

APPENDIX D: FORCE MAIN SYSTEM DATA

Table D-1. HRSD Force Mains

Table D-2. Force Main SSOs

Table D-3. Force Main Prioritization

Table D-4. Ferrous FM Segments within 3,000 feet Downstream of HRSD PS

Table D-5. Force Main Segments within 500 feet of a Drinking Water Reservoir

Table D-6. HRSD Force Main Segments (Added May 2010)

Figure D-1. HRSD North Shore Planned Force Main Inspections

Figure D-2. HRSD South Shore Planned Force Main Inspections

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Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
NF-001	13,388	6, 8, 18, 24	PVC, DIP, PCCP	WILLIAMSBURG
NF-001A	282	12, 14, 18	DIP, PVC	JAMES CITY
NF-002	10,370	8, 10, 12, 16, 24	DIP	WILLIAMSBURG
NF-003	10,922	4, 8, 12, 18, 24, 30	DIP, PCCP	JAMES CITY
NF-004	4,950	8, 16, 24, 36	PCCP, *TBD*	WILLIAMSBURG
NF-005	14,941	6, 8, 10, 12, 36	PCCP, *TBD*	JAMES CITY
NF-006	11,057	6, 12, 16, 20, 36	PCCP, *TBD*	JAMES CITY
NF-006X	227	20	CIP	JAMES CITY
NF-007	9,388	8, 12, 24	DIP, CIP	JAMES CITY
NF-008	32,145	2, 4, 6, 8, 10, 12, 14, 16, 24	DIP, CIP, PCCP, PE	NEWPORT NEWS
NF-009	3,416	4, 12, 14	DIP, PE, HDPE	NEWPORT NEWS
NF-010	7,721	8, 12, 16	DIP, AC	YORK
NF-011	13,913	6, 8, 10, 30, 42	PCCP, *TBD*	YORK
NF-011X	15,236	6, 8, 10, 12, 16, 30, 36, 42	AC, PCCP, RCCP	YORK
NF-012	9,625	2, 8, 16, 24, 42, 48	PCCP, *TBD*	YORK
NF-013	3,814	4, 6, 8, 10, 14, 24	DIP, CIP, PCCP, HDPE	NEWPORT NEWS
NF-014	3,532	6, 8, 10, 16	CIP	NEWPORT NEWS
NF-015	13,968	4, 6, 8, 12, 16, 24	CIP, PCCP	NEWPORT NEWS
NF-016	7,320	6, 8, 18, 24, 30	DIP, CIP, PCCP	NEWPORT NEWS
NF-017	15,310	6, 8, 12, 24, 36	CIP, DIP	NEWPORT NEWS
NF-018	5,041	6, 8, 18	DIP, CIP	NEWPORT NEWS
NF-019	1,303	18, 24, 30	CIP, PCCP	NEWPORT NEWS
NF-020	5,537	8, 10, 12, 14, 16	DIP, CIP	NEWPORT NEWS
NF-021	1,443	6, 10, 12	CIP	NEWPORT NEWS
NF-022	1,871	8, 16, 30	AC, PCCP	YORK
NF-023	3,362	8, 12, 16, 30	AC, PCCP	YORK
NF-024	14,259	4, 6, 8, 12, 30	CIP, PCCP	YORK
NF-025	7,406	18	RCCP	POQUOSON
NF-026	13,403	18, 30	CIP, RCCP	HAMPTON
NF-027	14,487	10, 16	DIP	NEWPORT NEWS
NF-028	2,674	12, 36	CIP, RCCP	NEWPORT NEWS
NF-029	3,112	8, 12, 24, 36	CIP	NEWPORT NEWS
NF-030	3,784	6, 8, 12, 36	RCP	NEWPORT NEWS
NF-031	1,059	6, 8, 12, 18	DIP, CIP, PE, HDPE	NEWPORT NEWS
NF-032	4,717	6, 8, 12, 18	DIP, CIP	NEWPORT NEWS
NF-033	7,112	6, 8, 12, 36	CIP, RCCP	NEWPORT NEWS
NF-036	3,385	6, 10, 12	AC	NEWPORT NEWS
NF-037	7,383	6, 8, 10, 12, 16, 36	CIP, DIP, RCCP	NEWPORT NEWS

