



Geomembranes

HAZGARD

Product Description

Since 1989 Layfield has been effectively using HAZGARD® 100 & 250 for many secondary containment applications. Both the unsupported HAZGARD® 100 and the supported HAZGARD® 250 share the same PVC alloy polymeric coating. HAZGARD® 100 is highly flexible and easily solvent weldable making it ideal for contractor installs in applications such as under building vapor barriers, soil remediation pads and cut-off curtains. HAZGARD® 250 is also highly flexible and solvent weldable and can be left exposed to the elements. HAZGARD® 5000 HT is Layfield's strongest supported geomembrane and is formulated to withstand continuous temperatures up to 90 C (194 F) and to contain hydrocarbons at elevated temperatures in the event of a spill. For more information on High Temperature resistant liners see the section on Layfield High Temp liners. HAZGARD® 1000 is an excellent secondary containment liner for strong solvents such as benzene, toluene and xylene. HAZGARD® 535 is Layfield's manufactured secondary containment material.



HAZGARD Material Properties

6 Jun 2012 HAZGARD® Minimum Material Properties						
Style	ASTM	HAZGARD 100	HAZGARD 250	HAZGARD 535	HAZGARD 1000	HAZGARD 5000 ^{HT}
Thickness (Nominal)	D1593	30 mil 0.75 mm	38 mil 0.95 mm	35 mil 0.88 mm	27 mil 0.68 mm	30 mil 0.75 mm
Thickness Minimum	D1593	28.5 mil 0.72 mm	36 mil 0.91 mm	33 mil 0.84 mm	26 mil 0.65 mm	30 mil 0.75 mm
Tensile Strength	D882 ¹ D751 ²	57 ppi ¹ 10 N/mm	180 lbs ² 800 N	300 lbs ² 1330 N	350 lbs ² 1555 N	600 lbs ² 2700 N
Elongation	D882 ¹ D751 ²	450 % ¹	25 % ²	1000 % ²	25 % ²	25 % ²
Tear Strength	D1004 ¹ D751B ²	6 lbs ¹ 26.7 N	22 lbs ² 98 N		150 lbs ² 667 N	125 lbs ² 556 N
Low Temperature	D1790 ¹ D2136 ²	-22°F ¹ -30°C	-22°F ² -30°C	-40°F ¹ -40°C	-45°F ² -43°C	-22°F ² -30°C

Note: Superscript numbers indicate the test methods used for each material.

Shop Seam Strengths

20 Dec 2011 HAZGARD® Minimum Shop Seam Strengths						
Style	ASTM	HAZGARD 100	HAZGARD 250	HAZGARD 535	HAZGARD 1000	HAZGARD 5000 ^{HT}
Heat Bonded Seam Strength	D6392 25 mm 1" Strip	37 ppi 6.5 N/mm	100 ppi 17.5 N/mm	55 ppi 9.6 N/mm	100 ppi 17.5 N/mm	210 ppi 36.8 N/mm
Heat Bonded Peel Adhesion Strength	D6392 25 mm 1" Strip	19 ppi 3.3 N/mm	20 ppi 3.5 N/mm	45 ppi 7.9 N/mm	15 ppi 2.6 N/mm	20 ppi 3.5 N/mm

Field Seam Strengths

20 Dec 2011 HAZGARD® Minimum Field Seam Strengths						
Style	ASTM	HAZGARD 100	HAZGARD 250	HAZGARD 535	HAZGARD 1000	HAZGARD 5000 ^{HT}
Heat Bonded Seam Strength	D6392 25 mm 1" Strip	Solvent 28 ppi 5.0 N/mm	80 ppi 14 N/mm	55 ppi 9.6 N/mm	80 ppi 14 N/mm	140 ppi 24.5 N/mm
Heat Bonded Peel Adhesion Strength	D6392 25 mm 1" Strip	Solvent 10 ppi 1.7 N/mm	15 ppi 2.6 N/mm	45 ppi 7.9 N/mm	15 ppi 2.6 N/mm	15 ppi 2.6 N/mm



NUNA EAST LTD

Section 10

Construction Pictures



















NUNA EAST LTD

Section 11

Signature Log

Appendix E

Additional Survey Data

Port Tank Farm New Access Ramp As Built - 29Oct2014.asc

0045	7976091.024301	503692.114665	11.688	ZGrv
0046	7976091.631327	503668.128927	11.965	ZGrv
0047	7976092.805417	503652.557394	13.980	ZGrv
0048	7976092.925925	503647.169591	12.505	ZGrv
0049	7976092.570082	503622.516112	12.791	ZGrv
0050	7976092.072632	503597.544422	13.009	ZGrv
0051	7976093.195012	503581.571946	13.148	ZGrv
0052	7976096.620935	503576.844672	13.469	ZGrv
0053	7976101.356807	503574.326026	13.415	ZGrv
0054	7976106.827704	503572.589605	13.491	ZGrv
0055	7976133.513732	503572.226613	13.351	ZGrv
0056	7976181.628935	503571.773593	12.335	ZGrv
0057	7976216.789728	503570.903615	12.752	ZGrv
0058	7976292.936431	503570.563640	10.657	ZGrv
0059	7976296.143955	503571.346061	10.569	ZGrv
0060	7976300.451967	503574.813285	10.321	ZGrv
0062	7976305.199913	503581.367530	10.039	ZGrv
0063	7976306.060393	503612.427954	9.943	ZGrv
0064	7976306.853950	503638.093958	9.911	ZGrv
0067	7976306.789793	503654.899819	9.857	ZGrv
0068	7976304.873552	503701.297789	9.940	ZGrv
0069	7976300.140502	503709.422464	9.843	ZGrv
0070	7976292.687541	503714.082011	9.903	ZGrv
0071	7976266.337712	503711.672554	11.112	ZGrv
0072	7976225.650365	503710.144893	12.574	ZGrv
0073	7976214.848084	503708.818164	12.730	ZGrv
0074	7976211.205088	503706.348085	12.476	ZGrv
0075	7976210.352283	503704.754097	12.332	ZGrv
0076	7976213.088056	503702.705971	12.201	ZGrv
0077	7976223.393949	503700.945363	11.316	XGrv
0078	7976222.330054	503695.843511	11.262	ZGrv
0079	7976209.733161	503697.556173	11.247	ZGrv
0080	7976189.906527	503697.609583	12.162	ZGrv
0081	7976188.548075	503704.168136	12.282	ZGrv
0082	7976185.296155	503707.742512	12.373	ZGrv
0083	7976177.955251	503706.384932	12.469	ZGrv
0084	7976177.863954	503710.864484	12.449	ZGrv
0085	7976162.896792	503711.306773	11.587	ZGrv
0086	7976162.017745	503709.135099	12.405	ZGrv
0087	7976131.283628	503709.262208	12.840	ZGrv
0088	7976098.264950	503708.989002	11.623	ZGrv
0089	7976092.411242	503702.844977	11.606	ZGrv
0090	7976091.265334	503692.051959	11.691	XGrv

Port Tank Farm As Built - 8Aug2014.ASC

0001	7976293.940	503576.962	10.366	28
01	7976304.200	503853.830	10.950	node
0002	7976296.680	503581.772	10.040	28
02	7976303.900	503894.480	10.550	node
0003	7976297.050	503590.464	9.865	28
03	7976280.700	503894.480	10.550	node
0004	7976297.050	503599.016	9.793	28
04	7976280.400	503853.830	10.950	node
0005	7976296.890	503607.472	9.822	28
05	7976305.200	503852.830	10.950	node
0006	7976296.600	503615.732	9.836	28
06	7976279.400	503852.830	10.950	node
0007	7976296.530	503623.916	9.828	28
07	7976300.600	503858.130	10.830	node
0008	7976296.690	503632.723	9.798	28
08	7976300.600	503890.980	10.670	node
0009	7976296.980	503640.775	9.685	28
09	7976294.100	503890.980	10.670	node
0010	7976297.140	503649.016	9.715	28
10	7976294.100	503858.130	10.830	node
0011	7976296.840	503656.986	9.857	28
11	7976290.500	503858.130	10.830	node
0012	7976296.070	503665.049	9.914	28
12	7976290.500	503890.980	10.670	node
0013	7976296.500	503672.760	9.918	27
13	7976284.000	503890.980	10.670	node
0014	7976296.740	503680.328	9.800	28
14	7976284.000	503858.130	10.830	node
0015	7976296.680	503689.167	9.862	28
15	7976280.700	503861.760	10.710	node
0016	7976296.640	503698.045	10.029	28
16	7976283.850	503861.760	10.710	node
0017	7976294.830	503703.792	10.072	28
17	7976290.650	503861.760	10.710	node
0018	7976292.760	503706.604	10.132	28
18	7976293.950	503861.760	10.710	node
0019	7976290.260	503709.537	9.926	28
19	7976300.750	503861.760	10.710	node
0020	7976286.660	503711.153	9.827	28
20	7976303.900	503861.760	10.710	node
0021	7976282.310	503710.669	10.160	28
21	7976300.600	503852.830	10.950	node
0022	7976274.160	503709.923	10.427	28
22	7976284.000	503852.830	10.950	node
0023	7976266.790	503709.319	11.089	28
23	7976300.600	503839.340	10.410	node
0024	7976260.570	503707.718	11.761	28
24	7976284.000	503840.050	10.440	node
0025	7976256.850	503706.505	12.348	28
0026	7976256.090	503705.315	12.624	128
0027	7976261.480	503714.495	11.395	28
0028	7976253.460	503714.268	11.688	28
0029	7976249.200	503713.374	11.903	28
0030	7976243.920	503709.981	12.066	28
30	7976298.150	503896.630	9.900	node
0031	7976241.360	503707.592	12.064	28
31	7976298.150	503904.630	9.850	node
0032	7976233.560	503707.042	12.248	28
32	7976286.450	503904.630	9.850	node
0033	7976225.070	503706.423	12.457	28
33	7976286.450	503896.630	9.900	node
0034	7976217.150	503706.349	12.767	128
34	7976304.200	503895.960	10.750	node

Port Tank Farm As Built - 8Aug2014.ASC

0035	7976216.480	503705.927	12.825	27
35	7976301.000	503895.960	10.750	node
0036	7976225.040	503705.855	12.596	27
36	7976301.000	503907.330	10.750	node
0037	7976233.060	503705.801	12.608	27
37	7976283.600	503907.330	10.750	node
0038	7976240.090	503705.908	12.654	27
38	7976283.600	503895.960	10.750	node
0039	7976241.780	503705.218	12.934	27
39	7976280.400	503895.960	10.750	node
0040	7976244.200	503707.121	13.025	27
40	7976305.200	503896.960	10.750	node
0041	7976246.290	503709.349	13.155	27
41	7976302.000	503896.960	10.750	node
0042	7976249.720	503711.571	13.068	27
42	7976302.000	503908.330	10.750	node
0043	7976253.380	503712.114	12.868	27
43	7976282.600	503908.330	10.750	node
0044	7976258.290	503713.031	12.259	27
44	7976282.600	503896.960	10.750	node
0045	7976260.690	503713.944	11.840	127
45	7976279.400	503896.960	10.750	node
0046	7976261.710	503714.009	11.485	28
46	7976280.970	503894.780	10.370	node
0047	7976258.980	503712.402	11.978	28
47	7976280.970	503895.280	10.370	node
0048	7976254.580	503711.170	12.422	28
48	7976286.460	503894.780	10.350	node
0049	7976251.140	503709.276	12.605	28
49	7976286.460	503895.280	10.350	node
0050	7976246.490	503707.269	12.715	28
50	7976298.150	503894.780	10.350	node
0051	7976243.550	503705.309	12.727	128
51	7976298.150	503895.280	10.350	node
0052	7976238.910	503704.679	12.618	27
52	7976303.640	503894.780	10.370	node
0053	7976231.140	503704.846	12.600	27
53	7976303.640	503895.280	10.370	node
0054	7976223.780	503704.726	12.539	27
0055	7976216.510	503705.029	12.877	27
0056	7976209.170	503704.795	12.613	27
0057	7976201.840	503704.274	12.326	27
0058	7976194.110	503704.246	12.316	27
0059	7976185.860	503704.330	12.327	27
0060	7976178.380	503704.127	12.336	27
60	7976293.300	503906.430	10.450	node
0061	7976172.040	503704.102	12.279	27
61	7976293.300	503906.210	10.300	node
0062	7976165.730	503704.131	12.317	27
62	7976303.300	503908.330	10.450	node
0063	7976158.030	503704.027	12.257	27
63	7976293.300	503910.690	9.980	node
0064	7976150.290	503704.003	12.457	27
64	7976293.750	503907.330	10.750	node
0065	7976144.270	503703.892	13.025	27
65	7976293.750	503903.330	10.750	node
0066	7976137.560	503704.786	13.174	127
66	7976293.750	503910.960	10.280	node
0067	7976136.320	503705.297	13.147	28
67	7976294.750	503910.690	10.280	node
0068	7976131.300	503706.682	12.899	28
68	7976294.750	503908.330	10.750	node
0069	7976123.240	503708.011	12.413	28

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69	7976291.300	503906.430	10.450	node
0070	7976115.310	503708.901	12.148	28
70	7976291.300	503906.210	10.300	node
0071	7976107.310	503708.917	12.003	28
71	7976291.300	503908.330	10.450	node
0072	7976101.430	503708.969	11.821	28
72	7976291.300	503910.670	9.980	node
0073	7976098.460	503708.125	11.714	28
73	7976290.850	503907.330	10.750	node
0074	7976096.040	503706.656	11.715	28
74	7976290.850	503908.330	10.750	node
0075	7976094.920	503703.653	11.717	28
75	7976291.310	503907.330	10.450	node
0076	7976094.080	503700.021	11.710	28
76	7976290.850	503910.670	10.280	node
0077	7976093.540	503692.204	11.721	28
77	7976289.850	503910.670	10.280	node
0078	7976093.890	503683.794	11.809	28
78	7976289.850	503908.330	10.750	node
0079	7976094.560	503674.717	11.894	28
79	7976293.300	503907.330	10.450	node
0080	7976095.250	503667.784	11.922	28
0081	7976094.960	503658.822	12.110	28
0082	7976095.210	503650.960	12.180	28
0083	7976095.720	503643.865	12.443	28
0084	7976096.210	503635.599	12.499	28
0085	7976096.510	503627.763	12.646	28
0086	7976096.970	503618.744	12.847	28
0087	7976097.560	503609.836	12.885	28
0088	7976097.510	503605.142	12.922	128
0089	7976098.150	503604.916	13.137	27
0090	7976098.580	503613.311	13.037	27
0091	7976098.330	503621.222	13.081	27
0092	7976098.170	503629.789	13.034	27
0093	7976098.590	503639.760	13.088	27
0094	7976098.520	503649.260	13.095	27
0095	7976098.480	503657.900	13.079	27
0096	7976098.520	503665.937	13.089	27
0097	7976098.740	503673.502	13.048	27
0098	7976098.330	503682.736	13.213	27
0099	7976097.950	503691.301	13.043	27
0100	7976097.570	503697.167	12.856	27
0101	7976098.360	503700.911	12.961	27
0102	7976100.690	503703.800	13.010	27
0103	7976110.360	503705.834	13.066	27
0104	7976119.210	503705.596	13.065	27
0105	7976128.950	503705.464	13.063	27
0106	7976136.990	503704.802	13.154	27
0107	7976129.540	503704.680	13.090	27
0108	7976121.440	503704.759	13.124	27
0109	7976112.630	503704.784	13.143	27
0110	7976104.490	503704.482	13.185	27
0111	7976102.660	503703.766	13.129	27
0112	7976100.680	503701.888	13.113	27
0113	7976099.490	503699.072	13.123	27
0114	7976099.290	503689.789	13.137	27
0115	7976099.270	503681.038	13.139	27
0116	7976099.450	503671.765	13.087	27
0117	7976099.530	503667.178	13.062	27
0118	7976099.430	503664.619	13.115	27
0119	7976099.510	503656.159	13.099	27
0120	7976099.620	503647.451	13.049	27
0121	7976099.970	503643.850	12.961	27

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0122	7976099.700	503640.490	12.994	27
0123	7976099.530	503631.933	13.098	27
0124	7976099.770	503622.932	12.947	27
0125	7976099.580	503613.263	13.122	27
0126	7976099.420	503604.989	13.196	27
0127	7976099.440	503602.435	13.223	27
0128	7976099.570	503599.554	13.157	27
0129	7976099.420	503592.309	13.279	27
0130	7976100.270	503591.224	13.274	27
0131	7976102.920	503591.828	12.815	27
0132	7976105.550	503593.944	12.000	27
0133	7976106.530	503596.135	11.804	127
0134	7976110.050	503586.722	11.884	27
0135	7976107.330	503587.492	12.189	27
0136	7976101.950	503587.049	12.928	27
0137	7976099.860	503586.255	13.237	27
0138	7976099.770	503582.093	13.437	27
0139	7976101.760	503579.430	13.549	27
0140	7976105.590	503577.946	13.411	27
0141	7976112.870	503577.406	13.478	27
0142	7976121.080	503577.856	13.328	27
0143	7976124.930	503578.538	13.006	27
0144	7976131.990	503578.393	12.997	27
0145	7976141.600	503578.234	13.117	27
0146	7976150.010	503578.117	12.889	27
0147	7976159.120	503578.213	12.538	27
0148	7976167.710	503578.705	12.257	27
0149	7976177.940	503578.725	12.225	27
0150	7976184.740	503578.695	12.212	27
0151	7976193.080	503578.740	12.209	27
0152	7976203.720	503578.538	12.249	27
0153	7976211.190	503578.446	12.391	27
0154	7976220.320	503578.106	12.577	27
0155	7976230.060	503578.164	12.512	27
0156	7976239.790	503578.131	12.562	27
0157	7976248.640	503578.149	12.462	27
0158	7976258.020	503577.978	12.594	27
0159	7976266.340	503578.034	12.622	27
0160	7976276.010	503578.054	12.593	27
0161	7976284.410	503578.216	12.627	27
0162	7976287.160	503578.828	12.615	27
0163	7976289.510	503580.880	12.616	27
0164	7976290.460	503582.528	12.639	27
0165	7976290.910	503586.762	12.570	27
0166	7976291.120	503596.344	12.545	27
0167	7976291.100	503607.371	12.573	27
0168	7976290.980	503617.102	12.449	27
0169	7976291.020	503626.307	12.515	27
0170	7976290.990	503635.178	12.521	27
0171	7976290.860	503643.592	12.470	27
0172	7976290.990	503652.519	12.549	27
0173	7976291.030	503663.059	12.499	27
0174	7976290.910	503680.223	12.516	27
0175	7976291.000	503688.012	12.578	27
0176	7976290.960	503696.614	12.571	27
0177	7976290.710	503699.349	12.543	27
0178	7976289.870	503701.658	12.585	27
0179	7976288.400	503703.197	12.568	27
0180	7976286.210	503704.086	12.551	27
0181	7976283.620	503704.627	12.544	27
0182	7976276.270	503704.868	12.578	27
0183	7976268.250	503704.912	12.634	27
0184	7976260.340	503704.765	12.591	27

Port Tank Farm As Built - 8Aug2014.ASC

0185	7976257.900	503704.159	12.700	27
0186	7976257.520	503700.901	12.405	27
0187	7976259.510	503697.226	12.363	27
0188	7976261.000	503693.924	12.018	27
0189	7976261.960	503692.210	11.855	27
0190	7976263.570	503689.144	11.116	27
0191	7976263.910	503687.983	11.026	27
0192	7976264.310	503687.406	10.942	127
0193	7976256.760	503702.827	12.590	27
0194	7976257.690	503705.103	12.626	27
0195	7976259.700	503705.338	12.656	27
0196	7976268.290	503705.309	12.633	27
0197	7976277.040	503705.260	12.533	27
0198	7976285.160	503705.153	12.599	27
0199	7976287.870	503704.277	12.571	27
0200	7976290.940	503700.858	12.575	27
0201	7976291.560	503697.268	12.551	27
0202	7976291.410	503688.844	12.566	27
0203	7976291.490	503681.693	12.510	27
0204	7976291.650	503676.314	12.493	27
0205	7976291.640	503673.352	12.512	27
0206	7976291.380	503664.884	12.525	27
0207	7976291.330	503655.972	12.520	27
0208	7976291.470	503645.995	12.480	27
0209	7976291.320	503636.141	12.520	27
0210	7976291.400	503626.877	12.530	27
0211	7976291.400	503616.760	12.444	27
0212	7976291.600	503608.981	12.529	27
0213	7976291.610	503600.376	12.597	27
0214	7976291.560	503591.223	12.582	27
0215	7976291.570	503584.304	12.615	27
0216	7976290.890	503581.514	12.642	27
0217	7976289.410	503579.383	12.604	27
0218	7976287.090	503577.893	12.642	27
0219	7976285.090	503577.609	12.620	27
0220	7976276.790	503577.600	12.579	27
0221	7976268.670	503577.636	12.593	27
0222	7976260.590	503577.556	12.575	27
0223	7976251.920	503577.535	12.543	27
0224	7976244.150	503577.366	12.491	27
0225	7976233.810	503577.507	12.577	127
0226	7976234.350	503577.132	12.452	28
0227	7976242.260	503576.486	12.183	28
0228	7976250.620	503575.878	11.999	28
0229	7976258.730	503575.546	11.782	28
0230	7976267.720	503574.946	11.469	28
0231	7976276.000	503574.508	11.237	28
0232	7976284.340	503573.756	10.922	28
0233	7976288.740	503574.566	10.762	28
0234	7976291.740	503575.462	10.508	128
0235	7976261.010	503713.740	11.614	28
0236	7976257.480	503712.029	12.072	28
0237	7976252.860	503710.518	12.426	28
0238	7976248.060	503708.153	12.695	28
0239	7976244.360	503705.837	12.713	28
0240	7976240.780	503703.218	12.161	28
0241	7976236.520	503700.838	11.379	28
0242	7976231.740	503699.709	10.851	128
0243	7976238.510	503703.014	12.029	27
0244	7976234.000	503701.180	11.512	27
0245	7976229.260	503699.025	10.664	127
0246	7976236.260	503702.641	11.630	28
0247	7976231.470	503700.679	10.680	28

