE SEAMED / SAMPLED: 13-Jul-13 DATE FORWARDED TO LAB
TYPE OF SEAM: FUSION DATE LAB TEST RESULTS REC'D

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	88	SE1	2	79	SE1	84	SE1
3	90	SE1	4	83	SE1	75	SE1
5	92	SE1	6	80	SE1	79	SE1
7	95	SE1	8	77	SE1	84	SE1
9	89	SE1	10	80	SE1	82	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PASS PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS

NOTES:

CHECKED BY: Y.E
DATE: 13-Jul-13



GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
LOCATION: Baffinland NU SHEET NUMBER: _____
DESTRUCTIVE TEST NUMBER*: DT-3 TEST DATE: 17-Jul-13
SEAM NUMBER: 8-9 ARCHIVE LAYFIELD OWNER ENGINEER
SAMPLE LOCATION: NEOS 3RD PARTY YES NO WHO?
DATE SEAMED / SAMPLED: 17 July, 2013 DATE FORWARDED TO LAB
TYPE OF SEAM: Fusion DATE LAB TEST RESULTS REC'D

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	75	SE1	2	60	SE1	61	SE1
3	84	SE1	4	65	SE1	60	SE1
5	76	SE1	6	65	SE1	67	SE1
7	80	SE1	8	64	SE1	68	SE1
9	77	SE1	10	62	SE1	66	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

NOTES: _____

LPL: PAS: PASS

3RD PARTY / LAB: PASS

CHECKED BY: Y.E

DATE: 17-July,2013

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
LOCATION: Baffinland NU SHEET NUMBER: _____
DESTRUCTIVE TEST NUMBER*: DT-4 TEST DATE: 17-Jul-13
SEAM NUMBER: 11-12 ARCHIVE LAYFIELD OWNER ENGINEER
SAMPLE LOCATION: 3 m NEOS TO SEOS 3RD PARTY YES NO WHO?
DATE SEAMED / SAMPLED: 16-Jul-13 DATE FORWARDED TO LAB _____
TYPE OF SEAM: Fusion DATE LAB TEST RESULTS REC'D _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	75	SE1	2	73	SE1	72	SE1
3	74	SE1	4	62	SE1	69	SE1
5	74	SE1	6	70	SE1	72	SE1
7	77	SE1	8	71	SE1	70	SE1
9	76	SE1	10	68	SE1	65	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PASS PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS

NOTES: _____

CHECKED BY: Y.E

DATE: 17-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
LOCATION: Baffinland NU SHEET NUMBER: _____
DESTRUCTIVE TEST NUMBER*: DT-5 TEST DATE: 18-Jul-13
SEAM NUMBER: P-13 ARCHIVE LAYFIELD OWNER ENGINEER
SAMPLE LOCATION: 17 mts. SEOS TO NEOS 3RD PARTY YES NO WHO?
DATE SEAMED / SAMPLED: 18-Jul-13 DATE FORWARDED TO LAB _____
TYPE OF SEAM: Fusion DATE LAB TEST RESULTS REC'D _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	81	SE1	2	66	SE1	65	SE1
3	77	SE1	4	63	SE1	68	SE1
5	75	SE1	6	64	SE1	66	SE1
7	75	SE1	8	66	SE1	67	SE1
9	74	SE1	10	65	SE1	64	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS FAIL

NOTES:

CHECKED BY: YE

DATE: 18-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 PROJECT TITLE: Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics CONTRACTOR: Nuna Logistics
LOCATION: Baffinland NU SHEET NUMBER: _____
DESTRUCTIVE TEST NUMBER*: DT-6 TEST DATE: 19-Jul-13
SEAM NUMBER: 13-14 ARCHIVE LAYFIELD OWNER ENGINEER
SAMPLE LOCATION: 13 mts NEOS TO SEOS 3RD PARTY YES NO WHO?
DATE SEAMED / SAMPLED: 18-Jul-13 DATE FORWARDED TO LAB _____
TYPE OF SEAM: Fusion DATE LAB TEST RESULTS REC'D _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	75	SE1	2	68	SE1	70	SE1
3	75	SE1	4	72	SE1	66	SE1
5	74	SE1	6	72	SE1	67	SE1
7	76	SE1	8	68	SE1	71	SE1
9	74	SE1	10	67	SE1	69	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS FAIL