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
NF-038	514	6	CIP	NEWPORT NEWS
NF-039	6,386	30, 36	CIP, STEEL	NEWPORT NEWS
NF-040	4,176	6, 12, 16	DIP, AC	NEWPORT NEWS
NF-041	6,190	12	CIP	NEWPORT NEWS
NF-042	18,586	20	AC	NEWPORT NEWS
NF-042X	624	12	CIP	NEWPORT NEWS
NF-043	3,948	12	CIP	NEWPORT NEWS
NF-046	5,485	4, 8, 10, 12, 30	CIP	HAMPTON
NF-047	8,962	30	CIP	HAMPTON
NF-048	3,360	16, 18, 24, 30	DIP, CIP	HAMPTON
NF-049	12,123	12, 30	CIP	NEWPORT NEWS
NF-050	2,461	12, 30	CIP, AC	NEWPORT NEWS
NF-055	480	*TBD*	*TBD*	NEWPORT NEWS
NF-058	22,139	8, 10, 16, 24, 30	DIP, RCCP, CIP	HAMPTON
NF-059	2,777	12, 18	AC, CIP	HAMPTON
NF-060	4,504	18	AC	HAMPTON
NF-061	10,396	12, 30	CIP	HAMPTON
NF-065	2,712	24	DIP	HAMPTON
NF-066	8,651	24	DIP, CIP	HAMPTON
NF-068	1,432	12	DIP	HAMPTON
NF-071	4,051	12	DIP, CIP	HAMPTON
NF-072	1,401	8, 10	DIP	HAMPTON
NF-073	2,347	12	AC	HAMPTON
NF-074	2,706	16	DIP	HAMPTON
NF-075	3,802	10	CIP	HAMPTON
NF-076	117	12	CIP	HAMPTON
NF-085	3,995	8, 14	CIP	HAMPTON
NF-089	5,162	6, 8, 12, 20, 24	DIP, CIP, AC	HAMPTON
NF-090	5,881	8	CIP	HAMPTON
NF-091	4,790	16	AC, CIP	HAMPTON
NF-093	5,481	16	AC, CIP	HAMPTON
NF-093A	47	16	AC	HAMPTON
NF-093B	46	10	*TBD*	HAMPTON
NF-096	4,238	16	CIP	HAMPTON
NF-097	6,831	10, 12, 16	CIP	HAMPTON
NF-100	1,017	18, 20	AC	NEWPORT NEWS
NF-105	4,479	10	CIP	NEWPORT NEWS
NF-107	3,254	16	CIP	NEWPORT NEWS