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0248	7976221.140	503699.723	10.597	28
0249	7976213.300	503699.965	10.562	28
0250	7976203.780	503699.886	10.654	28
0251	7976194.380	503699.992	10.597	28
0252	7976184.960	503699.927	10.686	28
0253	7976176.210	503700.829	10.838	28
0254	7976166.380	503701.147	10.944	28
0255	7976156.450	503701.193	10.883	28
0256	7976152.930	503701.100	11.026	28
0257	7976152.160	503699.941	10.896	28
0258	7976151.770	503692.112	10.932	28
0259	7976151.880	503682.442	10.904	28
0260	7976152.110	503672.077	10.871	28
0261	7976151.960	503663.780	10.879	28
0262	7976151.770	503654.642	10.941	28
0263	7976151.750	503646.066	10.991	28
0264	7976152.120	503636.110	10.959	28
0265	7976152.260	503625.629	10.888	28
0266	7976152.230	503615.743	10.946	28
0267	7976152.130	503605.574	10.938	28
0268	7976151.980	503596.526	11.005	28
0269	7976151.800	503587.274	11.034	28
0270	7976152.030	503583.156	11.158	28
0271	7976152.920	503582.064	11.226	28
0272	7976155.010	503581.677	11.053	28
0273	7976163.300	503581.869	10.996	28
0274	7976172.060	503581.808	10.992	28
0275	7976181.770	503582.084	10.952	28
0276	7976191.180	503582.071	10.829	28
0277	7976201.160	503581.960	10.818	28
0278	7976211.680	503582.262	10.623	28
0279	7976223.680	503582.170	10.677	28
0280	7976232.040	503582.174	10.641	28
0281	7976241.200	503582.135	10.669	28
0282	7976249.480	503582.061	10.760	28
0283	7976257.620	503582.115	10.709	28
0284	7976266.350	503582.219	10.673	28
0285	7976276.150	503582.065	10.630	28
0286	7976283.200	503582.235	10.658	28
0287	7976286.100	503582.539	10.798	28
0288	7976286.860	503584.722	10.663	28
0289	7976286.810	503593.622	10.662	28
0290	7976287.010	503602.971	10.706	28
0291	7976286.870	503613.102	10.651	28
0292	7976286.860	503622.976	10.733	28
0293	7976286.930	503634.477	10.603	28
0294	7976287.090	503643.585	10.671	28
0295	7976286.700	503653.471	10.617	28
0296	7976286.700	503661.652	10.629	28
0297	7976286.560	503671.896	10.718	28
0298	7976286.680	503679.924	10.702	28
0299	7976286.610	503689.996	10.720	28
0300	7976286.730	503696.303	10.666	28
0301	7976286.190	503699.247	10.629	28
0302	7976284.120	503700.490	10.719	28
0303	7976279.110	503700.671	10.762	28
0304	7976270.550	503701.064	10.794	28
0305	7976263.340	503700.159	10.771	28
0306	7976261.880	503699.333	10.843	28
0307	7976263.000	503695.998	10.639	28
0308	7976264.840	503691.681	10.412	28
0309	7976265.540	503686.895	10.437	128
0310	7976150.110	503700.527	11.590	27

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0311	7976149.910	503692.892	11.603	27
0312	7976149.810	503683.917	11.722	27
0313	7976149.720	503674.193	11.753	27
0314	7976149.650	503663.851	11.766	27
0315	7976149.790	503659.434	11.760	27
0316	7976149.570	503651.064	11.786	27
0317	7976149.480	503642.061	11.822	27
0318	7976149.610	503632.510	11.775	27
0319	7976149.650	503623.130	11.760	27
0320	7976150.000	503613.130	11.732	27
0321	7976150.110	503603.643	11.755	27
0322	7976149.840	503596.808	11.732	27
0323	7976149.930	503587.923	11.766	27
0324	7976150.470	503581.457	12.029	127
0325	7976149.940	503581.504	12.038	28
0326	7976141.970	503581.483	11.811	28
0327	7976133.380	503581.298	11.814	28
0328	7976124.730	503581.764	11.853	28
0329	7976118.540	503581.435	11.837	28
0330	7976111.120	503581.305	11.878	28
0331	7976105.140	503581.328	11.756	28
0332	7976103.610	503581.603	11.864	28
0333	7976103.190	503582.369	11.822	28
0334	7976102.420	503584.984	11.849	28
0335	7976102.740	503585.491	11.881	28
0336	7976104.230	503585.660	11.819	28
0337	7976108.580	503585.995	11.813	128
0338	7976106.020	503596.321	11.759	28
0339	7976105.180	503595.075	11.788	28
0340	7976103.750	503594.707	11.820	28
0341	7976103.200	503595.678	11.792	28
0342	7976103.340	503597.849	11.694	28
0343	7976102.550	503600.892	11.720	28
0344	7976102.590	503609.106	11.715	28
0345	7976102.630	503617.805	11.690	28
0346	7976102.680	503627.029	11.731	28
0347	7976102.710	503636.509	11.832	28
0348	7976102.750	503645.454	11.741	28
0349	7976102.400	503655.107	11.741	28
0350	7976102.370	503664.527	11.725	28
0351	7976102.480	503669.897	11.713	28
0352	7976102.410	503678.429	11.715	28
0353	7976102.240	503686.049	11.744	28
0354	7976102.340	503694.155	11.785	28
0355	7976102.350	503699.417	11.893	28
0356	7976103.240	503701.068	11.895	28
0357	7976105.160	503701.675	11.755	28
0358	7976113.030	503701.689	11.680	28
0359	7976121.870	503701.784	11.715	28
0360	7976130.200	503701.756	11.738	28
0361	7976137.740	503701.887	11.745	28
0362	7976143.410	503701.663	11.836	28
0363	7976149.780	503701.642	11.828	128
0364	7976205.450	503585.207	10.710	27
0365	7976196.460	503585.239	10.756	27
0366	7976187.210	503585.255	10.855	27
0367	7976178.590	503585.136	10.845	27
0368	7976169.770	503585.264	10.876	27
0369	7976161.340	503584.876	10.874	27
0370	7976155.580	503584.832	10.921	27
0371	7976155.270	503593.354	10.888	27
0372	7976155.320	503601.165	10.907	27
0373	7976155.370	503609.161	10.841	27

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0374	7976155.190	503616.930	10.880	27
0375	7976155.170	503622.349	10.856	127
0376	7976154.920	503633.961	10.849	27
0377	7976155.160	503639.981	10.827	27
0378	7976155.030	503650.116	10.915	127
0379	7976155.060	503657.716	10.829	27
0380	7976154.870	503664.030	10.822	27
0381	7976155.120	503671.229	10.888	127
0382	7976154.910	503676.949	10.876	27
0383	7976154.910	503684.965	10.902	27
0384	7976154.820	503692.944	10.880	27
0385	7976155.540	503698.231	10.892	27
0386	7976163.320	503698.359	10.901	27
0387	7976171.670	503698.184	10.747	127
0388	7976171.200	503697.148	10.586	28
0389	7976162.990	503697.559	10.574	28
0390	7976156.400	503697.140	10.400	28
0391	7976156.240	503689.598	10.393	28
0392	7976155.850	503678.220	10.480	128
0393	7976155.940	503669.717	10.534	28
0394	7976155.820	503664.104	10.347	28
0395	7976155.620	503657.979	10.460	128
0396	7976155.580	503649.892	10.755	28
0397	7976155.710	503642.515	10.782	28
0398	7976155.460	503634.437	10.723	128
0399	7976155.900	503621.314	10.694	28
0400	7976156.000	503612.899	10.660	28
0401	7976156.020	503604.506	10.682	28
0402	7976155.970	503596.514	10.725	28
0403	7976155.730	503588.814	10.694	28
0404	7976156.020	503585.322	10.729	28
0405	7976165.130	503585.566	10.661	28
0406	7976173.600	503586.258	10.634	28
0407	7976182.110	503586.191	10.629	28
0408	7976190.200	503586.564	10.603	28
0409	7976198.070	503586.431	10.541	28
0410	7976205.440	503586.173	10.530	128
0411	7976228.610	503602.708	10.481	28
0412	7976231.070	503600.248	10.499	28
0413	7976236.150	503597.340	10.432	28
0414	7976241.710	503595.709	10.445	28
0415	7976249.290	503596.106	10.335	28
0416	7976255.910	503598.851	10.374	28
0417	7976261.420	503603.619	10.406	128
0418	7976280.140	503645.021	10.652	28
0419	7976280.910	503643.049	10.633	28
0420	7976282.950	503642.331	10.661	28
0421	7976284.340	503643.456	10.680	28
0422	7976284.680	503650.766	10.652	28
0423	7976284.810	503653.279	10.632	28
0424	7976284.610	503659.077	10.658	28
0425	7976284.660	503664.455	10.681	28
0426	7976284.680	503669.280	10.631	28
0427	7976284.530	503672.847	10.628	28
0428	7976283.520	503674.714	10.604	28
0429	7976281.290	503674.574	10.631	28
0430	7976280.660	503673.713	10.621	28
0431	7976280.690	503669.482	10.542	28
0432	7976280.160	503665.226	10.572	28
0433	7976280.280	503660.094	10.649	28
0434	7976280.250	503654.613	10.543	28
0435	7976280.300	503648.524	10.618	528
0436	7976281.110	503648.094	10.909	27

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0437	7976281.360	503644.174	10.892	27
0438	7976282.440	503643.308	11.011	27
0439	7976283.750	503643.648	10.947	27
0440	7976284.130	503650.568	10.901	27
0441	7976284.150	503658.068	10.907	27
0442	7976283.960	503666.139	10.861	27
0443	7976283.950	503672.961	10.833	27
0444	7976282.740	503674.177	10.914	27
0445	7976281.490	503673.335	10.829	27
0446	7976281.120	503665.004	10.872	27
0447	7976281.220	503654.582	10.895	527
0448	7976291.790	503675.946	12.755	18
0449	7976290.820	503675.931	12.743	18
0450	7976290.830	503674.958	12.753	18
0451	7976291.810	503674.965	12.766	518
0452	7976299.570	503674.928	8.725	18
0453	7976300.540	503674.925	8.708	18
0454	7976300.550	503675.896	8.742	18
0455	7976299.580	503675.901	8.761	518
0456	7976285.870	503674.962	10.915	18
0457	7976286.830	503675.007	10.933	18
0458	7976286.820	503675.971	10.914	18
0459	7976285.850	503675.933	10.894	518
0460	7976282.700	503671.903	11.107	18
0461	7976282.740	503670.933	11.097	18
0462	7976283.680	503670.971	11.102	18
0463	7976283.670	503671.936	11.119	518
0464	7976283.610	503667.985	11.028	18
0465	7976282.660	503667.956	11.060	18
0466	7976282.680	503666.974	11.066	18
0467	7976283.640	503667.016	11.045	518
0468	7976283.650	503662.511	11.118	18
0469	7976282.690	503662.496	11.136	18
0470	7976282.700	503661.529	11.130	18
0471	7976283.680	503661.539	11.128	518
0472	7976283.670	503657.050	11.119	18
0473	7976282.700	503657.048	11.140	18
0474	7976282.700	503656.079	11.126	18
0475	7976283.670	503656.087	11.112	518
0476	7976283.640	503651.634	11.111	18
0477	7976282.690	503651.593	11.153	18
0478	7976282.730	503650.624	11.143	18
0479	7976283.690	503650.662	11.133	518
0480	7976283.670	503646.079	11.152	18
0481	7976282.720	503646.094	11.191	18
0482	7976282.710	503645.126	11.182	18
0483	7976283.670	503645.114	11.163	518
0484	7976279.410	503640.969	10.878	18
0485	7976278.450	503640.993	10.878	18
0486	7976278.480	503641.959	10.899	18
0487	7976279.440	503641.935	10.877	518
0488	7976273.710	503641.990	10.917	18
0489	7976272.740	503641.902	10.895	18
0490	7976272.820	503640.931	10.868	18
0491	7976273.790	503641.018	10.905	518
0492	7976267.910	503640.986	10.921	18
0493	7976266.940	503640.962	10.910	18
0494	7976266.920	503641.931	10.931	18
0495	7976267.890	503641.964	10.919	518
0496	7976261.940	503641.951	10.931	18
0497	7976260.950	503641.957	10.940	18
0498	7976260.950	503640.977	10.921	18
0499	7976261.920	503640.972	10.920	518

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0500	7976252.920	503640.995	11.101	18
0501	7976253.880	503640.991	11.076	18
0502	7976253.860	503641.951	11.051	18
0503	7976252.880	503641.954	11.061	518
0504	7976206.080	503583.141	11.002	18
0505	7976205.210	503583.169	11.012	18
0506	7976205.120	503582.167	11.036	18
0507	7976206.080	503582.169	11.033	518
0508	7976203.090	503582.159	11.048	18
0509	7976202.130	503582.161	11.034	18
0510	7976202.120	503583.137	11.021	18
0511	7976203.080	503583.141	11.034	518
0512	7976200.050	503583.139	11.026	18
0513	7976199.080	503583.144	11.028	18
0514	7976199.090	503582.156	11.037	18
0515	7976200.060	503582.152	11.036	518
0516	7976198.530	503577.642	12.485	18
0517	7976198.560	503578.572	12.441	18
0518	7976197.600	503578.582	12.426	18
0519	7976197.580	503577.626	12.476	518
0520	7976180.260	503578.924	12.503	18
0521	7976180.260	503577.941	12.534	18
0522	7976179.290	503577.941	12.516	18
0523	7976179.290	503578.868	12.497	518
0524	7976098.190	503666.466	13.356	18
0525	7976099.170	503666.458	13.342	18
0526	7976099.190	503667.451	13.322	18
0527	7976098.200	503667.465	13.327	518
0528	7976102.700	503669.115	11.927	18
0529	7976102.700	503670.110	11.926	18
0530	7976103.700	503670.122	11.958	18
0531	7976103.700	503669.136	11.959	518
0532	7976103.710	503671.543	11.967	18
0533	7976103.720	503672.525	11.951	18
0534	7976102.720	503672.513	11.920	18
0535	7976102.710	503671.555	11.909	518
0536	7976102.680	503674.550	11.979	18
0537	7976102.710	503675.517	11.954	18
0538	7976103.690	503675.526	11.950	18
0539	7976103.680	503674.536	11.977	518
0540	7976103.690	503677.593	11.963	18
0541	7976103.700	503678.580	11.956	18
0542	7976102.700	503678.590	11.911	18
0543	7976102.700	503677.618	11.924	518
0544	7976102.670	503680.534	11.961	18
0545	7976102.690	503681.514	11.947	18
0546	7976103.670	503681.494	11.925	18
0547	7976103.650	503680.523	11.946	518
0548	7976103.670	503683.559	11.994	18
0549	7976103.680	503684.532	11.988	18
0550	7976102.690	503684.528	12.019	18
0551	7976102.690	503683.554	12.028	518
0552	7976102.730	503686.460	11.972	18
0553	7976102.710	503687.440	11.946	18
0554	7976103.690	503687.471	11.958	18
0555	7976103.720	503686.479	11.977	518
0556	7976103.680	503689.491	11.950	18
0557	7976103.700	503690.467	11.960	18
0558	7976102.710	503690.476	11.959	18
0559	7976102.700	503689.504	11.940	518
0560	7976102.700	503692.449	11.967	18
0561	7976102.710	503693.430	11.944	18
0562	7976103.710	503693.404	11.977	18

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0563	7976103.670	503692.437	11.973	518
0564	7976103.700	503695.583	11.969	18
0565	7976103.680	503696.556	11.962	18
0566	7976102.680	503696.542	11.959	18
0567	7976102.720	503695.558	11.943	518
0568	7976102.700	503699.256	11.991	18
0569	7976102.750	503700.233	11.978	18
0570	7976103.730	503700.204	11.968	18
0571	7976103.700	503699.233	11.973	518
0572	7976106.430	503700.443	11.930	18
0573	7976107.420	503700.470	11.933	18
0574	7976107.390	503701.467	11.880	18
0575	7976106.420	503701.431	11.879	518
0576	7976109.460	503701.432	11.874	18
0577	7976110.440	503701.454	11.872	18
0578	7976110.450	503700.456	11.913	18
0579	7976109.480	503700.441	11.908	518
0580	7976112.510	503700.431	11.919	18
0581	7976113.480	503700.461	11.918	18
0582	7976113.440	503701.436	11.875	18
0583	7976112.490	503701.424	11.879	518
0584	7976115.410	503701.437	11.916	18
0585	7976116.380	503701.433	11.916	18
0586	7976116.390	503700.464	11.937	18
0587	7976115.400	503700.437	11.940	518
0588	7976118.450	503700.438	11.974	18
0589	7976119.420	503700.473	12.012	18
0590	7976119.400	503701.448	11.960	18
0591	7976118.430	503701.432	11.954	518
0592	7976121.420	503701.431	11.968	18
0593	7976122.380	503701.423	11.986	18
0594	7976122.380	503700.434	12.018	18
0595	7976121.400	503700.446	11.988	518
0596	7976124.450	503700.448	12.045	18
0597	7976125.420	503700.452	12.048	18
0598	7976125.410	503701.437	12.008	18
0599	7976124.440	503701.437	12.016	518
0600	7976127.470	503701.449	12.003	18
0601	7976128.440	503701.459	11.983	18
0602	7976128.450	503700.467	12.014	18
0603	7976127.470	503700.458	12.024	518
0604	7976130.500	503700.441	12.008	18
0605	7976131.480	503700.461	12.007	18
0606	7976131.450	503701.453	11.975	18
0607	7976130.480	503701.439	11.969	518
0608	7976133.540	503701.449	11.984	18
0609	7976134.510	503701.418	11.961	18
0610	7976134.480	503700.428	11.981	18
0611	7976133.510	503700.452	11.995	518
0612	7976136.490	503700.437	11.976	18
0613	7976137.470	503700.422	11.969	18
0614	7976137.480	503701.411	11.951	18
0615	7976136.510	503701.433	11.963	518
0616	7976139.430	503701.448	11.964	18
0617	7976140.400	503701.439	11.947	18
0618	7976140.390	503700.451	11.956	18
0619	7976139.410	503700.458	11.970	518
0620	7976142.440	503700.443	11.981	18
0621	7976143.420	503700.434	11.996	18
0622	7976143.420	503701.424	12.009	18
0623	7976142.450	503701.427	12.000	518
0624	7976145.390	503701.425	12.102	18
0625	7976146.360	503701.426	12.091	18