NOTES: _____

CHECKED BY: YE
DATE: 19-Jul-13



LAYFIELD GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT-7 **TEST DATE:** 19-Jul-13
SEAM NUMBER: 15-16 **ARCHIVE** LAYFIELD **OWNER** **ENGINEER**
SAMPLE LOCATION: 17 mts SEOS TO NEOS **3RD PARTY** YES **NO** **WHO?**
DATE SEAMED / SAMPLED: 18-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	70	SE1	2	66	SE1	65	SE1
3	73	SE1	4	66	SE1	64	SE1
5	73	SE1	6	68	SE1	66	SE1
7	72	SE1	8	66	SE1	66	SE1
9	70	SE1	10	67	SE1	65	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS FAIL

NOTES:

CHECKED BY: YE
DATE: 19-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



LAYFIELD GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT-8 **TEST DATE:** 19-Jul-13
SEAM NUMBER: 17-9 **ARCHIVE** LAYFIELD **OWNER** **ENGINEER**
SAMPLE LOCATION: 23 mts. EEOS TIE IN **3RD PARTY** YES **NO** **WHO?**
DATE SEAMED / SAMPLED: 18-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	76	SE1	2	64	SE1	66	SE1
3	80	SE1	4	60	SE1	62	SE1
5	71	SE1	6	65	SE1	56	SE1
7	75	SE1	8	65	SE1	60	SE1
9	79	SE1	10	69	SE1	60	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS! PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS FAIL

NOTES: _____

CHECKED BY: YE
 DATE: 19-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



LAYFIELD GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT-9 **TEST DATE:** 23-Jul-13
SEAM NUMBER: 10-21 **ARCHIVE** LAYFIELD **OWNER** _____ **ENGINEER** _____
SAMPLE LOCATION: NEOS **3RD PARTY** YES _____ NO _____ **WHO?** _____
DATE SEAMED / SAMPLED: 22-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	69	SE1	2	57	SE1	66	SE1
3	68	SE1	4	50	SE1	59	SE1
5	72	SE1	6	56	SE1	62	SE1
7	79	SE1	8	57	SE1	61	SE1
9	70	SE1	10	58	SE1	61	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS _____ FAIL _____

NOTES:

CHECKED BY: YE

DATE: 23-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS

LAYFIELD GEOMEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT-10 **TEST DATE:** 24-Jul-13
SEAM NUMBER: 23-17 **ARCHIVE** _____ **LAYFIELD** _____ **OWNER** _____ **ENGINEER** _____
SAMPLE LOCATION: SEOS **3RD PARTY** _____ **YES** _____ **NO** _____ **WHO?** _____
DATE SEAMED / SAMPLED: 23-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	68	SE1	2	57	SE1	59	SE1
3	75	SE1	4	54	SE1	62	SE1
5	66	SE1	6	56	SE1	58	SE1
7	75	SE1	8	61	SE1	62	SE1
9	65	SE1	10	53	SE1	58	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS _____ FAIL _____

NOTES: _____

CHECKED BY: YE

DATE: 24-Jul-13

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS

LAYFIELD MEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT11 **TEST DATE:** 28-Jul-13
SEAM NUMBER: 30/31 **ARCHIVE** _____ **LAYFIELD** _____ **OWNER** _____ **ENGINEER** _____
SAMPLE LOCATION: 13.99m From NEOS to SEOS **3RD PARTY** YES _____ NO _____ **WHO?** _____
DATE SEAMED / SAMPLED: 25-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	73	SE1	2	62	SE1	56	SE1
3	80	SE1	4	65	SE1	64	SE1
5	74	SE1	6	58	SE1	61	SE1
7	74	SE1	8	64	SE1	64	SE1
9	62	SE1	10	65	SE1	69	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS _____ FAIL _____

NOTES: _____

CHECKED Y.E

DATE: 02 AUG,2013

LAYFIELD MEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT12 **TEST DATE:** 28-LUL-13
SEAM NUMBER: P-29/ EXG LINER **ARCHIVE** LAYFIELD **OWNER** **ENGINEER**
SAMPLE LOCATION: EEOS **3RD PARTY** YES **NO** **WHO?**
DATE SEAMED / SAMPLED: 25-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	73	SE1	2	71	SE1	70	SE1
3	74	SE1	4	69	SE1	62	SE1
5	80	SE1	6	69	SE1	70	SE1
7	68	SE1	8	62	SE1	75	SE1
9	74	SE1	10	68	SE1	64	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

LPL: PAS: PASS

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

3RD PARTY / LAB: PASS _____ FAIL _____

NOTES:

CHECKED BY: YE

DATE: 02 AUG,2013

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS



LAYFIELD MEMBRANE DESTRUCTIVE TEST REPORT

PROJECT NUMBER: 14C - 091 **PROJECT TITLE:** Baffinland MRP Miln Port Fuel Upgrade
OWNER: Nuna Logistics **CONTRACTOR:** Nuna Logistics
LOCATION: Baffinland NU **SHEET NUMBER:** _____
DESTRUCTIVE TEST NUMBER*: DT13 **TEST DATE:** 28-Jul-13
SEAM NUMBER: 35/36 **ARCHIVE** LAYFIELD **OWNER** **ENGINEER**
SAMPLE LOCATION: SEOS **3RD PARTY** YES **NO** **WHO?**
DATE SEAMED / SAMPLED: 26-Jul-13 **DATE FORWARDED TO LAB** _____
TYPE OF SEAM: Fusion **DATE LAB TEST RESULTS REC'D** _____

FIELD TEST RESULTS (units = lbf. / in. width = ppi)

SHEAR STRENGTH			PEEL ADHESION				
SPECIMEN NUMBER	SEAM STRENGTH	** LOCUS OF BREAK CODE	SPECIMEN NUMBER	INSIDE SEAM		OUTSIDE SEAM	
				ADHESION STRENGTH	LOCUS OF BREAK CODE	ADHESION STRENGTH	** LOCUS OF BREAK CODE
1	85	SE1	2	54	SE1	65	SE1
3	85	SE1	4	62	SE1	60	SE1
5	63	SE1	6	69	SE1	65	SE1
7	85	SE1	8	70	SE1	71	SE1
9	77	SE1	10	72	SE1	70	SE1
11			12				

* DESTRUCTIVE TEST NUMBERS SHOULD BE SEQUENTIAL AND ARE TO BE PREFIXED BY EITHER DT (FUSION), DX (EXTRUSION) OR DS (SOLVENT).