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
NF-113	5,539	8, 16	CIP	NEWPORT NEWS
NF-119	889	20	CIP	NEWPORT NEWS
NF-120	714	16	AC	HAMPTON
NF-121	2,545	8, 12	CIP	NEWPORT NEWS
NF-122	239	18	CIP	NEWPORT NEWS
NF-130	4,651	30	DIP	NEWPORT NEWS
NF-132	1,049	12, 14	CIP	HAMPTON
NF-133	5,113	8, 10, 12, 27, 30, 42	DIP, RCCP, PVC	HAMPTON
NF-153	7,993	30	DIP	HAMPTON
NF-157	311	30	CIP, RCCP, RCP	HAMPTON
NF-158	2,469	30	RCCP	HAMPTON
NF-162	1,154	12	CIP	HAMPTON
NF-163	9,499	18	DIP	WILLIAMSBURG
NF-165	8,648	16	DIP	YORK
NF-171	7,603	8, 18, 24, 30	DIP, CIP, PCCP	NEWPORT NEWS
NF-172	14,418	8, 12, 24, 30, 36	DIP, PCCP	JAMES CITY
NF-173	18,649	6, 8, 10, 16	AC	YORK
NF-177	12,156	8, 20, 24	DIP	JAMES CITY
NF-178	14,795	6, 8, 12, 24	DIP	JAMES CITY
NF-178A	92	24	DIP	YORK
NF-178B	89	8, 24	DIP	JAMES CITY
NF-178C	378	12	DIP	YORK
NF-178D	372	12	DIP	JAMES CITY
NF-179	14,418	6, 8, 10, 12, 16, 24	DIP	NEWPORT NEWS
NF-180	5,003	8, 16, 30	DIP, AC	YORK
NF-181	3,796	30	DIP	GLOUCESTER
NF-182	12,570	2, 4, 8, 11, 24, 30	DIP, PE	GLOUCESTER
NF-183	14,078	2, 4, 8, 16	DIP, PVC	GLOUCESTER
NF-184	13,495	2, 4, 6, 8, 16	DIP, PVC	GLOUCESTER
NF-185	13,843	2, 4, 8, 20	DIP	GLOUCESTER
NF-186	12,846	2, 4, 8, 20	DIP	GLOUCESTER
NF-187	19,782	2, 4, 8, 10, 12, 18	DIP	GLOUCESTER
NF-188	6,920	2, 4, 8, 16	DIP, PVC	GLOUCESTER
NF-189	7,702	2, 4, 6, 8, 16	DIP, PVC	GLOUCESTER
NF-190	36,842	8, 10, 12, 20, 24	DIP	JAMES CITY
NF-191	8,445	4, 8, 12, 18	DIP, PVC	YORK
NF-191A	362	12	DIP	YORK
NF-192	4,135	24, 36	DIP	JAMES CITY

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
NF-193	12,182	30	DIP	HAMPTON
NF-194	6,983	30	DIP	HAMPTON
NF-195	7,138	8, 24, 30	DIP	JAMES CITY
NF-196	8,806	24, 30	DIP	JAMES CITY
NF-197	3,716	6, 10, 12, 18	DIP	YORK
NF-204	4,183	20, 30	DIP	JAMES CITY
NF-205	11,675	8, 16, 20, 30, 36	DIP	NEWPORT NEWS
SF-002	3,275	20, 24, 36	DIP, CIP, PCCP	NORFOLK
SF-004	12,144	6, 8, 24	CIP	NORFOLK
SF-005	19,813	4, 10, 12, 16, 20	CIP, RCP, DIP, PCCP	NORFOLK
SF-006	2,835	10, 12	CIP	NORFOLK
SF-007	13,330	6, 8, 10, 12, 16, 20	CIP, PCCP, PVC	NORFOLK
SF-008	6,174	10, 12, 18, 20	CIP, PVC	NORFOLK
SF-009	9,790	2, 4, 8, 10, 16, 18, 20	CIP, PVC	NORFOLK
SF-010	918	8, 14, 16	CIP	NORFOLK
SF-011	2,995	8, 10, 14	CIP	NORFOLK
SF-012	4,479	6, 10, 14	CIP	NORFOLK
SF-013	7,911	4, 10, 12, 18, 24, 42	DIP, RCP	VIRGINIA BEACH
SF-014	4,048	4, 8, 16, 24, 42	DIP, RCP	VIRGINIA BEACH
SF-015	8,468	4, 8, 10, 12, 20	AC, CIP, STEEL	VIRGINIA BEACH
SF-016	30,481	6, 8, 10, 12, 14, 16, 20, 36, 42, 48	DIP, PCCP, STEEL	VIRGINIA BEACH
SF-017	6,137	10, 24, 36, 42	RCP	VIRGINIA BEACH
SF-018	5,521	8, 12, 24	PCCP, DIP	VIRGINIA BEACH
SF-019	4,674	4, 6, 8, 20	AC	VIRGINIA BEACH
SF-020	6,794	10, 12, 18	AC, CIP	VIRGINIA BEACH
SF-021	5,622	8, 14, 16	AC	VIRGINIA BEACH
SF-022	17,216	6, 8, 12, 16	DIP, AC, PVC	VIRGINIA BEACH
SF-023	9,491	8, 10, 12, 24, 42, 48	DIP, PCCP	SUFFOLK
SF-024	4,286	10, 42	PCCP	SUFFOLK
SF-025	8,542	6, 8, 10, 30, 36	PCCP, *TBD*	SUFFOLK
SF-026	9,765	3, 8, 10, 12, 24, 30	CIP, PCCP	SUFFOLK
SF-027	14,060	8, 16, 30, 36	DIP, PCCP	CHESAPEAKE
SF-028	15,445	6, 8, 16, 24, 30	DIP, PCCP	SUFFOLK
SF-029	9,355	6, 8, 10, 16, 30	PCCP, *TBD*	PORTSMOUTH
SF-030	5,443	8, 14	AC, DIP	CHESAPEAKE
SF-031	6,015	8, 12, 24	DIP	PORTSMOUTH
SF-032	2,266	6, 8, 14	CIP	PORTSMOUTH
SF-036	1,750	8, 12, 14	DIP	PORTSMOUTH