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0626	7976146.380	503700.431	12.066	18
0627	7976145.390	503700.434	12.076	518
0628	7976148.490	503700.434	11.930	18
0629	7976149.480	503700.460	11.867	18
0630	7976149.450	503701.460	11.902	18
0631	7976148.480	503701.430	11.968	518
0632	7976197.080	503582.575	10.992	18
0633	7976197.090	503583.558	10.996	18
0634	7976196.100	503583.565	11.013	18
0635	7976196.110	503582.584	11.015	518
0636	7976191.060	503582.632	11.018	18
0637	7976191.050	503583.614	11.038	18
0638	7976190.080	503583.596	11.056	18
0639	7976190.090	503582.616	11.040	518
0640	7976185.100	503582.625	11.086	18
0641	7976185.090	503583.611	11.088	18
0642	7976184.110	503583.591	11.077	18
0643	7976184.120	503582.616	11.073	518
0644	7976179.060	503582.133	11.103	18
0645	7976179.070	503583.592	11.100	18
0646	7976178.090	503583.592	11.085	18
0647	7976178.080	503582.116	11.100	518
0648	7976173.080	503582.112	11.070	18
0649	7976173.100	503583.596	11.072	18
0650	7976172.120	503583.608	11.110	18
0651	7976172.100	503582.127	11.104	518
0652	7976168.020	503582.149	11.090	18
0653	7976168.000	503583.629	11.115	18
0654	7976167.030	503583.613	11.111	18
0655	7976167.050	503582.140	11.091	518
0656	7976162.870	503582.144	11.074	18
0657	7976162.870	503583.625	11.065	18
0658	7976161.890	503583.626	11.081	18
0659	7976161.890	503582.141	11.094	518
0660	7976157.850	503582.170	11.132	18
0661	7976157.860	503583.648	11.120	18
0662	7976156.880	503583.645	11.127	18
0663	7976156.880	503582.173	11.126	518
0664	7976154.310	503583.541	11.173	18
0665	7976152.840	503583.556	11.213	18
0666	7976152.850	503584.534	11.219	18
0667	7976154.330	503584.515	11.179	518
0668	7976154.350	503587.239	11.164	18
0669	7976152.870	503587.227	11.164	18
0670	7976152.860	503588.209	11.155	18
0671	7976154.350	503588.221	11.157	518
0672	7976154.360	503594.187	11.121	18
0673	7976152.880	503594.217	11.135	18
0674	7976152.900	503595.200	11.137	18
0675	7976154.380	503595.175	11.135	518
0676	7976152.890	503608.205	11.131	18
0677	7976154.380	503608.202	11.100	18
0678	7976154.380	503609.185	11.112	18
0679	7976152.900	503609.180	11.167	518
0680	7976154.870	503615.210	11.154	18
0681	7976152.890	503615.226	11.154	18
0682	7976152.890	503616.211	11.142	18
0683	7976154.870	503616.181	11.154	518
0684	7976165.010	503641.875	11.067	18
0685	7976164.990	503640.446	11.050	18
0686	7976165.970	503640.443	11.050	18
0687	7976165.970	503641.931	11.053	518
0688	7976170.760	503641.943	11.058	18

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0689	7976171.740	503641.938	11.084	18
0690	7976171.730	503640.448	11.077	18
0691	7976170.750	503640.455	11.059	518
0692	7976176.920	503640.491	11.050	18
0693	7976176.940	503641.975	11.068	18
0694	7976177.920	503641.963	11.083	18
0695	7976177.900	503640.483	11.052	518
0696	7976182.990	503640.476	11.034	18
0697	7976182.970	503641.957	11.012	18
0698	7976183.950	503641.970	11.008	18
0699	7976183.970	503640.480	10.992	518
0700	7976188.870	503640.467	10.923	18
0701	7976188.850	503641.957	10.912	18
0702	7976189.840	503641.963	10.905	18
0703	7976189.850	503640.483	10.921	518
0704	7976194.950	503640.531	10.917	18
0705	7976194.940	503641.982	10.923	18
0706	7976195.920	503641.994	10.916	18
0707	7976195.940	503640.508	10.908	518
0708	7976197.310	503643.356	11.028	18
0709	7976197.290	503644.344	10.997	18
0710	7976198.260	503644.361	10.996	18
0711	7976198.290	503643.381	11.015	518
0712	7976202.010	503641.985	10.926	18
0713	7976201.030	503641.987	10.904	18
0714	7976201.020	503640.503	10.909	18
0715	7976202.010	503640.500	10.936	518
0716	7976207.800	503642.015	10.974	18
0717	7976206.830	503642.018	10.984	18
0718	7976206.820	503640.535	10.965	18
0719	7976207.810	503640.535	10.952	518
0720	7976213.760	503641.996	10.901	18
0721	7976212.780	503642.013	10.946	18
0722	7976212.750	503640.530	10.945	18
0723	7976213.730	503640.514	10.921	518
0724	7976219.740	503641.975	10.892	18
0725	7976218.760	503641.973	10.915	18
0726	7976218.770	503640.484	10.906	18
0727	7976219.750	503640.494	10.892	518
0728	7976152.890	503601.207	11.141	18
0729	7976152.890	503602.190	11.137	18
0730	7976154.360	503602.189	11.138	18
0731	7976154.370	503601.205	11.127	518
0732	7976221.310	503636.688	10.935	18
0733	7976220.410	503636.714	10.933	18
0734	7976220.410	503635.732	10.960	18
0735	7976221.390	503635.730	10.959	518
0736	7976221.350	503631.727	10.925	18
0737	7976220.400	503631.745	10.940	18
0738	7976220.380	503630.764	10.923	18
0739	7976221.370	503630.753	10.906	518
0740	7976221.390	503626.930	10.852	18
0741	7976220.410	503626.940	10.856	18
0742	7976220.410	503625.956	10.853	18
0743	7976221.390	503625.947	10.845	518
0744	7976222.780	503622.179	10.830	18
0745	7976221.800	503622.164	10.834	18
0746	7976221.780	503621.240	10.833	18
0747	7976222.750	503621.196	10.829	518
0748	7976224.810	503618.059	11.344	18
0749	7976223.830	503618.052	11.334	18
0750	7976223.830	503617.081	11.338	18
0751	7976224.810	503617.077	11.347	518

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0752	7976224.360	503665.771	11.125	18
0753	7976224.370	503664.798	11.108	18
0754	7976223.400	503664.812	11.123	18
0755	7976223.400	503665.775	11.140	518
0756	7976216.730	503664.663	11.036	18
0757	7976217.700	503664.720	11.018	18
0758	7976217.760	503663.754	11.014	18
0759	7976216.790	503663.686	11.019	518
0760	7976219.670	503661.805	10.982	18
0761	7976218.690	503661.792	11.003	18
0762	7976218.700	503660.810	11.034	18
0763	7976219.670	503660.830	11.014	518
0764	7976222.650	503661.793	10.933	18
0765	7976221.670	503661.778	10.916	18
0766	7976221.680	503660.802	10.923	18
0767	7976222.660	503660.811	10.940	518
0768	7976221.270	503656.402	11.033	18
0769	7976220.300	503656.431	11.033	18
0770	7976220.280	503655.455	11.045	18
0771	7976221.260	503655.428	11.046	518
0772	7976221.290	503651.257	11.095	18
0773	7976220.310	503651.232	11.090	18
0774	7976220.340	503650.250	11.072	18
0775	7976221.310	503650.280	11.077	518
0776	7976221.290	503646.009	11.037	18
0777	7976220.310	503645.969	11.051	18
0778	7976220.350	503644.992	11.044	18
0779	7976221.330	503645.035	11.031	518
0780	7976221.770	503642.005	10.896	18
0781	7976222.750	503642.013	10.916	18
0782	7976222.750	503641.030	10.893	18
0783	7976221.770	503641.032	10.913	518
0784	7976227.670	503641.969	10.985	18
0785	7976226.700	503641.981	10.976	18
0786	7976226.670	503641.006	10.984	18
0787	7976227.650	503640.991	10.993	518
0788	7976232.320	503641.924	10.961	18
0789	7976233.300	503642.007	10.908	18
0790	7976233.380	503641.027	10.925	18
0791	7976232.410	503640.938	10.959	518
0792	7976239.680	503641.954	10.942	18
0793	7976238.710	503641.920	10.933	18
0794	7976238.750	503640.949	10.949	18
0795	7976239.720	503640.983	10.956	518
0796	7976245.440	503640.943	10.916	18
0797	7976245.450	503641.920	10.909	18
0798	7976244.450	503641.911	10.901	18
0799	7976244.470	503640.936	10.933	518
0800	7976246.540	503637.362	11.247	18
0801	7976246.560	503638.331	11.235	18
0802	7976245.580	503638.347	11.244	18
0803	7976245.560	503637.369	11.256	518
0804	7976245.140	503645.542	11.176	18
0805	7976246.110	503645.641	11.172	18
0806	7976246.200	503644.667	11.163	18
0807	7976245.230	503644.569	11.169	518
0808	7976147.570	503599.890	11.953	18
0809	7976146.590	503599.887	11.964	18
0810	7976146.590	503598.904	11.991	18
0811	7976147.560	503598.910	11.987	518
0812	7976141.660	503598.932	11.984	18
0813	7976140.690	503598.927	11.972	18
0814	7976140.690	503599.910	11.981	18

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0815	7976141.680	503599.913	11.981	518
0816	7976135.660	503599.928	12.049	18
0817	7976134.680	503599.925	12.035	18
0818	7976134.690	503598.945	12.027	18
0819	7976135.660	503598.951	12.046	518
0820	7976129.700	503598.945	12.028	18
0821	7976128.720	503598.921	12.030	18
0822	7976128.700	503599.897	12.023	18
0823	7976129.680	503599.925	12.004	518
0824	7976124.580	503601.943	12.014	18
0825	7976124.640	503600.968	12.001	18
0826	7976123.660	503600.924	12.036	18
0827	7976123.610	503601.891	12.049	518
0828	7976149.210	503660.776	12.051	18
0829	7976149.230	503659.790	12.051	18
0830	7976148.240	503659.774	12.045	18
0831	7976148.220	503660.754	12.047	518
0832	7976144.570	503660.796	12.024	18
0833	7976143.590	503660.783	12.029	18
0834	7976143.610	503659.806	12.006	18
0835	7976144.590	503659.817	12.001	518
0836	7976141.540	503663.834	12.051	18
0837	7976141.490	503664.807	12.072	18
0838	7976140.510	503664.767	12.087	18
0839	7976140.550	503663.785	12.057	518
0840	7976124.750	503646.813	12.117	18
0841	7976123.770	503646.790	12.096	18
0842	7976123.750	503647.785	12.109	18
0843	7976124.740	503647.800	12.141	518
0844	7976126.090	503645.044	11.928	18
0845	7976126.100	503644.058	11.931	18
0846	7976127.100	503644.068	11.911	18
0847	7976127.070	503645.051	11.942	518
0848	7976123.840	503641.921	11.849	18
0849	7976124.830	503641.929	11.881	18
0850	7976124.830	503640.940	11.871	18
0851	7976123.830	503640.935	11.842	518
0852	7976128.080	503638.756	11.865	18
0853	7976127.090	503638.790	11.868	18
0854	7976127.070	503637.810	11.828	18
0855	7976128.050	503637.783	11.822	518
0856	7976124.770	503635.744	11.829	18
0857	7976124.750	503634.766	11.873	18
0858	7976123.780	503634.785	11.856	18
0859	7976123.790	503635.767	11.830	518
0860	7976130.370	503641.932	11.914	18
0861	7976130.340	503640.960	11.892	18
0862	7976131.330	503640.949	11.866	18
0863	7976131.350	503641.918	11.884	518
0864	7976136.090	503641.917	11.757	18
0865	7976136.080	503640.928	11.769	18
0866	7976137.060	503640.922	11.759	18
0867	7976137.080	503641.907	11.751	518
0868	7976141.850	503641.899	12.027	18
0869	7976141.880	503640.915	12.030	18
0870	7976142.850	503640.931	12.032	18
0871	7976142.830	503641.908	12.035	518
0872	7976147.820	503641.877	12.074	18
0873	7976148.790	503641.873	12.098	18
0874	7976148.800	503640.898	12.107	18
0875	7976147.810	503640.891	12.085	518
0876	7976165.430	503645.036	11.197	18
0877	7976166.420	503645.015	11.177	18

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0878	7976166.450	503646.006	11.157	18
0879	7976165.460	503646.019	11.183	518
0880	7976160.020	503641.940	11.077	18
0881	7976159.050	503641.946	11.049	18
0882	7976159.040	503640.469	11.041	18
0883	7976160.010	503640.465	11.068	518
0884	7976152.890	503621.243	11.121	18
0885	7976152.890	503622.220	11.111	18
0886	7976154.860	503622.225	11.152	18
0887	7976154.860	503621.238	11.152	518
0888	7976154.820	503625.223	11.144	18
0889	7976154.670	503626.207	11.142	18
0890	7976152.920	503626.200	11.113	18
0891	7976152.880	503625.222	11.108	518
0892	7976152.860	503631.185	11.086	18
0893	7976152.860	503630.210	11.142	18
0894	7976152.860	503631.186	11.082	18
0895	7976154.850	503631.202	11.136	518
0896	7976152.880	503636.211	11.097	18
0897	7976152.880	503637.198	11.076	18
0898	7976154.860	503637.193	11.084	18
0899	7976154.870	503636.212	11.086	518
0900	7976154.870	503642.201	11.145	18
0901	7976154.860	503643.185	11.164	18
0902	7976152.880	503643.170	11.158	18
0903	7976152.890	503642.188	11.140	518
0904	7976152.880	503648.202	11.134	18
0905	7976152.880	503649.178	11.160	18
0906	7976154.860	503649.166	11.156	18
0907	7976154.860	503648.181	11.129	518
0908	7976156.240	503652.337	11.174	18
0909	7976155.260	503652.355	11.164	18
0910	7976155.260	503653.327	11.190	18
0911	7976156.230	503653.314	11.197	518
0912	7976154.860	503654.187	11.161	18
0913	7976154.860	503655.168	11.170	18
0914	7976152.880	503655.171	11.161	18
0915	7976152.880	503654.183	11.157	518
0916	7976152.870	503659.190	11.125	18
0917	7976152.860	503660.181	11.121	18
0918	7976154.850	503660.179	11.134	18
0919	7976154.850	503659.196	11.138	518
0920	7976163.910	503666.158	10.979	18
0921	7976162.930	503666.089	10.979	18
0922	7976163.000	503665.109	10.953	18
0923	7976163.970	503665.182	10.941	518
0924	7976158.170	503665.083	11.001	18
0925	7976157.180	503665.044	11.015	18
0926	7976157.120	503666.021	11.036	18
0927	7976158.100	503666.075	11.024	518
0928	7976154.850	503664.168	11.113	18
0929	7976154.860	503665.143	11.109	18
0930	7976152.890	503665.178	11.101	18
0931	7976152.870	503664.191	11.111	518
0932	7976152.850	503670.156	11.129	18
0933	7976152.880	503671.137	11.144	18
0934	7976154.360	503671.133	11.148	18
0935	7976154.350	503670.164	11.133	518
0936	7976155.340	503673.402	11.169	18
0937	7976155.290	503674.382	11.138	18
0938	7976156.250	503674.420	11.169	18
0939	7976156.310	503673.462	11.197	518
0940	7976153.860	503678.148	11.146	18

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0941	7976153.860	503677.166	11.173	18
0942	7976152.880	503677.159	11.173	18
0943	7976152.880	503678.138	11.160	518
0944	7976152.870	503685.114	11.159	18
0945	7976152.880	503684.134	11.156	18
0946	7976153.860	503684.143	11.149	18
0947	7976153.850	503685.122	11.163	518
0948	7976153.860	503692.102	11.137	18
0949	7976153.870	503691.117	11.144	18
0950	7976152.880	503691.121	11.150	18
0951	7976152.880	503692.103	11.147	518
0952	7976152.890	503699.052	11.107	18
0953	7976152.870	503698.072	11.073	18
0954	7976153.860	503698.071	11.091	18
0955	7976153.870	503699.059	11.121	518
0956	7976154.540	503699.470	11.126	18
0957	7976155.510	503699.445	11.111	18
0958	7976155.550	503700.430	11.098	18
0959	7976154.570	503700.456	11.112	518
0960	7976160.470	503700.415	11.131	18
0961	7976161.450	503700.413	11.119	18
0962	7976161.450	503699.429	11.119	18
0963	7976160.480	503699.432	11.141	518
0964	7976166.490	503699.427	11.101	18
0965	7976167.480	503699.433	11.083	18
0966	7976167.470	503700.424	11.100	18
0967	7976166.500	503700.417	11.109	518
0968	7976172.800	503699.434	11.026	18
0969	7976173.710	503699.522	11.020	18
0970	7976173.620	503700.493	11.075	18
0971	7976172.640	503700.399	11.079	518
0972	7976174.660	503704.013	12.497	18
0973	7976174.690	503704.989	12.544	18
0974	7976175.670	503704.974	12.549	18
0975	7976175.650	503703.994	12.502	518
0976	7976168.570	503705.148	12.563	18
0977	7976168.550	503704.164	12.534	18
0978	7976167.550	503704.200	12.539	18
0979	7976167.590	503705.171	12.568	518
0980	7976239.540	503602.363	15.165	14
0981	7976239.890	503599.943	12.158	27
0982	7976243.830	503598.803	12.110	27
0983	7976242.510	503601.673	15.166	14
0984	7976246.970	503601.715	15.166	14
0985	7976248.460	503599.250	12.108	27
0986	7976254.080	503601.651	12.202	27
0987	7976252.070	503603.380	15.165	14
0988	7976257.260	503607.694	15.164	14
0989	7976259.460	503606.410	12.107	27
0990	7976262.330	503612.254	12.177	27
0991	7976260.450	503615.065	15.183	14
0992	7976260.600	503618.591	15.184	14
0993	7976262.950	503618.718	12.155	27
0994	7976261.540	503624.821	12.158	27
0995	7976259.810	503622.686	15.183	14
0996	7976238.410	503596.523	10.452	28
0997	7976240.830	503596.175	10.449	28
0998	7976244.160	503595.314	10.512	28
0999	5000.000	5000.000	100.000	28
1000	7976252.780	503597.387	10.324	28
1001	7976257.610	503599.573	10.370	28
1002	7976261.830	503604.347	10.401	28
1003	7976264.430	503609.170	10.504	28

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1004	7976266.140	503615.359	10.571	28
1005	7976265.640	503621.014	10.619	28
1006	7976264.100	503625.834	10.672	28
1007	7976262.170	503629.000	10.680	28
1008	7976258.650	503633.581	10.804	28
1009	7976254.570	503637.531	10.771	28
1010	7976252.010	503640.068	10.871	28
1011	7976248.640	503639.738	10.732	28
1012	7976243.120	503639.450	10.744	28
1013	7976238.520	503638.714	10.716	28
1014	7976236.640	503636.718	10.729	28
1015	7976235.710	503637.343	10.709	28
1016	7976234.620	503638.520	10.712	28
1017	7976233.040	503639.658	10.712	28
1018	7976232.130	503640.343	10.695	128
1019	7976259.520	503628.532	12.189	27
1020	7976257.840	503626.634	15.168	14
1021	7976254.550	503630.138	15.183	14
1022	7976256.080	503631.782	12.195	27
1023	7976251.160	503635.027	12.189	27
1024	7976249.210	503632.882	15.184	14
1025	7976245.890	503633.508	15.178	14
1026	7976246.800	503636.009	12.110	27
1027	7976242.260	503636.047	12.108	27
1028	7976241.560	503633.262	15.182	14
1029	7976238.110	503632.171	15.185	14
1030	7976236.860	503633.773	12.079	27
1031	7976234.960	503635.222	11.694	27
1032	7976230.810	503639.815	10.976	127
1033	7976228.300	503638.682	10.815	27
1034	7976232.190	503633.882	11.521	27
1035	7976233.430	503631.245	12.117	27
1036	7976234.630	503630.048	15.175	14
1037	7976231.070	503626.045	15.175	14
1038	7976229.070	503626.406	12.232	27
1039	7976227.080	503621.475	12.202	27
1040	7976229.130	503621.513	15.171	14
1041	7976228.670	503616.316	15.172	14
1042	7976226.270	503615.498	12.146	27
1043	7976228.510	503609.007	12.149	27
1044	7976231.230	503608.785	15.177	14
1045	7976234.060	503605.535	15.170	514
1046	7976232.630	503603.385	12.130	27
1047	7976236.950	503600.868	12.125	127
1048	7976227.890	503637.698	10.686	28
1049	7976229.590	503634.411	10.698	28
1050	7976229.870	503633.133	10.709	28
1051	7976227.090	503629.453	10.692	28
1052	7976224.070	503622.816	10.609	28
1053	7976223.100	503615.330	10.568	28
1054	7976225.640	503607.940	10.520	28
1055	7976229.500	503601.994	10.486	28
1056	7976233.850	503598.924	10.455	128
1057	7976229.970	503671.528	14.882	14
1058	7976227.440	503672.544	11.930	27
1059	7976225.850	503667.010	11.936	27
1060	7976228.770	503666.945	14.908	14
1061	7976229.190	503661.113	14.866	14
1062	7976226.580	503660.105	11.894	27
1063	7976229.280	503654.361	11.751	27
1064	7976231.320	503656.372	14.873	14
1065	7976234.080	503653.182	14.875	14
1066	7976232.100	503651.274	11.726	27