** REFER TO LOCUS OF BREAK CODE DIRECTORIES PROVIDED FOR UNSUPPORTED AND SUPPORTED MATERIALS.

NOTES: _____

LPL: PAS: PASS

3RD PARTY / LAB: PASS _____ FAIL _____

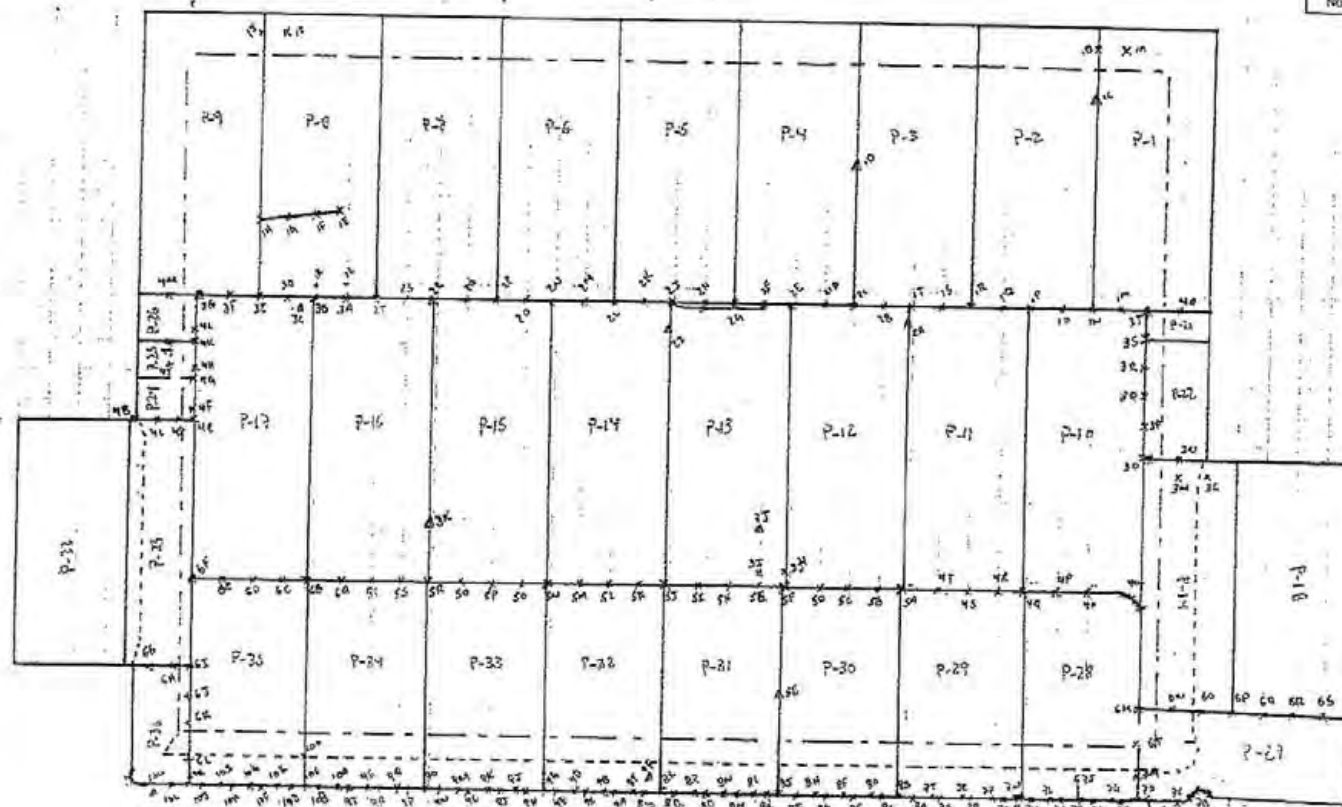
CHECKED BY: YE

DATE: 02 AUG,2013

LS FORM 8 (OPTIONAL)

LAYFIELD ENVIRONMENTAL SYSTEMS

NO.	REVISIONS	DATE (MM/DD/YY)	BY
-----	-----------	-----------------	----

**NOTES**

BAFFINLAND
MRP MILNE
PORT FUEL
UPGRADE-PHASE
2



HAZGARD 635

LEGEND

- EXTENT OF LINED
- TOE OF SLOPE
- LINER FIELD SCARP
- EXTENSION YIELDING
- XXX PATCH
- TA PANEL NUMBER
- TA REPAIR NUMBER

DATE:	OF	SCALE:
DATE:	CHD:	HYD:
DATE:	REVISION:	

DATE:	PROJECT NO.
	14C-091



CERTIFICATE OF FINAL INSPECTION AND ACCEPTANCE

PROJECT NAME: Baffinland MRP Milne Port Fwd Upgrade Phase - 2
PROJECT NUMBER: 14C-091 DATE: 28 July, 2013
OWNER: Nuna Logistics
LOCATION: Baffinland NU

SCOPE OF INSTALLATION(S): THE WORK

Installation of Hazmat 5.3.5 on the Tank Farm Phase 2
with underlay and overlay Geotextile LP12.

All the testing and repairs done 100%
Finish 100% Effluent Pond

Part 1 - LAYFIELD ENVIRONMENTAL SYSTEMS LTD.

I, Yorlun Espinola, a duly appointed representative of Layfield Environmental Systems Ltd. (LESL), have visually observed the installations (as outlined above), and have found the Work to be complete and free of defects and declare that the Work was completed in accordance with the project specifications, Layfield Environmental Systems' QC program and the terms and conditions of the contract.

Layfield Environmental Systems Representative:

Name: Yorlun Espinola
Title: Supervisor
Date: 28/July 2013 Signature: [Signature]

Part 2 - OWNER (or Representative)

I, _____, a duly appointed representative of _____, do hereby take over and accept the installation(s) described above, and confirm that the work has been completed in accordance with the project specifications and the terms of the conditions of the contract.

I have evaluated and measured the work together with the Layfield Environmental Systems representative, and agree that the measurements shown are both true and correct, and that the installation has met our approval.

Owners Representative:

Name: Hyle Huntz
Title: Ass't PM
Company: NUNA
Date: July 27/13 Signature: [Signature]

Comments: _____



NUNA EAST LTD

Section 9

Material Test Reports



Dow Chemical Canada ULC
Canada

June 10, 2013

Mr. Paul Mutter
Merkley Supply Ltd.
100 Bayview Road
Ottawa, ON K1Y 4L6

E-mail: paul.mutter@merkleysupply.com

**RIGID EXTRUDED POLYSTYRENE MATERIAL CERTIFICATION OF COMPLIANCE FOR BAFFIN ISLAND/NUNA
LOGISTICS PROJECT**

Dear Paul:

This letter certifies that the STYROFOAM™ HI-60 rigid extruded polystyrene insulation lots listed below meet or exceed our specification for STYROFOAM™ HI-60 product in Attachment 1. Moreover, the STYROFOAM™ HI-60 meets and exceeds the requirements of CAN/ULC S-701-01 "Standard for Thermal Insulation, Polystyrene Boards, and Pipe Coverings" Type 4.