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
SF-037	2,512	8, 12	DIP, CIP	PORTSMOUTH
SF-038	5,617	6, 10, 12, 20	CIP, DIP, PVC	PORTSMOUTH
SF-039	1,502	6	CIP	NORFOLK
SF-040	1,494	8	CIP	NORFOLK
SF-041	793	8, 12	CIP	NORFOLK
SF-042	959	6	CIP	NORFOLK
SF-043	1,264	6, 8	CIP	NORFOLK
SF-045	4,277	6, 8, 12	CIP, PVC	NORFOLK
SF-046	3,892	6, 10, 12, 16	PVC	NORFOLK
SF-051	10,078	6, 12, 18, 24	DIP, RCP	NORFOLK
SF-052	1,727	8, 10	CIP, PVC	NORFOLK
SF-057	3,652	12, 16, 24, 30, 39, 42, 48	DIP, HDPE, RCP	NORFOLK
SF-058	2,193	6, 30, 48	RCP	NORFOLK
SF-059	5,979	10, 12, 16, 42	RCP	NORFOLK
SF-060	2,952	20, 24	RCP	NORFOLK
SF-062	976	6	CIP	NORFOLK
SF-064	1,208	6	CIP	NORFOLK
SF-065	1,381	16, 18	CIP	NORFOLK
SF-066	7,587	12, 18	CIP	NORFOLK
SF-069	3,310	12	CIP	NORFOLK
SF-070	2,662	16	CIP	NORFOLK
SF-071	79	42	PCCP	VIRGINIA BEACH
SF-076	1,816	8	CIP	NORFOLK
SF-080	3,702	10, 24	DIP	NORFOLK
SF-081	4,129	16, 30, 36	DIP, RCP	NORFOLK
SF-082	7,198	12, 20	CIP, DIP	NORFOLK
SF-083	1,063	24	RCP	NORFOLK
SF-084	1,663	8, 24, 30	RCP, DIP	NORFOLK
SF-085	4,862	12	CAS	NORFOLK
SF-086	1,240	8, 12	CIP, STEEL	NORFOLK
SF-087	2,166	12	CIP	NORFOLK
SF-090	2,215	12, 16, 20	CIP, HDPE	NORFOLK
SF-091	7,799	8, 12	DIP, CIP	NORFOLK
SF-092	3,576	4, 8	DIP, HPDE	NORFOLK
SF-093	1,376	6, 8, 10	CIP	NORFOLK
SF-094	2,660	8	CIP	NORFOLK
SF-095	2,729	*TBD*	*TBD*	NORFOLK
SF-097	10,101	12, 20, 24, 30	DIP	NORFOLK