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1067	7976232.530	503649.847	11.585	27
1068	7976231.110	503647.722	11.288	27
1069	7976229.490	503646.788	10.931	27
1070	7976228.320	503647.832	10.747	127
1071	7976224.840	503673.691	10.797	28
1072	7976223.440	503669.167	10.622	28
1073	7976223.150	503663.208	10.578	28
1074	7976224.160	503658.387	10.622	28
1075	7976226.290	503653.837	10.695	28
1076	7976228.520	503650.432	10.691	28
1077	7976229.510	503648.801	10.699	28
1078	7976228.940	503648.372	10.659	28
1079	7976227.870	503648.846	10.661	128
1080	7976231.770	503641.199	10.656	28
1081	7976231.870	503642.072	10.638	28
1082	7976234.610	503643.885	10.691	28
1083	7976236.260	503645.052	10.716	28
1084	7976238.620	503644.374	10.720	28
1085	7976242.410	503644.045	10.698	28
1086	7976245.640	503643.443	10.747	28
1087	7976250.170	503644.545	10.819	28
1088	7976230.690	503642.029	10.950	27
1089	7976233.510	503645.342	11.272	27
1090	7976235.820	503648.072	11.653	27
1091	7976237.600	503650.841	14.872	14
1092	7976241.190	503649.587	14.872	14
1093	7976239.480	503647.298	11.805	27
1094	7976245.110	503646.435	11.750	27
1095	7976244.550	503649.224	14.873	14
1096	7976249.250	503649.886	14.866	14
1097	7976249.750	503647.427	11.952	27
1098	7976254.140	503649.125	11.915	27
1099	7976253.150	503651.663	14.882	14
1100	7976257.620	503655.801	14.878	14
1101	7976259.690	503654.557	11.907	27
1102	7976262.320	503662.057	11.849	27
1103	7976260.280	503661.694	14.874	14
1104	7976260.360	503668.230	14.888	14
1105	7976261.930	503669.942	11.889	27
1106	7976259.510	503676.059	11.877	27
1107	7976257.880	503674.250	14.881	14
1108	7976254.590	503677.805	14.883	14
1109	7976258.220	503679.657	11.678	27
1110	7976256.460	503680.937	11.881	27
1111	7976253.560	503684.007	11.890	27
1112	7976253.550	503685.772	11.751	27
1113	7976253.120	503685.954	11.687	27
1114	7976254.130	503686.280	11.639	127
1115	7976249.160	503687.389	11.656	27
1116	7976246.800	503687.291	11.487	27
1117	7976246.390	503686.542	11.574	27
1118	7976245.730	503685.156	11.680	27
1119	7976255.050	503646.697	10.670	28
1120	7976259.740	503649.452	10.725	28
1121	7976263.310	503655.705	10.667	28
1122	7976264.920	503661.506	10.612	28
1123	7976265.290	503667.856	10.616	28
1124	7976262.440	503675.736	10.636	28
1125	7976258.530	503681.359	10.802	28
1126	7976255.190	503686.114	11.353	28
1127	7976254.150	503686.951	11.486	28
1128	7976253.190	503687.020	11.574	128
1129	7976249.810	503687.976	11.535	28

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1130	7976247.250	503688.040	11.192	28
1131	7976245.860	503688.361	10.565	28
1132	7976243.180	503687.810	10.497	28
1133	7976241.280	503686.582	10.492	28
1134	7976235.720	503684.610	10.591	28
1135	7976229.830	503680.306	10.777	28
1136	7976226.280	503676.427	10.779	128
1137	7976249.750	503680.421	14.877	14
1138	7976245.650	503681.212	14.883	14
1139	7976240.110	503682.743	11.898	27
1140	7976240.280	503680.625	14.885	14
1141	7976234.780	503677.822	14.897	14
1142	7976233.550	503680.128	11.863	27
1143	7976229.820	503676.008	11.856	127
1144	7976229.770	503671.065	14.864	514
1145	7976167.360	503667.280	11.601	27
1146	7976170.770	503670.993	11.712	27
1147	7976169.410	503671.916	14.876	14
1148	7976170.020	503675.682	14.845	14
1149	7976172.040	503676.083	11.708	27
1150	7976168.300	503681.073	11.602	27
1151	7976167.810	503678.875	14.872	14
1152	7976164.030	503679.630	14.848	14
1153	7976160.990	503680.730	11.646	27
1154	7976158.330	503676.880	11.763	27
1155	7976164.890	503664.520	10.481	28
1156	7976169.310	503665.611	10.527	28
1157	7976171.200	503669.918	11.467	28
1158	7976172.820	503674.419	11.610	28
1159	7976172.090	503679.570	10.981	28
1160	7976170.290	503682.822	10.461	28
1161	7976165.190	503684.070	10.477	28
1162	7976159.240	503682.376	10.355	28
1163	7976156.320	503679.136	10.433	28
1164	7976155.510	503675.520	10.768	28
1165	7976162.420	503679.035	14.870	14
1166	7976160.220	503676.541	14.856	14
1167	7976159.840	503674.640	14.865	14
1168	7976160.140	503672.830	14.859	14
1169	7976158.150	503672.431	11.803	27
1170	7976160.910	503668.095	11.695	27
1171	7976164.770	503667.167	11.629	527
1172	7976161.690	503670.624	14.879	14
1173	7976155.540	503672.033	10.652	28
1174	7976157.640	503668.007	10.495	28
1175	7976161.290	503665.731	10.587	528
1176	7976164.400	503669.445	14.892	14
1177	7976166.300	503669.575	14.894	514
1178	7976132.410	503674.096	15.373	14
1179	7976128.420	503676.334	15.368	14
1180	7976124.640	503677.048	15.371	14
1181	7976121.500	503676.763	15.371	14
1182	7976117.050	503674.855	15.358	14
1183	7976114.480	503672.566	15.360	14
1184	7976112.890	503670.270	15.351	14
1185	7976112.100	503668.428	15.347	14
1186	7976111.410	503664.948	15.339	14
1187	7976136.380	503671.373	12.783	27
1188	7976132.700	503676.066	12.798	27
1189	7976127.030	503677.865	12.903	27
1190	7976119.320	503677.120	12.886	27
1191	7976112.780	503672.189	12.860	27
1192	7976110.790	503667.507	12.950	27

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1193	7976110.300	503661.933	12.806	27
1194	7976111.380	503655.792	12.762	27
1195	7976140.810	503666.539	11.857	28
1196	7976138.480	503672.916	11.922	28
1197	7976134.250	503678.831	11.909	28
1198	7976125.560	503679.994	11.921	28
1199	7976116.070	503678.979	11.909	28
1200	7976109.940	503671.755	11.890	28
1201	7976108.610	503661.799	11.833	28
1202	7976109.790	503653.201	12.099	28
1203	7976111.960	503650.296	12.088	28
1204	7976111.750	503661.334	15.337	14
1205	7976113.730	503656.848	15.336	14
1206	7976116.430	503654.133	15.336	14
1207	7976119.410	503652.390	15.336	14
1208	7976121.500	503651.751	15.337	14
1209	7976123.650	503651.478	15.342	14
1210	7976112.840	503652.236	12.652	27
1211	7976118.560	503650.277	12.653	27
1212	7976122.770	503649.417	12.560	27
1213	7976115.150	503650.039	12.146	28
1214	7976120.320	503648.144	12.067	28
1215	7976126.570	503651.699	15.348	14
1216	7976131.000	503653.433	15.361	14
1217	7976133.580	503655.524	15.368	14
1218	7976135.570	503658.390	15.370	14
1219	7976136.990	503663.367	15.378	14
1220	7976136.150	503668.857	15.380	514
1221	7976126.750	503649.852	12.729	27
1222	7976133.500	503652.704	12.891	27
1223	7976137.790	503659.509	12.865	27
1224	7976138.360	503666.470	12.689	527
1225	7976125.900	503648.272	12.019	28
1226	7976133.200	503649.836	11.916	28
1227	7976138.180	503655.713	11.962	28
1228	7976140.650	503662.563	11.894	528
1229	7976164.580	503623.053	15.501	14
1230	7976167.200	503623.542	15.489	14
1231	7976168.890	503624.856	15.513	14
1232	7976169.880	503626.557	15.510	14
1233	7976170.050	503629.067	15.519	14
1234	7976169.300	503631.002	15.500	14
1235	7976169.140	503631.233	15.510	14
1236	7976157.670	503624.724	12.296	27
1237	7976160.230	503621.586	12.321	27
1238	7976164.480	503619.946	12.204	27
1239	7976169.480	503621.595	12.275	27
1240	7976172.630	503624.616	12.201	27
1241	7976171.940	503630.255	12.254	27
1242	7976170.140	503633.563	12.291	27
1243	7976167.090	503636.232	12.044	27
1244	7976162.610	503635.764	12.253	27
1245	7976154.200	503624.367	10.839	28
1246	7976156.690	503620.745	10.656	28
1247	7976163.280	503617.118	10.634	28
1248	7976171.210	503618.952	10.552	28
1249	7976176.680	503624.668	10.560	28
1250	7976175.230	503632.048	10.648	28
1251	7976167.480	503632.677	15.506	14
1252	7976170.340	503637.802	10.694	28
1253	7976166.110	503639.250	10.675	28
1254	7976160.660	503638.420	10.686	28
1255	7976165.080	503633.348	15.517	14

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1256	7976162.960	503632.924	15.515	14
1257	7976160.860	503631.283	15.512	14
1258	7976159.820	503628.508	15.509	14
1259	7976160.390	503625.840	15.505	514
1260	7976159.290	503634.478	12.310	27
1261	7976157.130	503629.381	12.281	27
1262	7976157.050	503626.701	12.294	527
1263	7976156.800	503636.262	10.705	28
1264	7976154.340	503629.184	10.904	528
1265	7976211.450	503657.373	14.908	14
1266	7976210.310	503655.336	14.908	14
1267	7976207.920	503652.569	14.913	14
1268	7976204.570	503650.142	14.908	14
1269	7976200.680	503648.669	14.921	14
1270	7976196.860	503648.239	14.918	14
1271	7976192.600	503648.879	14.925	14
1272	7976188.210	503650.905	14.933	14
1273	7976184.260	503654.616	14.935	14
1274	7976182.200	503658.217	14.927	14
1275	7976214.510	503664.698	11.770	27
1276	7976214.650	503661.592	11.765	27
1277	7976213.740	503657.970	11.715	27
1278	7976212.160	503654.890	11.759	27
1279	7976210.060	503651.958	11.809	27
1280	7976207.160	503649.521	11.794	27
1281	7976203.540	503647.631	11.671	27
1282	7976199.260	503646.539	11.708	27
1283	7976195.760	503646.141	11.681	27
1284	7976191.860	503646.488	11.714	27
1285	7976187.940	503648.462	11.778	27
1286	7976184.240	503650.972	11.778	27
1287	7976181.710	503654.263	11.653	27
1288	7976179.780	503659.782	11.729	27
1289	7976179.260	503664.870	11.729	27
1290	7976179.290	503666.349	11.722	27
1291	7976216.900	503670.489	10.718	28
1292	7976217.470	503662.788	10.598	28
1293	7976216.690	503658.178	10.620	28
1294	7976214.790	503654.164	10.723	28
1295	7976212.160	503650.088	10.702	28
1296	7976208.810	503647.175	10.764	28
1297	7976203.910	503644.927	10.670	28
1298	7976198.980	503643.792	10.618	28
1299	7976194.300	503643.407	10.676	28
1300	7976190.760	503644.111	10.709	28
1301	7976186.370	503646.105	10.736	28
1302	7976182.160	503648.896	10.751	28
1303	7976179.430	503653.421	10.752	28
1304	7976178.080	503657.904	10.720	128
1305	7976181.520	503668.199	14.940	14
1306	7976183.490	503672.794	14.935	14
1307	7976185.740	503675.614	14.926	14
1308	7976187.840	503677.371	14.925	14
1309	7976179.470	503669.253	11.662	27
1310	7976182.010	503673.698	11.719	27
1311	7976185.120	503677.750	11.753	27
1312	7976189.220	503679.980	11.732	27
1313	7976193.220	503681.377	11.763	27
1314	7976181.180	503674.706	11.332	28
1315	7976181.630	503678.030	10.617	28
1316	7976183.340	503680.633	10.466	28
1317	7976187.090	503682.467	10.480	28
1318	7976189.420	503683.762	10.383	28

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1319	7976192.710	503685.014	10.360	28
1320	7976196.640	503684.754	10.613	28
1321	7976199.920	503685.058	10.734	28
1322	7976191.260	503679.228	14.906	14
1323	7976195.250	503680.203	14.898	14
1324	7976198.800	503680.175	14.895	14
1325	7976202.740	503679.230	14.894	14
1326	7976207.200	503676.599	14.904	14
1327	7976209.980	503673.623	14.908	14
1328	7976211.270	503671.534	14.907	514
1329	7976196.970	503681.868	11.659	27
1330	7976201.790	503681.240	11.696	27
1331	7976205.880	503679.553	11.739	27
1332	7976210.010	503676.625	11.757	27
1333	7976212.960	503672.585	11.781	27
1334	7976214.600	503668.538	11.754	527
1335	7976212.030	503674.694	11.815	27
1336	7976213.690	503676.954	11.136	27
1337	7976216.520	503679.629	10.680	127
1338	7976211.560	503684.104	10.601	27
1339	7976209.850	503681.828	11.019	27
1340	7976207.360	503679.241	11.710	127
1341	7976204.410	503683.402	10.707	28
1342	7976207.260	503682.207	10.627	28
1343	7976208.340	503682.448	10.589	28
1344	7976210.970	503685.128	10.516	128
1345	7976216.510	503679.286	10.668	28
1346	7976215.350	503677.223	10.531	28
1347	7976214.610	503676.147	10.559	28
1348	7976216.320	503672.412	10.681	128
1349	7976234.380	503694.436	10.873	27
1350	7976238.150	503696.861	11.541	27
1351	7976242.440	503699.184	12.172	27
1352	7976245.470	503700.562	12.634	27
1353	7976246.700	503700.069	12.766	27
1354	7976247.630	503698.485	12.577	27
1355	7976249.200	503696.801	11.928	27
1356	7976251.030	503693.899	11.800	27
1357	7976250.010	503691.339	11.605	27
1358	7976247.950	503688.084	11.249	127
1359	7976245.850	503688.481	10.517	28
1360	7976245.580	503691.485	10.479	28
1361	7976245.160	503695.212	10.639	28
1362	7976242.330	503694.441	10.409	28
1363	7976239.200	503693.445	10.522	28
1364	7976234.720	503693.419	10.589	128
1365	7976188.370	503684.078	10.525	27
1366	7976187.350	503690.019	10.564	27
1367	7976193.660	503690.918	10.433	27
1368	7976194.300	503685.326	10.435	127
1369	7976194.090	503685.455	10.369	28
1370	7976193.350	503690.792	10.393	28
1371	7976187.760	503689.718	10.300	28
1372	7976188.650	503684.084	10.329	128
1373	7976179.670	503684.111	10.774	27
1374	7976179.860	503678.998	10.864	27
1375	7976180.320	503674.947	11.353	127
1376	7976178.220	503661.255	11.715	27
1377	7976173.490	503660.830	11.928	27
1378	7976172.480	503669.732	11.751	27
1379	7976172.830	503678.302	11.190	27
1380	7976173.390	503684.982	10.634	127
1381	7976172.520	503684.800	10.365	28

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1382	7976172.780	503682.869	10.360	28
1383	7976171.860	503681.845	10.374	28
1384	7976172.050	503680.540	10.646	128
1385	7976172.110	503671.739	11.476	28
1386	7976170.930	503669.054	11.303	28
1387	7976170.170	503666.507	10.637	28
1388	7976169.570	503665.152	10.434	28
1389	7976169.760	503663.805	10.439	28
1390	7976170.470	503661.959	10.814	28
1391	7976171.840	503659.755	11.306	28
1392	7976172.620	503659.215	11.251	28
1393	7976174.500	503657.298	10.972	28
1394	7976175.990	503656.205	10.657	128
1395	7976181.880	503681.427	10.371	28
1396	7976181.500	503679.647	10.405	28
1397	7976181.380	503676.060	11.082	128
1398	7976173.060	503678.262	11.182	340
1399	7976176.950	503678.963	10.993	340
1400	7976180.550	503679.494	10.735	340
1401	7976179.950	503672.813	11.489	340
1402	7976176.630	503672.485	11.478	340
1403	7976171.620	503672.177	11.675	340
1404	7976172.600	503666.423	11.726	340
1405	7976176.390	503666.792	11.812	340
1406	7976178.580	503666.523	11.766	340
1407	7976177.820	503662.664	11.752	340
1408	7976174.010	503662.505	11.837	340
1409	7976186.830	503586.927	10.583	340
1410	7976186.110	503597.328	10.444	340
1411	7976186.910	503608.138	10.540	340
1412	7976187.140	503618.930	10.503	340
1413	7976187.290	503629.555	10.620	340
1414	7976187.330	503640.159	10.685	340
1415	7976187.350	503642.561	10.683	340
1416	7976177.820	503643.734	10.660	340
1417	7976176.880	503655.252	10.717	340
1418	7976167.770	503644.144	10.692	340
1419	7976160.650	503643.776	10.701	340
1420	7976151.160	503644.039	11.239	340
1421	7976140.180	503643.888	11.737	340
1422	7976129.750	503643.598	11.820	340
1423	7976118.790	503643.059	11.985	340
1424	7976106.550	503642.065	11.765	340
1425	7976102.950	503642.049	11.730	340
1426	7976105.410	503653.372	11.897	340
1427	7976105.780	503664.576	11.732	340
1428	7976106.270	503676.141	11.747	340
1429	7976106.370	503686.818	11.763	340
1430	7976105.970	503698.452	11.732	340
1431	7976116.140	503698.640	11.765	340
1432	7976116.540	503691.671	11.791	340
1433	7976117.060	503684.364	11.767	340
1434	7976127.190	503684.829	11.816	340
1435	7976127.420	503691.669	11.803	340
1436	7976127.560	503699.214	11.850	340
1437	7976137.350	503699.457	11.744	340
1438	7976148.590	503699.283	11.613	340
1439	7976148.860	503694.139	11.682	340
1440	7976148.880	503686.177	11.741	340
1441	7976148.930	503676.364	11.681	340
1442	7976148.630	503666.114	11.764	340
1443	7976148.640	503661.313	11.807	340
1444	7976144.770	503661.451	11.830	340

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1445	7976143.230	503670.878	11.795	340
1446	7976140.710	503682.513	11.778	340
1447	7976138.380	503697.930	11.783	340
1448	7976152.240	503697.895	10.865	340
1449	7976152.190	503685.745	10.919	340
1450	7976152.190	503673.552	10.932	340
1451	7976152.250	503661.803	10.844	340
1452	7976149.240	503656.253	11.807	340
1453	7976139.800	503656.211	11.828	340
1454	7976141.270	503650.947	11.773	340
1455	7976147.980	503650.554	11.810	340
1456	7976148.360	503636.139	11.808	340
1457	7976139.490	503636.026	11.716	340
1458	7976128.890	503635.992	11.718	340
1459	7976136.940	503628.383	11.719	340
1460	7976146.670	503627.967	11.761	340
1461	7976147.510	503617.830	11.800	340
1462	7976141.330	503617.693	11.688	340
1463	7976141.190	503608.876	11.727	340
1464	7976148.960	503608.843	11.700	340
1465	7976148.770	503598.502	11.740	340
1466	7976148.670	503585.704	11.794	340
1467	7976138.780	503584.643	11.725	340
1468	7976138.350	503595.151	11.757	340
1469	7976128.330	503595.561	11.795	340
1470	7976127.730	503583.874	11.853	340
1471	7976117.570	503583.285	11.804	340
1472	7976116.310	503597.214	11.784	340
1473	7976115.750	503602.802	11.750	340
1474	7976109.510	503603.059	11.757	340
1475	7976103.290	503603.195	11.694	340
1476	7976103.970	503595.470	11.771	340
1477	7976103.680	503589.835	12.799	340
1478	7976103.580	503583.262	11.748	340
1479	7976105.180	503584.377	11.853	340
1480	7976111.040	503582.714	11.905	340
1481	7976108.390	503610.995	11.772	340
1482	7976103.110	503611.442	11.751	340
1483	7976102.750	503620.892	11.671	340
1484	7976108.230	503621.315	11.866	340
1485	7976112.800	503631.440	11.892	340
1486	7976103.230	503631.939	11.733	340
1487	7976152.470	503632.014	10.893	340
1488	7976154.980	503632.740	10.880	340
1489	7976157.840	503638.938	10.709	340
1490	7976164.710	503639.625	10.682	340
1491	7976173.660	503639.167	10.685	340
1492	7976178.250	503627.665	10.575	340
1493	7976172.790	503617.588	10.556	340
1494	7976155.960	503616.621	10.698	340
1495	7976156.820	503606.169	10.682	340
1496	7976157.100	503595.781	10.692	340
1497	7976157.340	503586.779	10.729	340
1498	7976166.510	503586.654	10.662	340
1499	7976167.050	503597.823	10.568	340
1500	7976166.990	503608.994	10.536	340
1501	7976176.210	503610.940	10.567	340
1502	7976177.980	503600.362	10.465	340
1503	7976179.290	503591.287	10.540	340
1504	7976186.750	503592.587	10.470	340
1505	7976183.750	503631.740	10.618	340
1506	7976186.050	503639.478	10.698	340
1507	7976179.560	503639.181	10.645	340