Compliance to the specification shown in Attachment 1 applies to:

Production Lot #:

1H240202 – 2" HI-60 shipped from Merkley Supply Limited stock

The summary of our STYROFOAM™ HI-60 specifications and the measured values are titled in the attached table. Please realize that the manufacturing of STYROFOAM™ Brand Insulation is a continuous and constantly monitored process. Explaining notes to that effect are included at the bottom of the attached table. Additional characteristics of the product are included in Attachment 2.

Material from the above mentioned lot # was manufactured at the following Dow Plant Location:

4445 Marie Victorin
Varennnes, Québec Canada J3X 1T3

Please do not hesitate to contact me if you have any further questions.

Regards,

Brian Baird
Senior Account Manager
Dow Building Solutions

Mailing Address

3298 Hargrove Road
Mississauga, ON L5L 4E9
905/820-7400 - Phone
800/807-4312 – Fax
bkbaird@dow.com

918340 061013A:BKB\lb

Attachments

Attachment 1

Specifications	STYROFOAM™ HI-40 1" & 1.5"	Note
Type CAN/ULC S701-01	Type 4	
Thermal resistance R-value per inch Metric RSI ASTM C-518-91, C-177-85	5-R per inch RSI-0.87	1
Compressive strength (min) Metric ASTM D1621	60 (lb/in ²) 415(kPa)	1
Water absorption (% by volume) max. ASTM D2842	0.7	1
Water vapor permeance max. (perm) Metric ASTM E96	0.6 perms 35 ng/pa.s.m ²	1
Co-efficient of linear thermal expansion. Metric. ASTM D696	3.5 (x10 ⁵ in/in. °F) 0.063 mm/m/°C	
Width (inches) ASTM D1622	24" +/- 1/16"	
Length (inches) ASTM D1622	96" +/- 3/16"	
Thickness (inches) ASTM D1622	1" or 1.5" +/- 1/16"	

Notes:

1. Dow manufactures extruded polystyrene insulation in a continuous monitored process. The key manufacturing properties of cell size, density, blowing agent content, and fresh compressive strength are kept within established upper and lower control limits for that particular product. This ensures that the final aged product properties will meet or exceed the published properties listed in Attachment 1.
2. Dow testing of extruded polystyrene is performed at the Standard Council of Canada accredited facility located at:
The Dow Chemical Company
200 Larkin Center, 1605 Joseph Drive
Midland, MI 48674

Attachment 2

Additional Product Characteristics – STYROFOAM™ HI-60 Extruded Polystyrene

Flammability:

In Accordance with CAN/ULC S102.2 Test Method

Flame Spread: 155

Smoke Developed: Over 500

Chemical Resistance:

Chemical Resistance ⁽¹⁾ of STYROFOAM DECKMATE Insulation			
Acid inorganic, weak	Excellent	Salts	Excellent
Acid, inorganic, strong	Excellent	Insecticides	Not recommended
Acid, organic, weak	Excellent	Kerosene	Poor
Acid, organic, strong	Good	Mineral oil USP	Excellent
Bases	Excellent	Naphtha (VMP)	Not recommended
Alcohols, including isopropyl alcohol	Excellent	Turpentine	Not recommended
Methyl ethyl ketone	Not recommended	Beer	Good
Polyglycols, including propylene glycol	Excellent	Gasoline	Not recommended
Hydrocarbons	Not recommended	Fruit juices	Good

(1) Explanation of ratings:

Excellent = The plastic was unaffected for the duration of the test.

Good = A very slight clouding or discoloration of the plastic.

Poor = Considerable change in plastic during exposure.

Not recommended = Severe attack of the plastic. Became soft and unusable after a few hours of exposure.

NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

Biological Resistance:

Resists biological degradation by organisms or enzymes.

Environmental:

Inert, non-nutritive, is highly stable, and is non-regulated by WHIMIS, therefore, does not produce any undesirable gases or leachate.

Ultra-Violet Degradation Resistance:

The prolonged exposure of STYROFOAM™ brand insulation products and other polystyrene foam insulations to sunlight's UV radiation will cause deterioration of the exposed surface. This will manifest itself by the formation of a yellowish, dusty surface. Once formed, this dusty surface will act as a protective screen preventing further deterioration of the insulation's exposed surface. This screen will be effective provided the deteriorated surface remains undisturbed. Sunlight will not affect the material underlying the deteriorated surface.

Following installation or while in storage, STYROFOAM™ brand insulation products can be protected from the effects of sunlight's UV radiation by the use of coverings such as tarps, building paper or other sheathing membranes or light coloured latex paints.