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
SF-099	3,256	20	CIP, PVC	NORFOLK
SF-100	3,560	6, 8, 10, 12, 14	CIP, PVC	NORFOLK
SF-101	2,625	6, 8, 10	DIP, CIP	NORFOLK
SF-103	5,175	10, 12, 16	AC, DIP	NORFOLK
SF-106	9,191	4, 6, 8, 12	DIP, CIP	NORFOLK
SF-109	1,983	8, 10, 16	AC	VIRGINIA BEACH
SF-110	1,899	8, 10, 14	AC, DIP, CIP	NORFOLK
SF-111	2,079	4, 10	DIP, CIP	NORFOLK
SF-114	958	8, 12, 20, 24	AC, CIP	NORFOLK
SF-115	2,250	8, 12, 14	AC, CIP	NORFOLK
SF-116	4,577	8, 16	AC, CIP	NORFOLK
SF-117	8,645	8, 10, 24	RCP	VIRGINIA BEACH
SF-118	22,767	8, 10, 24, 36, 42	DIP, PCCP, STEEL	VIRGINIA BEACH
SF-119	26,346	6, 8, 10, 12, 18, 24, 36	RCP, STEEL	VIRGINIA BEACH
SF-120	8,787	6, 8, 10, 12, 16, 18, 24, 30, 36	RCP, CIP	VIRGINIA BEACH
SF-121	6,279	8, 10, 14, 24	DIP, CIP	VIRGINIA BEACH
SF-122	5,105	10, 16, 18, 24	RCP-FB	VIRGINIA BEACH
SF-123	3,242	6, 8, 16, 24	DIP, RCP-FB, HDPE	VIRGINIA BEACH
SF-124	6,989	6, 8, 10, 16	DIP	VIRGINIA BEACH
SF-125	3,117	6, 8, 12, 16	DIP	VIRGINIA BEACH
SF-126	6,617	6, 8, 12, 16, 24	DIP	VIRGINIA BEACH
SF-127	11,023	8, 12, 16, 18	AC	VIRGINIA BEACH
SF-128	5,204	6, 10, 16, 24	DIP, RCP-FB	VIRGINIA BEACH
SF-129	6,829	8, 10, 16, 24	DIP, RCP-FB, RCP	VIRGINIA BEACH
SF-130	8,330	6, 8, 12, 16	AC, DIP	VIRGINIA BEACH
SF-131	10,636	4, 8, 12, 16	AC, DIP	VIRGINIA BEACH
SF-132	1,109	19, 20	AC, CIP, PVC	VIRGINIA BEACH
SF-133	2,956	6, 8, 12, 14	CIP	CHESAPEAKE
SF-134	14,417	6, 8, 10, 12, 16, 24, 30	RCP, CIP	VIRGINIA BEACH
SF-135	20,747	10, 12, 20, 24, 42	RCCP, PCCP, *TBD*	VIRGINIA BEACH
SF-136	17,804	6, 8, 30	DIP, PCCP	CHESAPEAKE
SF-137	16,389	8, 30	PCCP, *TBD*	CHESAPEAKE
SF-138	10,256	8, 10, 12, 20, 24	DIP	CHESAPEAKE
SF-139	4,139	6, 12	CIP	CHESAPEAKE
SF-140	3,331	10, 12	CIP	CHESAPEAKE
SF-141	6,307	6, 8, 10, 14, 16	CIP	CHESAPEAKE
SF-142	3,840	6, 8, 16, 24	DIP, CIP	CHESAPEAKE
SF-143	10,124	6, 8, 12, 16, 18, 20, 24, 30	DIP, CIP, PCCP	CHESAPEAKE