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1508	7976180.000	503643.304	10.642	340
1509	7976191.480	503642.172	10.699	340
1510	7976197.140	503642.826	10.700	340
1511	7976175.080	503685.266	10.693	340
1512	7976164.250	503685.842	10.405	340
1513	7976157.680	503685.796	10.366	340
1514	7976156.760	503692.549	10.330	340
1515	7976161.010	503695.204	10.471	340
1516	7976170.500	503695.729	10.530	340
1517	7976171.530	503689.936	10.458	340
1518	7976184.240	503690.918	10.745	340
1519	7976184.080	503699.093	10.679	340
1520	7976193.250	503699.936	10.749	340
1521	7976194.490	503690.490	10.797	340
1522	7976204.080	503691.433	10.688	340
1523	7976203.960	503699.176	10.647	340
1524	7976213.640	503699.146	10.520	340
1525	7976213.150	503690.284	10.724	340
1526	7976205.940	503686.078	10.588	340
1527	7976195.410	503685.408	10.614	340
1528	7976191.340	503685.477	10.365	340
1529	7976190.940	503687.919	10.402	340
1530	7976189.430	503694.122	10.675	340
1531	7976183.860	503685.743	10.781	340
1532	7976177.310	503683.894	10.824	340
1533	7976177.050	503648.490	10.703	340
1534	7976155.850	503650.898	10.791	340
1535	7976155.850	503645.473	10.734	340
1536	7976194.960	503639.238	10.703	340
1537	7976194.790	503625.794	10.591	340
1538	7976195.230	503613.424	10.569	340
1539	7976197.040	503596.817	10.418	340
1540	7976197.490	503587.054	10.527	340
1541	7976197.780	503587.242	10.501	340
1542	7976198.030	503596.706	10.394	340
1543	7976198.720	503606.151	10.513	340
1544	7976198.490	503615.276	10.510	340
1545	7976198.190	503624.386	10.559	340
1546	7976198.380	503633.708	10.627	340
1547	7976198.130	503640.258	10.678	340
1548	7976207.020	503639.902	10.733	340
1549	7976206.880	503631.093	10.637	340
1550	7976207.130	503621.654	10.571	340
1551	7976207.370	503612.331	10.408	340
1552	7976207.660	503603.155	10.390	340
1553	7976208.240	503593.995	10.396	340
1554	7976209.080	503585.205	10.513	340
1555	7976218.460	503584.858	10.491	340
1556	7976218.860	503594.683	10.342	340
1557	7976218.870	503603.404	10.455	340
1558	7976218.860	503612.583	10.480	340
1559	7976218.950	503621.547	10.560	340
1560	7976219.140	503630.716	10.668	340
1561	7976219.570	503639.866	10.694	340
1562	7976225.200	503640.304	10.670	340
1563	7976225.170	503631.521	10.709	340
1564	7976227.920	503634.409	10.676	340
1565	7976228.990	503640.415	10.858	340
1566	7976232.940	503635.295	11.507	340
1567	7976234.950	503632.895	11.991	340
1568	7976236.390	503640.968	10.649	340
1569	7976222.190	503611.799	10.454	340
1570	7976222.000	503602.295	10.439	340

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1571	7976222.070	503593.334	10.320	340
1572	7976222.050	503584.719	10.524	340
1573	7976231.700	503584.775	10.532	340
1574	7976232.000	503591.718	10.259	340
1575	7976233.110	503597.221	10.397	340
1576	7976241.820	503592.501	10.340	340
1577	7976241.960	503585.540	10.475	340
1578	7976251.470	503585.759	10.474	340
1579	7976251.170	503592.640	10.221	340
1580	7976256.320	503594.876	10.202	340
1581	7976257.210	503585.859	10.464	340
1582	7976266.080	503586.416	10.405	340
1583	7976264.330	503594.074	10.259	340
1584	7976262.810	503599.852	10.229	340
1585	7976267.830	503607.424	10.359	340
1586	7976268.770	503597.974	10.280	340
1587	7976268.890	503588.792	10.338	340
1588	7976269.010	503584.276	10.567	340
1589	7976269.110	503612.399	10.524	340
1590	7976269.290	503621.558	10.562	340
1591	7976269.580	503630.511	10.623	340
1592	7976269.830	503640.021	10.627	340
1593	7976263.020	503639.227	10.722	340
1594	7976263.690	503632.726	10.609	340
1595	7976258.620	503638.262	10.624	340
1596	7976254.810	503641.239	10.744	340
1597	7976277.420	503639.753	10.622	340
1598	7976278.200	503630.483	10.649	340
1599	7976278.860	503621.205	10.558	340
1600	7976279.200	503612.192	10.550	340
1601	7976279.070	503602.931	10.489	340
1602	7976278.600	503593.682	10.481	340
1603	7976278.310	503584.675	10.523	340
1604	7976284.760	503584.569	10.595	340
1605	7976285.200	503593.887	10.620	340
1606	7976285.220	503602.608	10.637	340
1607	7976284.880	503611.434	10.594	340
1608	7976284.990	503620.393	10.625	340
1609	7976284.790	503629.984	10.627	340
1610	7976284.840	503639.384	10.647	340
1611	7976279.240	503644.237	10.596	340
1612	7976270.240	503644.924	10.663	340
1613	7976261.730	503644.274	10.650	340
1614	7976254.310	503644.051	10.661	340
1615	7976247.140	503643.250	10.732	340
1616	7976236.430	503643.243	10.693	340
1617	7976228.670	503643.485	10.839	340
1618	7976233.510	503648.479	11.552	340
1619	7976222.560	503643.994	10.710	340
1620	7976222.840	503650.874	10.639	340
1621	7976222.520	503657.134	10.605	340
1622	7976226.450	503649.982	10.695	340
1623	7976218.030	503643.546	10.676	340
1624	7976263.150	503649.875	10.631	340
1625	7976272.030	503650.762	10.649	340
1626	7976278.380	503650.898	10.587	340
1627	7976282.530	503651.094	10.871	340
1628	7976282.410	503645.186	10.915	340
1629	7976282.320	503657.836	10.872	340
1630	7976275.640	503658.096	10.536	340
1631	7976267.900	503657.651	10.610	340
1632	7976267.930	503665.960	10.528	340
1633	7976277.590	503665.887	10.505	340

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1634	7976282.860	503665.768	10.873	340
1635	7976282.490	503672.957	10.845	340
1636	7976274.140	503672.942	10.438	340
1637	7976266.890	503672.892	10.512	340
1638	7976268.700	503681.968	10.307	340
1639	7976276.970	503680.696	10.497	340
1640	7976283.990	503681.104	10.595	340
1641	7976283.370	503689.964	10.613	340
1642	7976274.360	503689.973	10.465	340
1643	7976267.470	503689.824	10.366	340
1644	7976266.280	503697.839	10.650	340
1645	7976275.240	503697.727	10.574	340
1646	7976283.180	503697.568	10.629	340
1647	7976261.720	503683.352	10.700	340
1648	7976257.980	503689.296	11.287	340
1649	7976254.740	503696.702	12.020	340
1650	7976251.930	503703.258	12.720	340
1651	7976247.930	503700.726	12.758	340
1652	7976250.020	503697.288	11.967	340
1653	7976266.780	503712.413	11.067	340
1654	7976259.090	503709.898	11.817	340
1655	7976251.810	503706.892	12.716	340
1656	7976245.290	503703.539	12.740	340
1657	7976238.130	503699.411	11.628	340
1658	7976231.600	503696.353	10.747	340
1659	7976223.230	503696.706	10.615	340
1660	7976214.500	503697.546	10.600	340
1661	7976206.070	503697.779	10.637	340
1662	7976199.060	503697.917	10.620	340
1663	7976198.860	503689.316	10.689	340
1664	7976204.990	503688.966	10.625	340
1665	7976208.440	503688.232	10.228	340
1666	7976211.130	503689.353	10.620	340
1667	7976217.650	503689.369	10.641	340
1668	7976225.560	503689.557	10.712	340
1669	7976233.600	503690.028	10.624	340
1670	7976241.510	503691.277	10.566	340
1671	7976229.170	503684.751	10.746	340
1672	7976221.800	503683.329	10.710	340
1673	7976216.080	503683.071	10.672	340
1674	7976220.820	503677.473	10.815	340
1675	7976220.820	503670.876	10.737	340
1676	7976167.240	503647.023	11.796	27
1677	7976171.050	503649.590	11.883	27
1678	7976169.770	503652.778	14.893	14
1679	7976169.960	503655.796	14.894	14
1680	7976171.150	503649.784	11.910	27
1681	7976173.330	503654.875	11.715	27
1682	7976171.410	503658.780	11.824	27
1683	7976168.530	503658.338	14.907	14
1684	7976166.460	503659.563	14.903	14
1685	7976166.760	503661.530	11.726	27
1686	7976162.870	503661.594	11.794	27
1687	7976163.360	503659.529	14.881	14
1688	7976161.320	503658.308	14.894	14
1689	7976158.540	503658.204	11.862	27
1690	7976157.410	503655.315	11.830	27
1691	7976157.380	503653.390	11.680	27
1692	7976174.280	503657.351	11.049	28
1693	7976170.460	503661.956	10.865	28
1694	7976166.580	503664.305	10.461	28
1695	7976162.790	503663.764	10.599	28
1696	7976160.180	503656.583	14.895	14

Port Tank Farm As Built - 8Aug2014.ASC

1697	7976159.810	503654.242	14.879	14
1698	7976160.060	503652.966	14.888	14
1699	7976161.160	503651.130	14.884	14
1700	7976158.270	503650.009	11.749	27
1701	7976161.220	503647.489	11.773	27
1702	7976164.150	503646.723	11.751	527
1703	7976159.400	503662.371	10.569	28
1704	7976156.190	503659.085	10.600	28
1705	7976155.460	503656.462	10.840	28
1706	7976155.650	503651.005	10.790	28
1707	7976158.260	503647.056	10.712	28
1708	7976162.390	503644.796	10.667	28
1709	7976165.950	503643.779	10.696	28
1710	7976169.420	503645.182	10.686	28
1711	7976172.260	503647.381	10.727	28
1712	7976163.520	503649.660	14.900	14
1713	7976173.460	503649.062	10.689	28
1714	7976175.520	503653.002	10.740	528
1715	7976166.680	503649.773	14.890	14
1716	7976169.350	503651.983	14.882	514
1717	7976113.330	503625.312	14.847	14
1718	7976112.110	503622.794	14.846	14
1719	7976111.420	503619.229	14.847	14
1720	7976113.030	503627.400	12.369	27
1721	7976111.130	503623.380	12.391	27
1722	7976110.330	503616.883	12.370	27
1723	7976113.180	503629.062	11.991	28
1724	7976110.390	503625.214	11.847	28
1725	7976108.580	503618.825	11.881	28
1726	7976109.030	503613.996	11.859	28
1727	7976111.200	503609.022	11.768	28
1728	7976111.500	503616.916	14.850	14
1729	7976112.460	503613.494	14.849	14
1730	7976113.840	503611.047	14.850	14
1731	7976116.560	503608.310	14.853	14
1732	7976119.180	503606.792	14.850	14
1733	7976121.980	503605.948	14.851	14
1734	7976126.370	503605.951	14.858	14
1735	7976112.920	503610.237	12.457	27
1736	7976116.740	503606.704	12.439	27
1737	7976122.380	503604.280	12.420	27
1738	7976125.950	503604.819	12.276	27
1739	7976131.200	503606.748	12.315	27
1740	7976133.290	503607.371	12.404	27
1741	7976116.990	503604.800	11.869	28
1742	7976123.570	503602.961	11.813	28
1743	7976126.990	503603.267	11.783	28
1744	7976134.470	503606.691	11.768	28
1745	7976128.880	503606.637	14.848	14
1746	7976134.600	503611.044	14.850	14
1747	7976136.410	503614.654	14.847	14
1748	7976137.010	503618.533	14.846	14
1749	7976136.030	503623.468	14.853	14
1750	7976134.910	503625.584	14.851	14
1751	7976133.390	503627.489	14.852	14
1752	7976135.560	503609.421	12.328	27
1753	7976138.100	503616.087	12.394	27
1754	7976137.750	503622.166	12.340	27
1755	7976135.490	503627.111	12.406	27
1756	7976137.830	503611.053	11.723	28
1757	7976140.030	503617.907	11.750	28
1758	7976138.930	503624.346	11.710	28
1759	7976137.710	503626.950	11.714	28

Port Tank Farm As Built - 8Aug2014.ASC

1760	7976131.120	503629.309	14.867	14
1761	7976128.020	503630.745	14.868	14
1762	7976124.370	503631.341	14.864	14
1763	7976121.000	503630.936	14.862	14
1764	7976117.030	503629.147	14.864	514
1765	7976131.360	503630.971	12.366	27
1766	7976125.430	503632.614	12.409	27
1767	7976121.850	503632.220	12.489	27
1768	7976115.090	503629.756	12.472	527
1769	7976133.520	503631.114	11.751	28
1770	7976127.590	503633.968	11.784	28
1771	7976122.990	503634.077	11.831	28
1772	7976116.310	503631.972	11.914	528
5000	7976196.000	503617.990	10.503	408
5001	7976281.870	503660.320	10.902	408
5002	7976277.850	503583.200	10.552	408
5003	7976144.580	503650.702	11.781	408
5004	7976109.750	503695.563	11.725	408
5005	7976197.070	503704.914	12.312	408
5006	7976103.220	503600.818	11.663	408

Appendix F

Tanks and Pipes

Note the page count for each document below. These reports will be provided upon request.

- A. E349000-TM001-00-118-0005-001 thru -009 DATA BOOK 2613-TK-004 12,000,000 LITRE ARTIC DIESEL TANK SITE ERECTED MILNE PORT SITE **[738 page]**
- B. E349000-TM001-00-118-0006-001 thru -009 DATA BOOK 2613-TK-005 12,000,000 LITRE ARTIC DIESEL TANK SITE ERECTED MILNE PORT SITE **[727 page]**
- C. E349000-TM001-00-118-0007-001 thru -009 DATA BOOK 2614-TK-007 750,000 LITRE JET A-1 TANK MILNE PORT SITE **[771 page]**
- D. E349000-TM001-00-118-0008-001 thru -009 DATA BOOK 2614-TK-008 750,000 LITRE JET A-1 TANK MILNE PORT SITE **[778 page]**
- E. E349000-TM001-00-118-0009-001 thru -009 DATA BOOK 2613-TK-006 12,000,000 LITRE ARCTIC DIESEL TANK SITE ERECTED MILNE PORT SITE **[798 page]**
- F. E349000-TM001-00-118-0010-001 thru -009 PIPE FABRICATION TURNOVER PACKAGE **[994 page]**
- G. E349000-TM001-00-118-0011-001 thru -008 DATA BOOK 2613-TK-006 12,000,000 LITRE ARCTIC DIESEL TANK MILNE PORT SITE **[691 page]**
- H. E349000-CM010-02-236-001Sub01 Turnover Report [5ML Tank 2613-TK-002] **[14 page]**
- I. E349000-CM010-50-035-0001Sub02 General Tank Layout As-Built **[1 page]**
- J. E349000-CM010-50-035-0002Sub02 General Tank Details As-Built **[1 page]**

- K. E349000-CM010-50-035-0003Sub02 General Tank Details As-Built **[1 page]**
- L. E349000-CM010-50-035-0004Sub02 Spiral Stairway & Landing Details **[1 page]**
- M. E349000-CM010-50-035-0001Sub01 [GEM Steel] Mill Test Reports **[150 pages]**
- N. E349000-CM010-50-107-0001Sub01 Weld Procedure Data Sheet 60.1M **[1 page]**
- O. E349000-CM010-50-107-0002Sub01 Weld Procedure Data Sheet 60.2M **[1 page]**
- P. E349000-CM010-50-107-0003Sub01 Weld Procedure Data Sheet FCR-007 **[1 page]**
- Q. E349000-CM010-50-107-0004Sub01 Weld Procedure Data Sheet FE-01 **[1 page]**
- R. E349000-CM010-50-107-0005Sub01 Weld Procedure Data Sheet FE-01 **[1 page]**
- S. E349000-CM010-50-107-0006Sub01 Weld Procedure Data Sheet SH-207 **[1 page]**
- T. E349000-CM010-50-107-0007Sub01 Weld Procedure Data Sheet SV-204 **[1 page]**

The above tank data books include the following sections as submitted by Groupe Laframboise Ltee:

- Section 1: Inspection Test Plan
- Section 2: Procedures
- Section 3: Non-Destructive Examination Reports
- Section 4: Welding Data
- Section 5: Engineering
- Section 6: Tank Calibration & Strapping
- Section 7: Material Data
- Section 8: None-Conformity Report

The above pipe fabrication turnover packages include the following sections as submitted by Groupe Laframboise Ltee:

- Section 1: Inspection Test Plan
- Section 2: Procedures
- Section 3: Welder Qualifications
- Section 4: Welding Consumables
- Section 5: Material Test Reports
- Section 6: Non-Destructive Examination
- Section 7: Hydro/Pneumatic Testing
- Section 8: As Built/ Mapped Drawing

Appendix G

Fuel Dispensing Modules

- A. E349000-PM004-02-118-0003Sub01 Milne Port Diesel [Dispensing Module] Operations Manual **[44 pages]**
- B. E349000-PM004-02-118-0004Sub01 Milne Port Jet A [Dispensing Module] Operations Manual **[30 pages]**
- C. E349000-PM004-02-118-0002Sub01 [Fuel Dispensing Module] Fire Suppression System Operations and Maintenance Manual **[158 pages]**
- D. E349000-PM004-50-117-0001Sub01 Milne Port Jet Fuel Module Inspection Plan **[5 pages]**
- E. E349000-PM004-50-117-0002Sub01 Milne Port Jet Fuel Module Test Plan **[2 pages]**
- F. E349000-PM004-50-117-0003Sub01 Milne Port Diesel Fuel Module Inspection Plan **[5 pages]**
- G. E349000-PM004-50-117-0004Sub01 Milne Port Diesel Fuel Module Test Plan **[3 pages]**
- H. E349000-PM004-50-042-0004-001Sub03 Milne Port Jet Fuel Isometric As Built **[1 page]**
- I. E349000-PM004-50-042-0004-002Sub02 Milne Port Jet Fuel Assembly As Built **[1 page]**
- J. E349000-PM004-50-042-0004-003Sub01 Milne Port Jet Fuel Floor Plan As Built **[1 page]**
- K. E349000-PM004-50-042-0008-001Sub03 Milne Port Diesel Fuel Isometric As Built **[1 page]**

- L. E349000-PM004-50-042-0008-002Sub02 Milne Port Diesel Fuel Assembly As Built
[1 page]
- M. E349000-PM004-50-042-0008-003Sub01 Milne Port Diesel Fuel Floor Plan As Built
[1 page]
- N. E349000-PM004-70-042-0002Sub02 Milne Port Jet Fuel General Arrangement Electrical
As Built **[1 page]**
- O. E349000-PM004-70-042-0004Sub02 Milne Port Diesel Fuel General Arrangement
Electrical As Built **[1 page]**
- P. E349000-PM004-70-082-0001Sub02 Milne Port Jet Fuel Module One Line Diagram As
Built **[1 page]**
- Q. E349000-PM004-70-082-0002Sub02 Milne Port Diesel Fuel Module One Line Diagram
As Built **[1 page]**
- R. E349000-PM004-70-083-0004Sub02 Milne Port Jet Fuel Module Three Line Diagram As
Built **[1 page]**
- S. E349000-PM004-70-083-0005Sub02 Milne Port Diesel Fuel Module Three Line Diagram
As Built **[1 page]**



HATCH		VENDOR DATA REVIEW	
Doc Number	E349000-PM004-02-118-0003	Sub	01
Date Received	12/04/2014		
Review Grade		Next Submittal Status	
☐ C1 - Proceed to next submission & status ☐ C2 - Proceed with exceptions as noted to next submission & status ☐ C3 - Do not proceed, revise as noted & resubmit		☐ Internal Review ☐ Certified Final ☐ Final ☐ As-Built	
☒ C4 - No further submission required - Complete ☐ No further submission required - Cancelled ☐ No further submission required - Superseded		Next Submittal Date:	
Package Coordinator: Name, signature and Date: KEN MAI, Ken Mai, 23/09/2014			
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Milne Port Diesel Operations MANUAL

2014 VERSION A

MILNE PORT DIESEL OPERATIONS MANUAL - Version A

Issue Date: January 2014

PLEASE READ BEFORE USING.