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Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
SF-144	12,708	8, 10, 12, 24	DIP, CIP	CHESAPEAKE
SF-144X	980	20, 24	DIP	CHESAPEAKE
SF-146	2,718	12	CIP, PVC	NORFOLK
SF-147	11,952	10, 12, 18, 20	DIP, PVC, CIP	CHESAPEAKE
SF-150	11,937	6, 8, 18, 30	DIP	CHESAPEAKE
SF-154	929	10	CIP	CHESAPEAKE
SF-155	867	6, 12	CIP	CHESAPEAKE
SF-156	767	24	DIP	CHESAPEAKE
SF-158	4,907	8, 10, 16, 24	DIP	CHESAPEAKE
SF-159	11,278	8, 10, 18, 30, 36	DIP, PCCP, STEEL	CHESAPEAKE
SF-160	14,477	8, 14, 16, 18, 24, 30	DIP	CHESAPEAKE
SF-163	2,231	10	CIP	CHESAPEAKE
SF-164	13,148	8, 10, 12, 30	DIP, PVC	CHESAPEAKE
SF-165	9,833	8, 12, 14, 16, 36	DIP, RCP	VIRGINIA BEACH
SF-166	1,938	8, 12, 36, 42	PCCP, STEEL	VIRGINIA BEACH
SF-167	9,886	8, 10, 12, 16, 42	PCCP, TBD	VIRGINIA BEACH
SF-168	7,344	8, 16, 36, 42	DIP, PCCP	VIRGINIA BEACH
SF-169	16,154	8, 12, 18, 20, 36, 42	PCCP, *TBD*	VIRGINIA BEACH
SF-170	3,055	8, 16	DIP	VIRGINIA BEACH
SF-171	20,916	12, 42	PCCP, DIP, PVC	VIRGINIA BEACH
SF-172	13,608	10, 30, 42	DIP, PCCP, PVC	VIRGINIA BEACH
SF-173	4,338	6, 10, 12	AC, DIP	VIRGINIA BEACH
SF-174	5,389	10, 12, 42	PCCP, RCCP, *TBD*	VIRGINIA BEACH
SF-175	9,075	8, 42, 54	PCCP, *TBD*	VIRGINIA BEACH
SF-176	2,703	12	DIP	VIRGINIA BEACH
SF-177	9,709	4, 8, 10, 12, 24, 30, 42	DIP, PCCP	VIRGINIA BEACH
SF-178	7,376	8, 20, 24	DIP, CIP	CHESAPEAKE
SF-179	946	24	CIP	CHESAPEAKE
SF-180	4,903	4, 6, 20, 24	DIP, CIP	CHESAPEAKE
SF-181	2,078	8, 10, 20	DIP	CHESAPEAKE
SF-182	9,148	2, 8, 12, 16, 20	AC, DIP	CHESAPEAKE
SF-183	9,196	6, 12, 20	AC, DIP	CHESAPEAKE
SF-184	5,663	8, 14, 16	AC, DIP, CIP	CHESAPEAKE
SF-185	1,818	6, 8, 10, 24	DIP, PCCP	CHESAPEAKE
SF-186	9,191	8, 14	AC	SUFFOLK
SF-187	4,697	10, 18	DIP	SUFFOLK
SF-188	3,279	6, 8, 14	AC, DIP	SUFFOLK
SF-189	7,754	6, 8, 18, 20, 24	DIP, CIP, PCCP	SUFFOLK