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We Engineer Solutions

2014 Milne Port Diesel Operations Manual (Version A)

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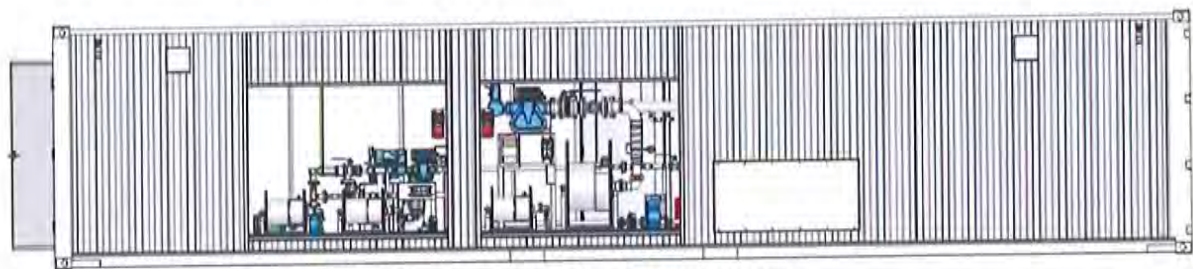
Section 1: Introduction

Milne Port Diesel Dispensing System

Overview

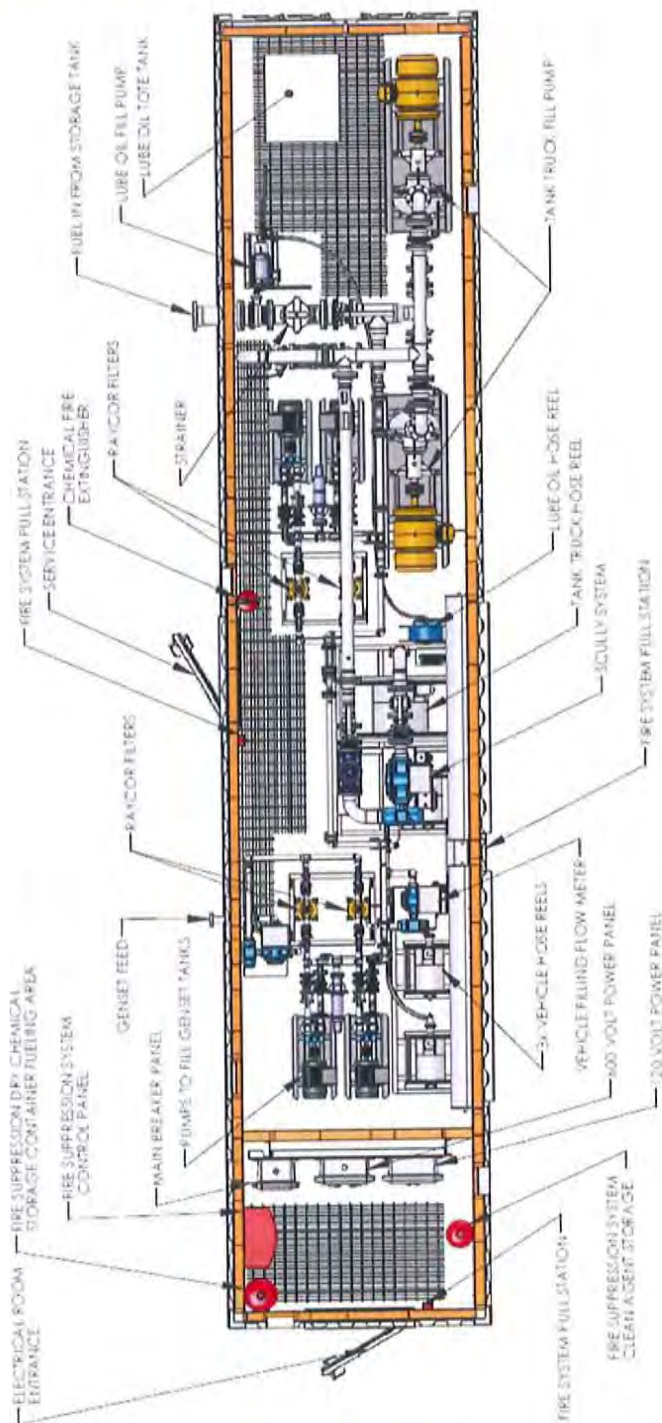
SEI Industries has provided three modules to Baffinland Iron Mines — one diesel and one Jet A system at Milne Port and a diesel system at the Mine Site. An operations manual has been supplied for each module as well as a separate maintenance manual. The maintenance manual provides details on all of the components used to create the systems as well as parts lists.

This specific manual is the operations manual for Milne Port Diesel. It includes instructions on the operation, lubrication and inspection of the diesel dispensing fueling module. A list of all fueling module components is also included. A layout of this module, identifying all the major components, can be found on the inside of the module near the side man-door and on page 2 of this manual.



Milne Port Diesel Dispensing System

Milne Port Diesel Layout



Section 2: Safety

General Safety Procedures

Ensure work site safety by observing the following suggestions:

- Ensure you are aware of all safety and emergency information in this manual and all safety and emergency procedures regulations, procedures and guidelines provided at the work site.
- Obey "no smoking" signs.
- Familiarize yourself with the emergency stop switch locations.
- Ensure that an appropriate communications structure is in place before deployment to minimize confusion in an emergency.
- Anticipate emergencies before they happen and prepare a mini-response plan.
- Know the exact location of all fire extinguishers available at the site and how to summon emergency fire and medical assistance.
- Keep this manual and all enclosed manufacturer documentation readily available at the site for reference.

Caution

Do not operate any part of the system unless you have received training deemed appropriate by both SEI Industries and your employer. In particular, you must fully understand all general safety precautions with respect to refueling operations and the handling of flammable materials,

Pump Safety Procedures

Fire Procedure

If a fire occurs:

1. Press an emergency stop switch, cutting all power in the unit.
2. If the automatic fire suppression system (which has a battery backup allowing it to operate when the power supply is cut), fails to activate then a manual fire alarm must be pulled. To activate, lift the alarm door and pull the ring down. One alarm is located on the outside of the container. The other alarm stations are inside the module; one just inside the service entrance and the other just inside the electrical room door (see layout on page 2).
3. If needed, a manual fire extinguisher can be found just inside the service entrance door. Refer to the layout found in this manual if you are unfamiliar with the system.
4. Any vehicle or tanker truck should be removed from the immediate area.
5. Ensure that assistance has been requested from the site supervisor and/or the local fire emergency team.



Fuel Fire Emergencies

Warning

In the event of a fuel fire or spill, immediately stop all fill/discharge operations. Immediately press an emergency stop switch.

Warning

If a fuel spill from the fuel system occurs, as the result of mishandling of the equipment or a component failure, then it is likely that, without emergency assistance, you do not have the resources necessary to contain the spill. If the spilled fuel from the fueling system ignites, then clear the area immediately as you do not have the resources to control such a fire alone.

Baffinland Iron Mines is responsible for creating a training program that guides the user through adequate safety procedures in the event of a fuel fire.

The following items are essential elements of such procedures:

1. IMMEDIATELY STOP ALL FILL/DISCHARGE OPERATIONS.
2. Locate a fire extinguisher and extinguish any fires outside the fueling modules.
3. Clear the area of all non-essential personnel and request emergency response teams.
4. If possible, use the valves feeding the fuel system to shut off the flow, both upstream and downstream of the fire zone.
5. Await emergency response teams.

Warning

If an emergency stop switch has been pressed, it will stop all systems using electricity. If the system will not start up again, check all emergency stop switches and pull out the switch that was activated.

Fuel Spill Emergencies**Warning**

In the event of a fuel fire or spill, immediately stop all fill/discharge operations. Immediately press an emergency stop switch.

Warning

If a fuel spill from the fuel system occurs, as the result of mishandling of the equipment or a component failure, then it is likely that, without emergency assistance, you do not have the resources necessary to contain the spill. If the spilled fuel from the fueling system ignites, then clear the area immediately as you do not have the resources to control such a fire alone.

Baffinland Iron Mines is responsible for creating a training program that guides the user through adequate safety and clean-up procedures in the event of a fuel spill.

The following items are essential elements of such procedures:

1. IMMEDIATELY STOP ALL FILL/DISCHARGE OPERATIONS. IMMEDIATELY PRESS AN EMERGENCY STOP SWITCH.
2. SHUT DOWN OR REMOVE all potential ignition sources near the fuel spill and locate a fire extinguisher.
3. Clear the area of all non-essential personnel and request emergency response teams.
4. If ignition of the fuel spill is imminent, or if fuel vapour makes respiration difficult, evacuate every person from the area and await emergency response teams.
5. If possible, identify the source of the leak.
6. IMMEDIATELY SHUT OFF THE VALVE SUPPLYING THE REFUELING SYSTEM MODULE WITH FUEL.
7. If possible, use the ball valves inside the fuel system to shut off the flow both upstream and downstream of the fire zone.
8. Await emergency response teams.
9. Prepare for clean-up operations.

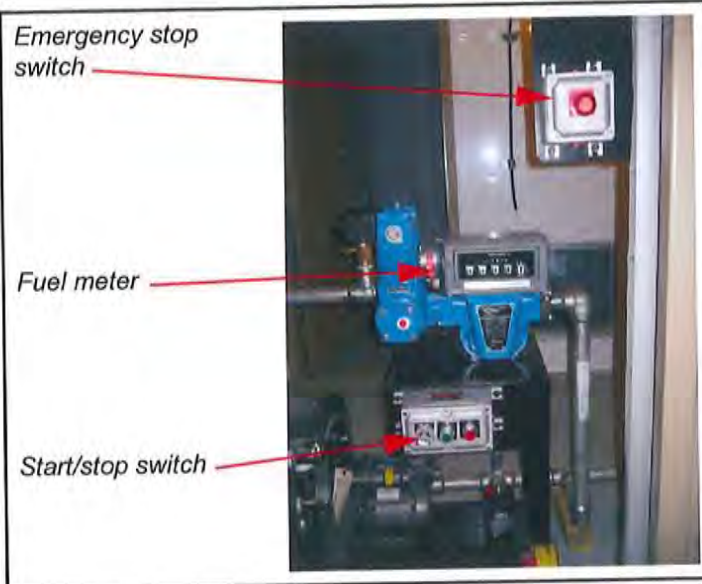
Section 3: Quick Start Guides

Warning

Quick start guides should only be used once you are trained and completely familiar with operational procedures. Please refer to *Section 4: Operations* of this manual.

Vehicle Refueling Checklist

1. Check the electrical room to make sure all breakers are on.
2. Turn on lights, if not already on.
3. If lights will not come on, check emergency stop switches. Pull out any that are pushed in.
4. Zero fuel meter.
5. Pull out hose reel.
6. Start pump.
7. When full, turn off pump.
8. Retract the hose reel by pushing the rewind button and holding the button until rewound.
9. Zero fuel meter.



Tanker Truck Filling Checklist

1. Check the electrical room to make sure all breakers are on.
2. Turn on lights, if not already on.
3. If lights will not come on, check emergency stop switches. Pull out any that are pushed in.
4. Plug in Scully control system cord. If tanker truck not equipped with Scully system, deactivate system with key and attach grounding reel.
5. Zero fuel meter.
6. Release hose reel clutch by pulling black knob out.

Tanker truck fuel meter



Warning

Filling Empty Tanks

The API RP 2003 recommends limiting the initial velocity to 1m/s (500 LPM) until the tanker truck inlet is submerged by two inlet pipe diameters. After that, the flow can increase up to 3m/s (1500 LPM). A gate valve on the truck will control the flow or the ball valve near the hose reel can be also used.

7. Start pump.
8. When full, turn off pump.
9. Engage hose reel clutch by pushing black knob in.
10. Retract the hose reel by pushing the rewind button and holding the button until rewind.
11. Zero fuel meter.

Genset Refueling Checklist

1. Check the electrical room to make sure all breakers are on.
2. Turn on lights, if not already on.
3. If lights will not come on, check emergency stop switches. Pull out any that are pushed in.
4. Zero fuel meter.
5. Determine how to stop the fuel flow before the Genset tank overflows.
6. Start pump.
7. When full, turn off pump.
8. Zero fuel meter.



Warning

Filling the Genset

At the time of installation, the Genset system is provided with only manual control. There are two ways to control filling. The first way is to determine how much fuel is required to fill the Genset tank and then use the flow meter reading to gauge when to shut the fuel flow off. The other option is to have a second person, who monitors the level in the tank and is in communication to advise the person running the pump, to shut off the flow before it overflows.

Lube Oil Dispensing Checklist

1. Reset meter to oil amount required.



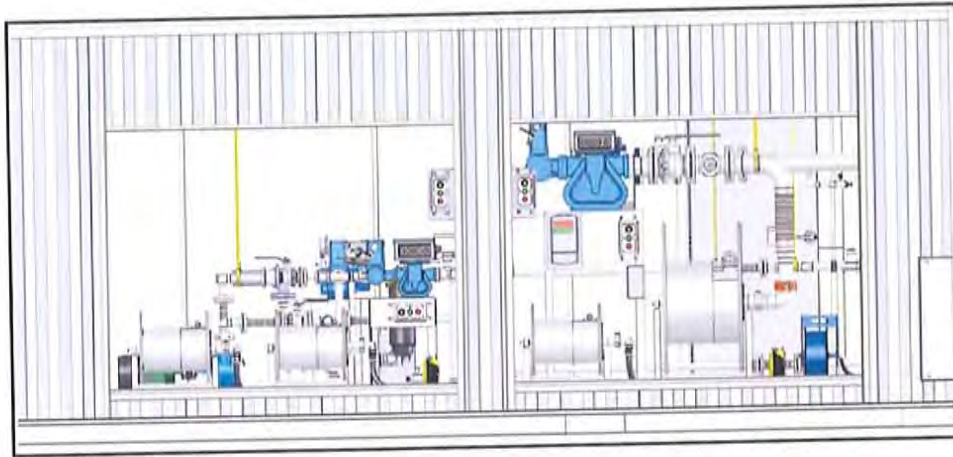
2. Turn on pump.
3. Pull out hose and insert nozzle into engine oil port.
4. Squeeze handle until meter is zero.
5. Allow hose reel to rewind, then turn off pump.



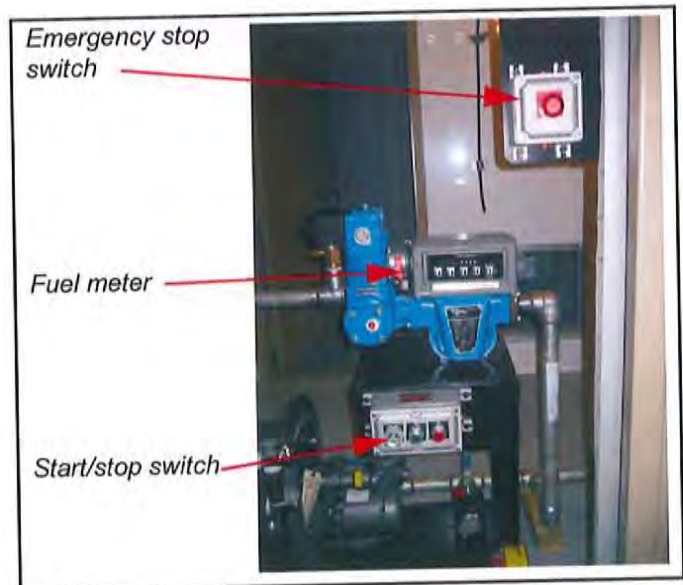
Section 4: Operations

Vehicle Refueling Procedures

1. Locate the refueling side of the container.
2. Open the left-hand refueling door.



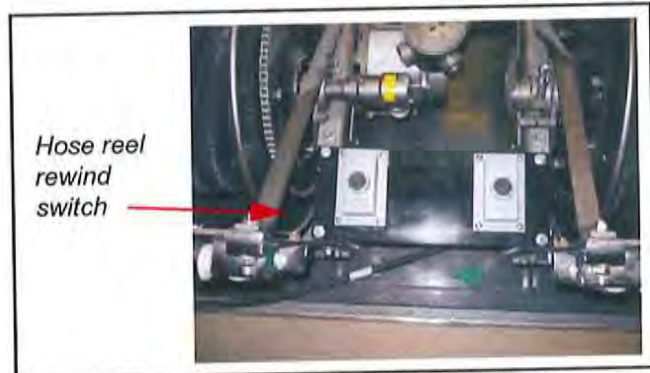
3. Locate the emergency stop switch, meter and start/stop switches.
4. Reset the fuel meter to zero, if required.



5. Pull out grounding reel cable and connect clamp to the truck where the grounding will take place.
6. The hose reel on the right hand side should be used first. If this hose reel is being serviced or is inoperable, use the hose reel on the left and the same meter. A final hose reel can be found behind the right-hand refueling door but the meter for this hose reel is located behind the left-hand door.
7. The hose reel rolls out manually only. Power is for rewind only. Tension can be changed by adjusting the tension wing nut.
8. Start pump.



9. The nozzle will shut off when vehicle has been filled. Once it stops, turn off the pump. Carry the nozzle back to the hose reel to keep it clean. Activate the button to retract the hose and hold it until the hose is retracted enough to allow you to place the nozzle in its holder.



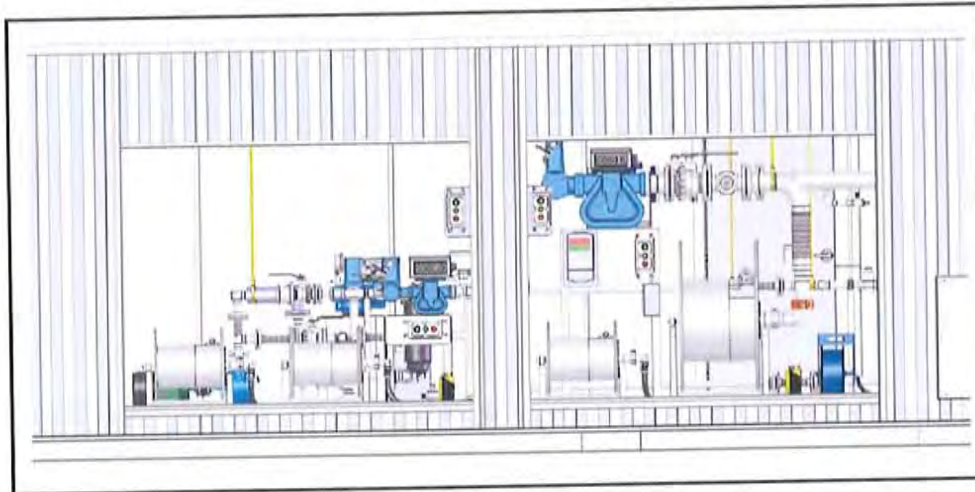
10. Reset the meter to zero.
11. Close the refueling door.

Important Note

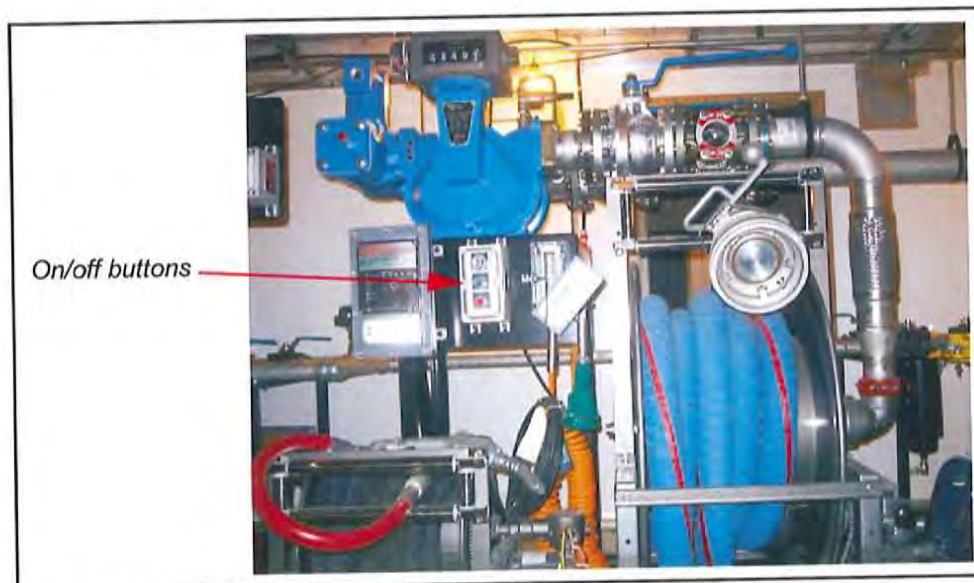
If no fuel is dispensed for a period of five minutes, the dispensing pump will shut down. To reactivate the pump, press the pumping start button again.

Tanker Truck Filling

1. Locate the refueling side of the container.
2. Open the right-hand refueling door and locate emergency stop switch.



3. The large hose reel with a 3" hose and a bottom loading coupler is for filling tankers.



4. Reset fuel meter to zero, if required.

Tanker truck fuel meter



5. Connect the Scully system cord to the tanker truck.



6. If the truck is not equipped with a receptacle for the Scully cord, please refer to the bypass authorization instructions at the end of these steps.