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
SF-190	18,937	8, 10, 24, 30	PCCP, *TBD*	SUFFOLK
SF-194	16,092	8, 24, 30	PCCP, *TBD*	SUFFOLK
SF-195	136	16	*TBD*	NORFOLK
SF-197	6,184	8, 10, 16, 24, 30, 36	RCP	VIRGINIA BEACH
SF-198	4,162	14, 16, 20	CIP	VIRGINIA BEACH
SF-199	6,327	8, 10, 12	AC, DIP	CHESAPEAKE
SF-200	1,437	6, 8, 10, 12	CIP	CHESAPEAKE
SF-203	2,474	8, 12	DIP	NORFOLK
SF-205	77	6, 8, 10	CIP	NORFOLK
SF-206	5,558	6, 8, 10, 12, 16	DIP	PORTSMOUTH
SF-208	5,338	8, 16	AC	CHESAPEAKE
SF-209	5,905	6, 8, 16	DIP, PVC	CHESAPEAKE
SF-210	16,353	4, 8, 12, 16, 24, 30	DIP	CHESAPEAKE
SF-211	5,447	8, 12, 24, 30	DIP, PCCP	CHESAPEAKE
SF-212	8,140	2, 4, 6, 8, 10, 12, 16, 20, 24	DIP	VIRGINIA BEACH
SF-213	14,861	8, 12, 30	DIP, PCCP, STEEL	VIRGINIA BEACH
SF-214	12,870	8, 12, 24	DIP	SUFFOLK
SF-216	8,315	10, 18, 20, 24	CIP, RCP	PORTSMOUTH
SF-217	4,284	24	RCP, DIP	PORTSMOUTH
SF-218	5,671	8, 24, 30	PCCP, RCP, *TBD*	PORTSMOUTH
SF-219	13,455	12, 24, 30	CIP, RCP	PORTSMOUTH
SF-220	2,476	30	RCP	PORTSMOUTH
SF-221	14,427	6, 24, 48	DIP, RCP	PORTSMOUTH
SF-222	2,149	24, 36, 48	CIP, RCP	PORTSMOUTH
SF-223	1,414	10, 24	RCP	PORTSMOUTH
SF-224	2,084	8, 20, 36	RCP	PORTSMOUTH
SF-225	1,631	30	RCP	PORTSMOUTH
SF-226	2,556	24, 30, 36	CIP, RCP	PORTSMOUTH
SF-227	12,597	42, 48	DIP	NORFOLK
SF-228	5,128	42, 48	DIP, PCCP	NORFOLK
SF-229	826	8, 12	DIP	CHESAPEAKE
SF-230	687	12, 20, 24	DIP	CHESAPEAKE
SF-231	378	14	AC, DIP	SUFFOLK
SF-232	3,245	12, 24	DIP	CHESAPEAKE
SF-233	6,093	8, 10, 12, 18	DIP, PVC	CHESAPEAKE
SF-234	16,433	8, 12, 24	DIP	CHESAPEAKE
SF-235	7,901	12, 24, 30	DIP	NORFOLK
SF-236	22,313	4, 8, 10, 30, 36	DIP	CHESAPEAKE