7. A green light should appear on the Scully panel.



8. To manually unwind the hose reel, pull the large black knob out to release the clutch.

Clutch knob



9. Pull the supply hose out, carrying the dry break to keep it clean. Tension can be changed by adjusting the wing nut.

Tension wing nut



10. Connect the bottom loading coupler to the tanker truck.



Drybreak coupler

11. The system's deadman switch must be held in the "on" position to activate the flow.



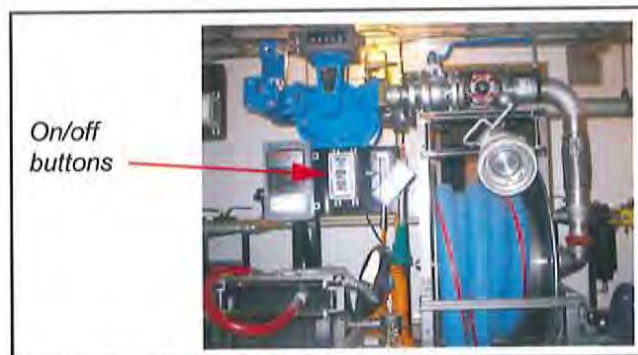
Deadman connector and switch.

Warning

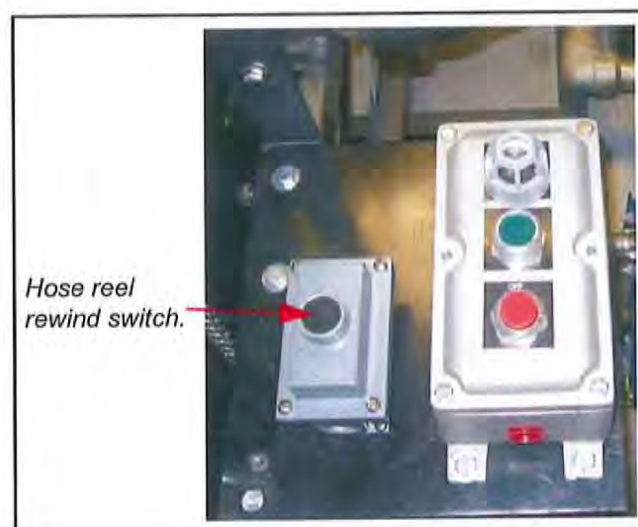
Filling Empty Tanks

The API RP 2003 recommends limiting the initial velocity to 1m/s (500 LPM) until the tanker truck inlet is submerged by two inlet pipe diameters. After that, the flow can increase up to 3m/s (1500 LPM). A gate valve on the truck will control the flow or the ball valve near the hose reel can be also used.

12. Start pump.



13. When the tanker truck has been filled or the Scully System has shut off the flow, turn off pump. Next, disconnect the dry break coupler from the tanker truck and push in the black knob on the hose reel. Activate the push button to rewind the hose, carrying the dry break back to the hose reel to keep it clean. The mount on top of the hose reel will hold the coupler in place. The rewind motor will continue to run while the button is being pushed.



14. Reset the meter to zero.
15. Disconnect the Scully system and place its cord back into the system module.
16. Close the refueling door.

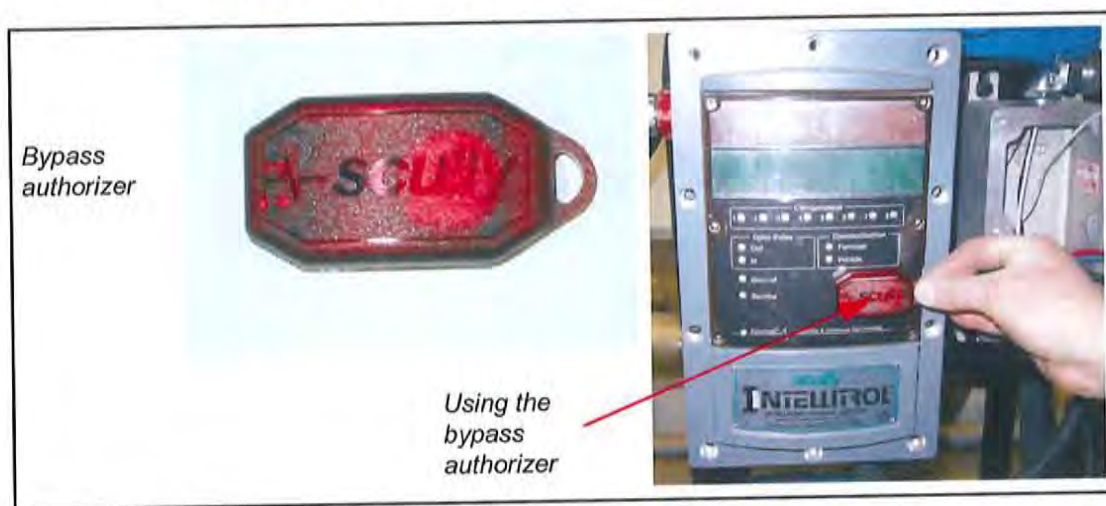
Important Note

If no fuel is dispensed for a period of five minutes, the dispensing pump will shut down. To reactivate the pump, press the pumping start button again.

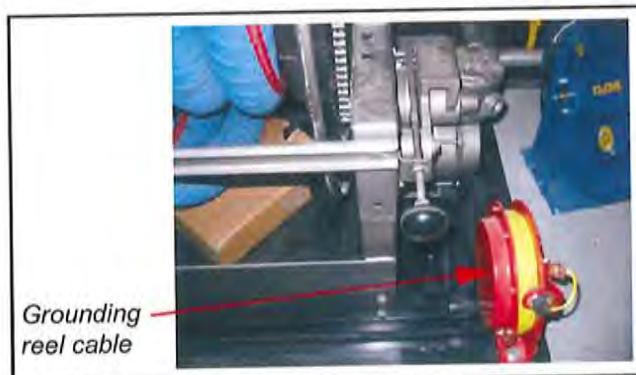
Scully Bypass Authorization Instructions

If the Scully system is not operational or if the tanker truck system is not working, the system can be bypassed.

1. Locate the bypass authorizer.
2. Place bypass authorizer with Scully logo facing out.
3. After 10 seconds, the Scully system will accept the bypass request



4. Attach the grounding reel clip to tank truck.
5. Keep in mind that the load sensors will not be functioning properly.
6. Connect dry break coupler and start pump, then activate deadman switch.
7. To eliminate overfilling of the tanker, monitor the level in tank with a dipstick or visually check the level.
8. Stop pumping before the tanker is overfilled by releasing the deadman switch.



All other tanker filling operations remain the same.

Genset Refueling

The Genset system runs independent to all other systems. The control center is located to the right of the service entrance door.

The control system consists of an on/off switch, fuel meter and emergency stop switch.

At the time of installation, the Genset system is provided with only manual control. There are two ways to control filling. The first way is to determine how much fuel is required to fill the Genset tank and then use the flow meter reading to gauge when to shut the fuel flow off. The other option is to have a second person, who monitors the level in the tank and is in communication to advise the person running the pump, to shut off the flow before it overflows.



Lube Oil Dispensing

The lube oil system is used to add engine oil to trucks; a mechanical lube meter is attached to the end of hose reel hose to set the amount of oil dispensed. The oil is stored in a tote tank found inside the double-door end of the fueling module. The system consists of a tote tank, pump, hose reel with a meter on the end and a control center.

1. Open the right-hand door (on the fuel dispensing side) and use the blue hose reel (on right-hand side).
2. Re-set meter to oil required.
3. Turn on pump.
4. Pull out hose and insert nozzle into engine oil fill port.
5. Squeeze handle until the desired quantity of oil is dispensed.
6. Turn off pump.



Air Heating Systems

Caution

The electrical room must never be allowed to freeze as this may cause the fire suppression system to fail.

The fueling modules contain heaters designed for hazardous locations. Each module has two heaters. The electrical room has a 120 volt heater (part number 010075, model XB2-4200T2D11T). The refueling area has a 600 volt heater (part number 010095, model FX5-SD-600360-200T). All heaters are controlled by a thermostat which is set at the time the units are commissioned. To change the temperature, adjust the thermostat.



Fueling area heater



Fueling area thermostat



Electrical room heaters

The Milne Port Site maintenance manual provides comprehensive information and instructions for each unit covering maintenance, troubleshooting, service and parts lists.

Fire Suppression System

The fire suppression system is made up of two sections — one in the electrical room and the other in the fuel dispensing area. Fire suppression chemical is stored in the electrical room.

The system is triggered by smoke, heat, flame detectors or by manual pull stations located by the two service doors or between the fueling doors.

The system should be serviced annually and verification should be conducted by a qualified technician.

For service technician use only.



Fire Status Conditions



Normal Condition: Green power LED is on, indicating the panel is receiving AC power. All other LEDs off, display reports system is normal.

Alarm Condition: Red LED labelled FIRE ALARM flashes. Tone alert (buzzer) on panel sounds. The alarm strobe mounted on the outside of the unit will flash as well. The display reports FIRE.

Acknowledging an Alarm: Press the FIRE ALARM ACK button on the keypad. The red LED should change from flashing to steady on.

Silencing the Alarm: Press the ALARM SILENCE ACK button on keypad. The alarm silenced LED should turn on and the display will show ALARM SILENCE IN PROGRESS.

Resetting the System: Press the SYSTEM RESET button on the keypad. The display will show SYSTEM RESET IN PROGRESS. If all devices reset, the alarm LEDs will flash. Press the FIRE ALARM ACK or the PRIORITY 2 ACK button, or both, on the keypad and display should show SYSTEM IS NORMAL.

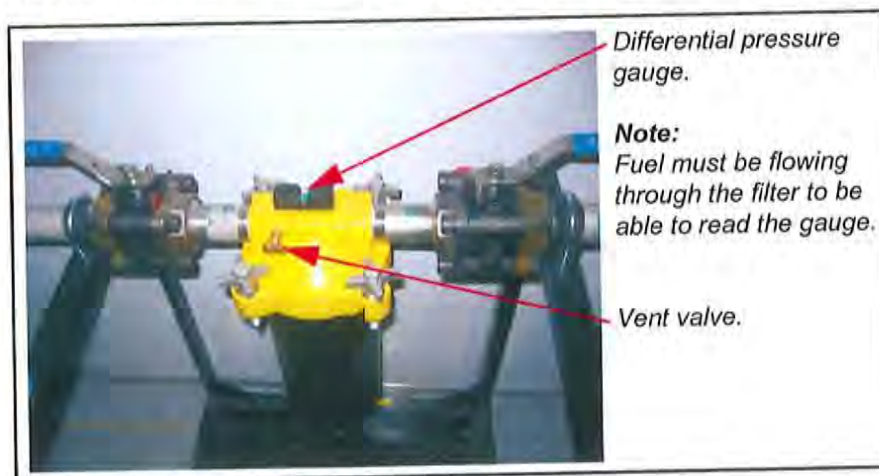
If the device remains in alarm and fails to reset, the display will show ALARM PRESET, SYSTEMS RESET ABORTED. This will require resetting the individual pull station or sensor, disabling the device or a hardware reset.

Trouble Conditions: The yellow LED labelled TROUBLE flashes, the tone will sound and the display will show TROUBLE. To acknowledge the trouble, press the TROUBLE ACK button located just below the Trouble LED. The device identified on the display must be checked and/or serviced.

Supervisory Conditions: The yellow LED labelled SUPERVISORY flashes, the tone will sound and the display will show SUPERVISORY. To acknowledge the trouble, press the SUPV ACK button located just below the LED. Read the display and investigate the problem to determine the cause.

Filtration Vehicle Fuel Dispensing

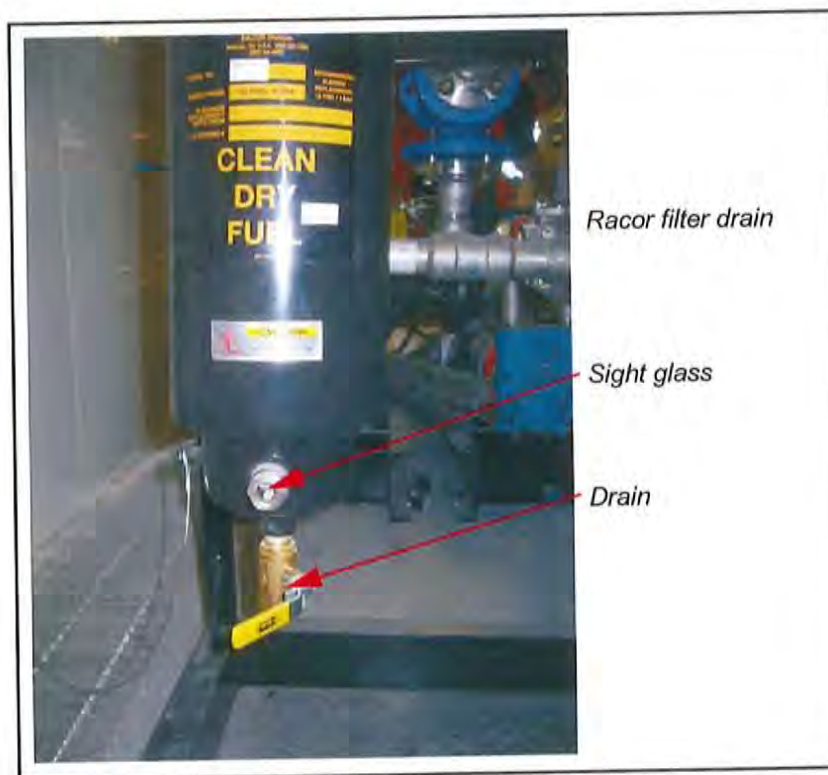
The filter assemblies are designed to meet the toughest hydrocarbon refueling conditions and provide for easy filter change outs. The FBO assembly can flow 100 LPM. The unit can be used for diesel fuel dispensing pumps or as a primary fuel filter/water separator for large dispensing modules. The assembly features a locking ring collar which attaches the filter housing to the aluminium die-cast filter head with four bolts.



The slotted locking ring collar allows maintenance personnel to hand-loosen the four collar bolts, rotate and lower the bowl assembly for element change outs. Refer to the maintenance manual for further information.

As the system is dispensing fuel, check to see if the differential pressure gauge is in the green. If it's in the red, it means that the filter cartridge needs to be changed. You should be able to determine what filter is being used by checking which pump is running or by liquid movement in the sight glass. Refer to the maintenance department to change the cartridge.

While the unit is still warm, the fuel filters should be drained daily of any water that has accumulated in the filter housings. Check the sight glass for accumulated water, if present. Open the drain valves on the bottom of the housings and vent valve, draining any water into a container until you see clear fuel flowing through.



Vehicle Refilling Automatic Shut-Off Nozzles

This nozzle (part number 006507, model 7H) works the same way as any typical gas station nozzle used to fill cars.

- UL and ULC listed for use in gasoline, diesel and up to 10 per cent ethanol blends.
- Prevents fuel spills utilizing a unique "No Pressure, No Flow" device.
- The nozzle cannot be opened until the pumping system is pressurized and closes automatically when the pressure is removed.
- Prevents user from jamming the nozzle in an open position (blocker on lever guard).
- FlowLock allows the nozzle to shut-off when falling out of a fill pipe and tipped up, limiting spillage and unsafe conditions.
- Low reliable shut-off specifically designed to ensure proper automatic shut-off as low as five gallons per minute.



See the maintenance manual for parts and service information.

Bottom Loading Coupler

The bottom loading coupler is used along with the Scully system to prevent over filling. It connects to a standard API bottom loading adapter. Dual interlocks ensure that the bottom loading coupler cannot be opened unless it is properly connected to an API adaptor.



Scully System

Scully's electronic tanker truck system provides self-checking overfill protection as well as grounding verification for tanker trucks that carry/haul petroleum products.



The Scully IntelliCheck on-board provides overfill prevention and a "retained product" monitoring system. Once its plugged into the receptacle on the tanker truck and a green light has come on, the system will sense the level of fuel in the tanker and shut fuel flow off before the tank overflows.



It works in combination with the system's deadman switch which must be held in the "on" position to activate the flow. See *Tanker Truck Filling* in this manual for details on how to hook up and activate the system.



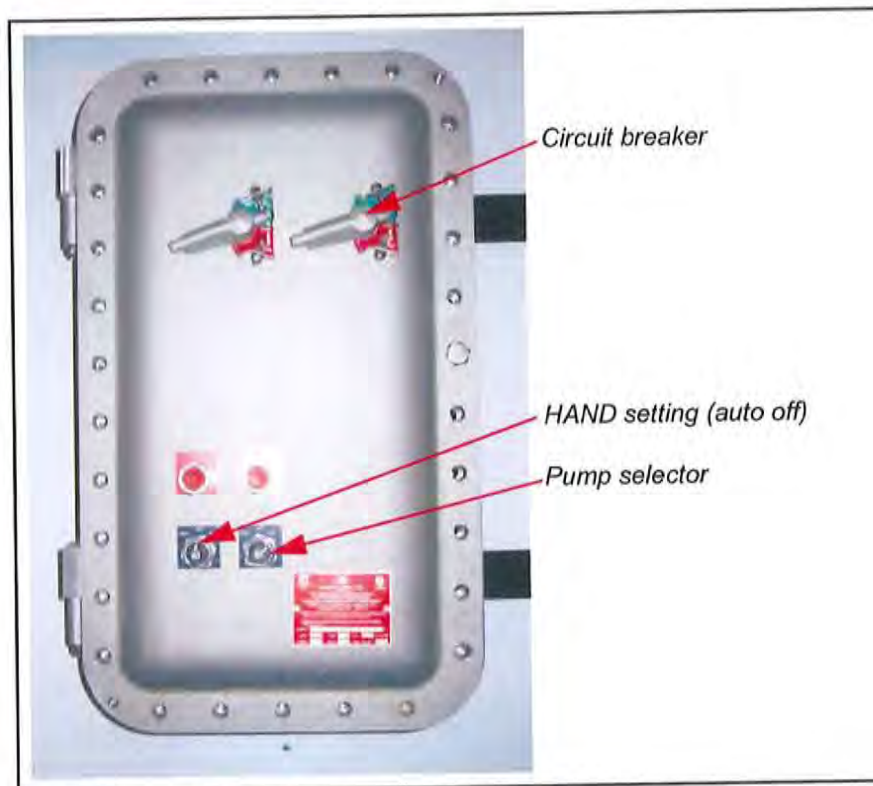
Deadman connector and switch.

Pumps

The system includes two 1500 litre pumps, four 100 litre pumps and one 6 litre pump.

Tanker Truck Refueling Pumps

The 1500 LPM pumps are used to fill the tanker trucks. Only one pump runs at a time. Each time you start the system, it will start the opposite pump to the one that was used the last time. If a pump has to be serviced, it can be taken off line by using the switch box (shown below).



To eliminate one pump, turn the left knob to HAND and switch the right knob to number 1 or 2. Start the pump to make sure you've selected the pump you want to keep on line. If it isn't correct, stop the pump and switch to the opposite pump number.

Use the circuit breaker handles to lock out the pump prior to servicing.

Pump Bearing Housing

If the pump oil level is low and oil has to be added, use SAE 30 non-detergent oil. Shut the pump down, remove the filler plug, then add oil until the sight gauge shows the correct level. DO NOT OVERFILL. Replace the filler plug and turn the left control panel switch back to AUTO.

Pump Priming

In most cases, the pumps should never have to be primed as the system should be normally flooded. However, if the fuel level is low in the main storage tanks, priming may be necessary if a pump has never been on line or if it has been off line for service. Before priming, make sure all inline valves are open.



If, upon start-up, the pump failed to pump fuel using the control panel, shut the pump down and close the inflow valve (this eliminates flow causing a spill). Remove the priming plug, add fuel to the housing until full, re-install the plug and bring the pump back on line. If it still does not pump, repeat the priming operation. If it still fails to pump, refer to the maintenance manual to service the pump.

Vehicle and Genset Refueling Pumps

There are four 100 LPM pumps (two for vehicle refueling and two for Genset refueling). These pumps run in the same way as the 1500 LPM pumps, switching from one pump to the other as they are started. The control of the pumps is also the same with a control panel similar to the larger pump systems. The two vehicle pumps feed the fuel to three hose reels used to dispense fuel to motor vehicles. The two Genset pumps feed through a flow meter directly to the outlet. Priming of these pumps should not be necessary due to the design of the pumps.

Lube Oil Pump

There is one 6 LPM pump that draws lube oil from the tote tank in the storage area and dispenses oil. This is accomplished through the Coxreel using a hose with a dispensing meter on the end of it.

Lube oil meter



Lube oil control

The lube oil pump is installed near the tote tank.



Strainers

Every month, the strainers should be inspected. There is a gauge on each side of the strainer and, if a difference of 5 PSI between the gauges shows, then the filter basket has to be cleaned. To do this, close the isolation valves attached to the strainer and open the bottom drain. When some fuel has drained, open the top assembly to eliminate any vacuum build up.

When the fuel has completely drained, pull the basket out, clean it using some fuel and return it to the strainer. Close the drain, open the isolation valves again and the system is now ready to return to service.



Strainer Gauges



Suction gauge 1



Suction gauge 2



Suction gauge 3

Section 5: Specifications

Fuel Module Specifications

Container Specifications

Length: 40'

Width: 8'

Height: 8'

PSD-1070 Lube Oil Assembly

- 6 LPM Pump C/W 56C Adapter
- Hose Reel Coxreel EZ-Coil
- Electric Motor 1 HP 120V XP
- Pump Base Lube Oil

PSD-990 Genset Fueling System (two assemblies)

- 100 LPM Pump 1-1/2" Inlet
- Electric Motor 1-1/2 HP 600V 3PH
- Pump Base 100LPM
- Filter Housing FBO-14 DPL
- Filter Base 100LPM

PSD-990A Vehicle Fueling System (two pump and filter assemblies)

- 100 LPM Pump 1-1/2" Inlet
- Electric Motor 1-1/2 HP 600V 3PH
- Pump Base 100LPM
- Filter Housing FBO-14 DPL
- Filter Base 100LPM
- Three only Hannay 6024-19-21 Hose Reels
- Hose Reel Frame PSD-969
- Hose Reel Frame PSD-968
- Flow Meter TCS 700-15
- Control Station
- Grounding Reel

PSD-947 Tanker Truck Filling System (two pump assemblies)

- 1500 LPM Pump 4" Inlet
- Electric Motor 26 HP 600V 3 PH C/W Frame 284T
- Pump Base
- Hose Reel Frame PSD-968
- Hose Reel Hannay 346-33-34
- Flow Meter TCS 700-40-45
- Scully Over Fill Controller
- Bottom Loading Coupler
- Control Station
- Grounding Reel

Fire Suppression System

- Control Panel (in electrical room)
- Manifold Electric Room
- Fire Protection Fluid Container Electrical Room
- Manifold Fuel Pumping Area
- Fire Protection Fluid Container Fueling Area (in electrical room)

Electrical Room

- Fire Suppression System
- 600V Power Panel
- 120V Power Panel
- Main Breaker Panel
- Contactor Panel

Section 6: Maintenance Inspections

Inspection Schedule

Daily	Weekly	Monthly	Annually
Inspect to find problems requiring service.	Check oil level in lube oil tote tank.	Inspect hoses for cracks or damage.	Change pump bearing housing oil.
Drain water in filters.			Replace all filter cartridges.
While pumping fuel, check filter pressure differential gauge. If red, change cartridge.			
Inspect basket strainers.		While pumping fuel, check pressure gauges on each side of the strainers. If a difference of 5 PSI exists, the baskets must be cleaned.	
			Replace Scully system O-ring and corrosion pack.
Inspect for any evidence of leaks. Repair and clean spills.			
Inspect for any electrical cables frayed or pulled from strain including the Scully cable.			
Check the fire suppression system control panel to see if it's activated. Green light under AC power label should be ON.			
With the pumps running, check for excess vibration. If any, advise maintenance crew.	Check oil level in pump bearing housing.		
General clean up as needed.			

Appendix

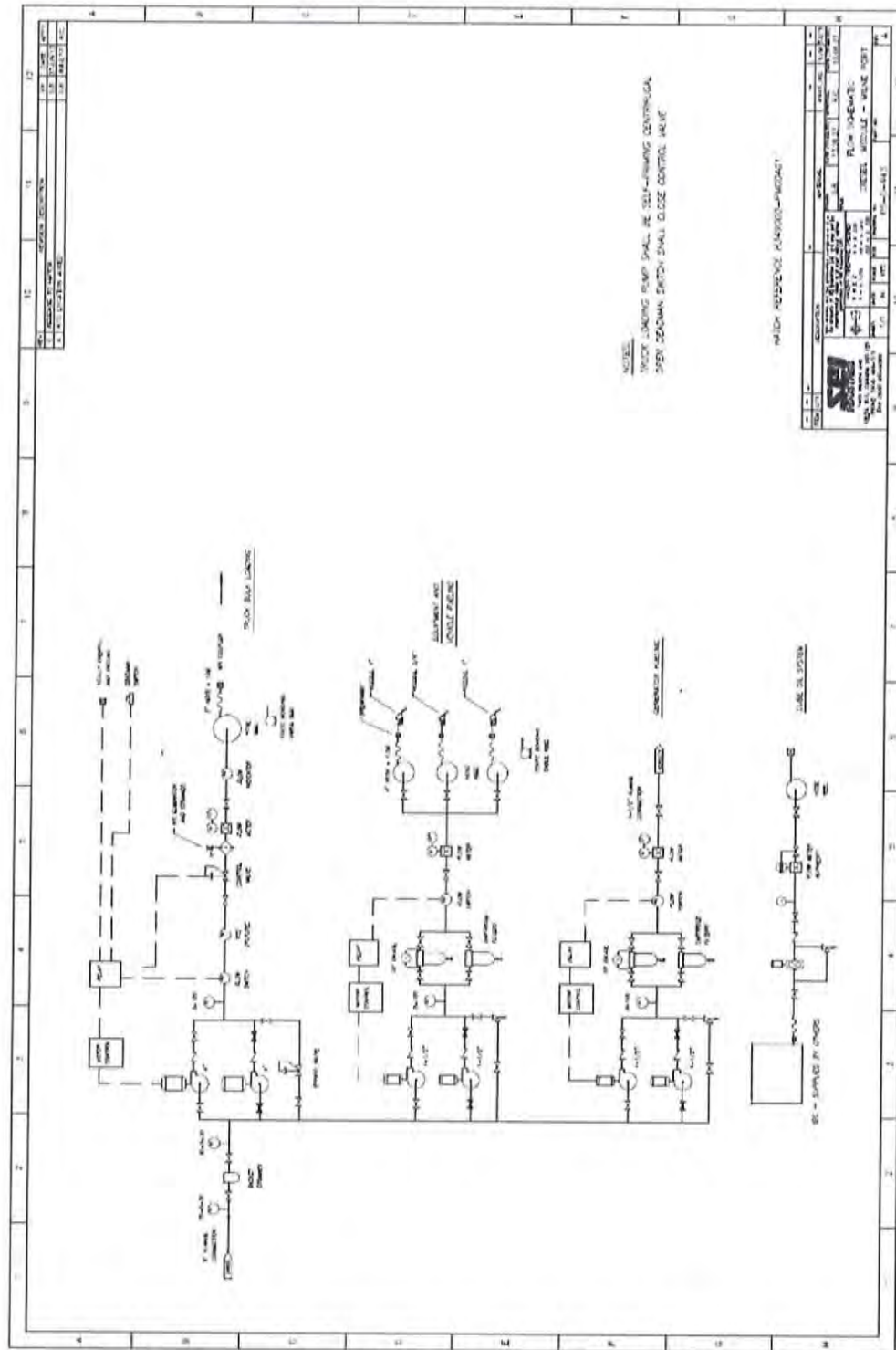
Bill of Materials

Type	No.	Description 1	Description 2	Quantity per	Unit of Measure	WHERE USED
Item	010059	CONTAINER, 40', MODIFIED, PORT	INSULATED, STL-FLOOR, DOORS, HAT	1.00	EACH	CONTAINER
Item	010074	LIGHT, FIXTURE, 4' FLOURESCENT	EXPLOSION, PROOF	4.00	EACH	
Item	010073	TRANSFORMER, CLS-1, ZONE-2	5KVA, 600-120/240	1.00	EACH	
Item	010093	HEATER, OVERHEAD, 600V	RUFFNECK, W/T-START	1.00	EACH	
Item	010075	HEATER, CONVECTION, 120V	EXPLOSION PROOF	1.00	EACH	
Item	010115	FIRE SUPPRESSION SYSTEM	AS PER QUOTE JUNE 25, 2013	1.00	EACH	
Item	006676	EXTINGUISHER, FIRE, 20LB ABC	DRY CHEMICAL	1.00	EACH	
Item	010128	LIGHT, EXTERIOR, EXP, LED-FLOOD	FMV9LCYUNV176	4.00	EACH	
Item	010123	PANELBOARD, 600V, FUEL-MODULES	CXJ16426FC3H2-N4-E3-8C1-8RP3HI	1.00	EACH	
Item	010124	PANELBOARD, 120/240V, FUEL-MODUL	CXJ16166-FC-H2-N4-E3-6C10	1.00	EACH	
Item	010118	BREAKER, MAIN, EXP, FUEL-MODULES	XCB2-1536100	1.00	EACH	
Item	010119	CONTACTOR, ESTOP, FUEL-MODULE	CXJ8126-H1-N4-N5	1.00	EACH	
Item	010117	SWITCH, LIGHT, ON-OFF, EXP	CX-1333-X1-N4-N5-N6	2.00	EACH	TANKER LOADING MODULE
Item	010127	SLIPFITTER, SFA6	FOR LED-FLOODLIGHTS	4.00	EACH	
Item	010221	PUMP, 400GPM, GR, 25HP		2.00	EACH	
Item	010078	STRAINER, BASKET, 6" FLNG	SIMPLEX, MDL-72, 1/8" SS, MESH	1.00	EACH	
Item	010096	VALVE, RELIEF, PILOT-OPERATED, 4"	150# FLNG	1.00	EACH	
Item	010299	SCULLY, OVERFILL	INTELLITROLL, IC-OG	1.00	EACH	
Item	010300	SCULCON, JCT, W/30' WIRE	SC-8A	1.00	EACH	
Item	010301	BYPASS, AUTHORIZER, INTELLITROL		1.00	EACH	
Item	010095	VALVE, REDUCING, PILOT-OPERATED	4", 150# FLNG, W/DEADMAN	1.00	EACH	
Item	007584	HANDLE, DEADMAN, W/50' CORD	G2 MONITORING SYSTEM	1.00	EACH	
Item	010071	METER, FLOW, 4", REGIS-LITRES, DSL	RIGHT-LEFT, W/10:1 PULSER	1.00	EACH	
Item	010077	INDICATOR, FLOW, 4", FLNG	VISI-FLO, 1521RF-0402	1.00	EACH	
Item	010063	REEL, HOSE, HANNAY, 3"x40'	ELECT, REWIND	1.00	EACH	
Item	010079	HOSE, DSL, ARC, 3"x40', 3" MNPT	GOODYEAR, EXTREMFLEX	1.00	EACH	
Item	003167	COUPLER, 3", VIC-STYLE-77	W/T-GASKET	1.00	EACH	
Item	010192	REEL, PLATE, STEEL, 3"		1.00	EACH	
Item	010120	STATIONS, CONTROL, START/STOP	CX1373-X3-N4-N5-3N6	1.00	EACH	
Item	010122	BOX, JUNCTION, EXP, FUEL-MODULES	CXJ12128-H1-N1-N4-N5	1.00	EACH	
Item	010139	VALVE, 4", 150# FLANGED	SPLIT-BODY, CARBON STEEL	8.00	EACH	
Item	010141	VALVE, 6", 150# FLANGED	CARBON-STEEL	2.00	EACH	
Item	010145	VALVE, WAFER-CHECK, 4", 150# FLNGD	CARBON-STEEL	2.00	EACH	
Item	004886	COUPLER, 4" API, BOTTOM LOADING	W/TTMA 4"x3"NPT ADAPTER	1.00	EACH	
Item	010184	GAUGE, WIKA, 4"-30HG-30PSIG	1/2"NPT, LOWER-MOUNT	3.00	EACH	
Item	010185	GAUGE, WIKA, 4", 0-160PSIG	1/2"NPT, LOWER-MOUNT	1.00	EACH	
Item	010326	RELAY, OMRON	H3CR-A-AC100-240/DC100-125	1.00	EACH	
Item	010327	SOCKET, RELAY, OMRON	PCCF-11E	1.00	EACH	
Item	010352	BLOCK, TERMINAL, M4/6	011511607	4.00	EACH	
Item	010353	BLOCK, TERMINAL, GROUND, M4/6P	016511316	1.00	EACH	
Item	010101	SWITCH, FLOW, 4" INLINE, EXP	120VAC, PADDLE-STYLE	1.00	EACH	
Item	010126	STARTER, 25HP, BAFFINLAND	CXJ14286-H2-N1-N5-2C1-4N6	1.00	EACH	

Bill of Materials (continued)

Type	No.	Description 1	Description 2	Quantity per	Unit of Measure	WHERE USED
Item	010222	PUMP, ASSY, 100LPM, 1.5HP		2.00	EACH	VEHICLE REFUELING
Item	010202	VALVE, RELIEF, 21-PSIG, 42GPM	CARBON-STL, FLANGED	1.00	EACH	
Item	010070	METER, FLOW, 1-1/2", REGIS-LITRES	LEFT-RIGHT, W/10:1 PULSER	1.00	EACH	
Item	010064	REEL, HOSE, HANNAY, 1"x36'	ELECT, REWIND	3.00	EACH	
Item	010183	FRAME, HOSE REEL, 1.5"		1.00	EACH	
Item	010080	HOSE, DSL, ARC, 1"x40', 1" MNPT	GOODYEAR, COLD FLEX	3.00	EACH	
Item	006507	NOZZLE, 1" OPW 7H-5400		3.00	EACH	
Item	006509	SWIVEL, 1", ULC644	w/SILICONE SEAL	3.00	EACH	
Item	010303	BREAK-AWAY, 1", OPW-66V-1300		3.00	EACH	
Item	010304	HOSE, ASSY, DSL, FUEL-DELIVERY, 1"	W/1" MNPT ENDS	3.00	EACH	
Item	010179	BASE, FILTER, SUPPORT, 31.25"x31"		1.00	EACH	
Item	003241	HOUSING, FBO-14 DPL	WITH SIGHT GLASS	2.00	EACH	
Item	003243	FILTER, ELEMENT, 25MICRON	RACOR, FBO-60338	2.00	EACH	
Item	010120	STATIONS, CONTROL, START/STOP	CX1373-X3-N4-N5-3N6	1.00	EACH	
Item	010197	VALVE, SPLIT-BODY, 1-1/2", SS	150# FLNGD, FIRE-SAFE	6.00	EACH	
Item	010198	VALVE, BALL, 1-1/2", CARBON-STL	SOCKET-WELD, FIRE-SAFE	10.00	EACH	
Item	010275	VALVE, WAFER-CHECK, 1-1/5", 150#		3.00	EACH	
Item	010202	VALVE, RELIEF, 21-PSIG, 42GPM	CARBON-STL, FLANGED	1.00	EACH	
Item	002538	CAMLOCK, F, 3/4", AL		3.00	EACH	
Item	002183	BUSHING, 1.5" MNPT x 1" FNPT, SS		3.00	EACH	
Item	010184	GAUGE, WIKA, 4"-30HG-30PSIG	1/2"NPT, LOWER-MOUNT	1.00	EACH	GEN SET FUELING
Item	010326	RELAY, OMRON,	H3CR-A-AC100-240/DC100-125	1.00	EACH	
Item	010327	SOCKET, RELAY, OMRON	PCCF-11E	1.00	EACH	
Item	010352	BLOCK, TERMINAL, M4/6	011511607	4.00	EACH	
Item	010353	BLOCK, TERMINAL, GROUND, M4/6P	016511316	1.00	EACH	
Item	010101	SWITCH, FLOW, 4" INLINE, EXP	120VAC, PADDLE-STYLE	1.00	EACH	
Item	010222	PUMP, ASSY, 100LPM, 1.5HP		2.00	EACH	
Item	010070	METER, FLOW, 1-1/2", REGIS-LITRES	LEFT-RIGHT, W/10:1 PULSER	1.00	EACH	
Item	010179	BASE, FILTER, SUPPORT, 31.25"x31"		1.00	EACH	
Item	003241	HOUSING, FBO-14 DPL	WITH SIGHT GLASS	2.00	EACH	
Item	003243	FILTER, ELEMENT, 25MICRON	RACOR, FBO-60338	2.00	EACH	
Item	010184	GAUGE, WIKA, 4"-30HG-30PSIG	1/2"NPT, LOWER-MOUNT	1.00	EACH	
Item	010120	STATIONS, CONTROL, START/STOP	CX1373-X3-N4-N5-3N6	1.00	EACH	
Item	010197	VALVE, SPLIT-BODY, 1-1/2", SS	150# FLNGD, FIRE-SAFE	2.00	EACH	
Item	010198	VALVE, BALL, 1-1/2", CARBON-STL	SOCKET-WELD, FIRE-SAFE	2.00	EACH	
Item	010275	VALVE, WAFER-CHECK, 1-1/5", 150#		1.00	EACH	
Item	010202	VALVE, RELIEF, 21-PSIG, 42GPM	CARBON-STL, FLANGED	1.00	EACH	
Item	010326	RELAY, OMRON,	H3CR-A-AC100-240/DC100-125	1.00	EACH	
Item	010327	SOCKET, RELAY, OMRON	PCCF-11E	1.00	EACH	
Item	010352	BLOCK, TERMINAL, M4/6	011511607	4.00	EACH	
Item	010353	BLOCK, TERMINAL, GROUND, M4/6P	016511316	1.00	EACH	LUBE OIL SYSTEM
Item	010101	SWITCH, FLOW, 4" INLINE, EXP	120VAC, PADDLE-STYLE	1.00	EACH	
Item	010125	STARTER, 2HP, BAFFINLAND	CX112246-H2-N1-N4-N5-2C1-4N6	2.00	EACH	
Item	010234	PUMP, LUBE OIL, 1.8GPM, 115V	W/56CFRAME	1.00	EACH	
Item	010235	MOTOR, ELEC, 0.5HP, 1800RPM	115/208-230, 56C-FRAME	1.00	EACH	
Item	010231	DISPENSER, OIL, PRE-SET, LITRES	GRACO, 207742	1.00	EACH	
Item	010230	REEL, HOSE, OIL, 1/2"x50', EZ-COIL	W/HOSE	1.00	EACH	
Item	006853	VALVE, BALL, 1/2" FNPT, SS		2.00	EACH	
Item	010467	HOSE, ASSY, 1/2"x24"	W/SSKC&C	1.00	EACH	
Item	002537	CAMLOCK, F, 1/2", AL		2.00	EACH	
Item	010120	STATIONS, CONTROL, START/STOP	CX1373-X3-N4-N5-3N6	1.00	EACH	VARIOUS
Item	010379	STARTER, 1/2HP, BAFFINLAND	CX1393-MOD-C6-N4	1.00	EACH	
Item	010468	HOSE, ASSY, 1/2"x172"	W/SSKC&C	1.00	EACH	
Item	010121	E-STOP, SWITCH FUEL MODULE	CX1333-X1-N4-N5-N6	5.00	EACH	

Milne Port Diesel Schematic



Vehicle Refueling Checklist

Warning

Quick start guides should only be used once you are trained and familiar with operational procedures. Refer to *Section 4: Operations* of the operations manual for complete instructions.

- Check the electrical room to make sure all breakers are on.
- Turn on lights, if not already on.
- If lights will not come on, check emergency stop switches. Pull out any that are pushed in.
- Zero fuel meter.
- Pull out hose reel.
- Start pump.
- When full, turn off pump.
- Retract the hose reel by pushing the rewind button and holding the button until rewind.
- Zero fuel meter.

**Emergency stop
switch**

Fuel meter

Start/stop switch



Tanker Truck Filling Checklist

Warning

Quick start guides should only be used once you are trained and familiar with operational procedures. Refer to *Section 4: Operations* of the operations manual for complete instructions.

- Check the electrical room to make sure all breakers are on.
- Turn on lights, if not already on.
- If lights will not come on, check emergency stop switches. Pull out any that are pushed in.
- Plug in Scully control system cord. If tanker truck not equipped with Scully system, deactivate system with key and attach grounding reel.
- Zero fuel meter.
- Release hose reel clutch by pulling black knob out.
- Start pump.
- When full, turn off pump.
- Engage hose reel clutch by pushing black knob in.
- Retract the hose reel by pushing the rewind button and holding the button until rewind.
- Zero fuel meter.



Tanker truck fuel meter

Warning

Filling Empty Tanks

The API RP 2003 recommends limiting the initial velocity to 1m/s (500 LPM) until the tanker truck inlet is submerged by two inlet pipe diameters. After that, the flow can increase up to 3m/s (1500 LPM). A gate valve on the truck will control the flow or the ball valve near the hose reel can be also used.

Genset Refueling Checklist

Warning

Quick start guides should only be used once you are trained and familiar with operational procedures. Refer to *Section 4: Operations* of the operations manual for complete instructions.

- Check the electrical room to make sure all breakers are on.
- Turn on lights, if not already on.
- If lights will not come on, check emergency stop switches. Pull out any that are pushed in.
- Zero fuel meter.
- Determine how to stop the fuel flow before the Genset tank overflows.
- Start pump.
- When full, turn off pump.
- Zero fuel meter.



Warning

Filling Genset

At the time of installation, the Genset system is provided with only manual control. There are two ways to control filling. The first way is to determine how much fuel is required to fill the Genset tank and then use the flow meter reading to gauge when to shut the fuel flow off. The other option is to have a second person, who monitors the level in the tank and is in communication to advise the person running the pump, to shut off the flow before it overflows.