Table D-1. HRSD Force Mains (Updated May 2010)				
Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
SF-237	12,103	6, 8, 10, 12, 18, 30, 36	DIP	SUFFOLK
SF-238	1,577	36	STEEL	SUFFOLK
SF-239	2,825	8, 12, 24, 36	DIP	SUFFOLK
SF-240	4,893	8, 12, 30, 36	DIP	SUFFOLK
SF-241	4,761	30	DIP	SUFFOLK
SF-242	8,234	8, 12, 30	DIP	SUFFOLK
SF-243	3,560	30	STEEL	ISLE OF WIGHT
SF-244	13,239	6, 8, 16, 18, 30	DIP, PVC	ISLE OF WIGHT
SF-245	20,134	6, 8, 30	DIP	ISLE OF WIGHT
SF-246	6,877	8, 12, 30	DIP, HDPE	ISLE OF WIGHT
SF-247	1,920	30	STEEL	ISLE OF WIGHT
SF-248	11,909	10, 24, 30	DIP	ISLE OF WIGHT
SF-249	426	8, 24	DIP	ISLE OF WIGHT
SF-250	1,316	24	STEEL	ISLE OF WIGHT
SF-251	4,532	8, 10, 16, 24	DIP	ISLE OF WIGHT
SF-252	2,990	8, 12, 18, 20	DIP	CHESAPEAKE
SF-253	23,542	6, 8, 12, 18, 20, 24	DIP	SUFFOLK
SF-254	22,611	8, 12, 20	DIP	ISLE OF WIGHT
SF-255	6,621	8, 20	DIP	ISLE OF WIGHT
SF-256	8,537	42, 48, 54	DIP, STEEL	VIRGINIA BEACH
SF-257	6,191	8, 12, 20, 30, 36, 42, 54	DIP, STEEL	VIRGINIA BEACH
SF-258	14,243	4, 8, 12, 16, 20, 24	DIP	CHESAPEAKE
SF-259	1,099	8, 16	DIP	CHESAPEAKE
SF-260	10,826	42	DIP, STEEL	VIRGINIA BEACH
SF-262	12,012	12, 16, 42	DIP	VIRGINIA BEACH
SF-263	2,578	12, 16, 36, 42	DIP	VIRGINIA BEACH
SF-264	6,003	6, 8, 12, 16, 18, 30	DIP	SUFFOLK
SF-265	4,384	8, 30	DIP, CCP-FB	SUFFOLK
SF-266	6,815	12, 30	DIP	SUFFOLK
SF-267	5,938	6, 8, 12, 30	DIP	SUFFOLK
SF-268	941	30	DIP	NORFOLK
SF-269	1,589	30	HDPE	NORFOLK
SF-270	426	30	DIP	NORFOLK
SF-271	8,789	12, 36, 42, 48	STEEL	CHESAPEAKE
SF-272	8,508	12, 48	STEEL	CHESAPEAKE
SF-273	1,966	48	STEEL	CHESAPEAKE
SF-274	2,737	10, 30, 42, 48	DIP, STEEL	VIRGINIA BEACH
SF-275	3,748	42	DIP	VIRGINIA BEACH

Line Number	Length (Feet)	Diameter (Inches)	Material	Primary Jurisdiction
SF-276	10,828	8, 36	DIP	CHESAPEAKE
SF-277	11,130	8, 12, 36	DIP	CHESAPEAKE
SF-278	772	8, 16	DIP	CHESAPEAKE
SF-279	2,221	16	DIP	VIRGINIA BEACH
SF-NAT	3,751	54	PCCP	SUFFOLK
SF-OUT	375	14	CIP	CHESAPEAKE

TBD – to be determined during Condition Assessment Activities

Table D-2. Force Main SSOs

Line No.	Occurrences	Date	ID No.	Location	Jurisdiction	Reported Cause	Volume (gal)
NF-006	1	9/2/2005	2006-T-100325	1 Busch Gardens Blvd at Admin Building	James City	HRSD was notified by Busch Garden's staff that sewage was seeping through asphalt in front of administrative building due to failure in Line #6 underground.	50
NF-008	2	4/29/2004	2004-T-1948	Route 60 near Picketts Line	Newport News	Contractor was installing guard rail and damaged FM.	12000
		1/14/2007	2007-T-101099	15482 Warwick Blvd & Stafford St	Newport News	Internal corrosion caused failure of 24" force main.	750
NF-009	3	1/24/2003	2003-T-1313	Route 60 @ Enterprise Drive	Newport News	Graphitization. Hole in pipe repaired w/ full-circle clamp.	4500
		3/8/2003	2003-T-1661	Route 60 @ Enterprise Drive	Newport News	Graphitization. 8-ft section replaced. 2,000 gal. recovered.	18000
		4/9/2003	2003-T-1961	Route 60 between Enterprise Dr and Picketts Lane	Newport News	Excessive I/I and graphitization	18000
NF-011	1	9/12/2007	2008-T-101269	204 Hollywood Boulevard	York	Contractor hit a 42" force main. Estimated flow rate is 500 gpm.	420000
NF-020	2	9/19/2005	2006-T-100331	12280 Jefferson Avenue	Newport News	Failed air vent riser pipe. Conservative leak rate estimate of 25 gpm from 11pm 9/19 to 2am 9/20 to storm drain at intersection of Jefferson Avenue and Clair Lane.	4500
		9/20/2005	2006-T-100332	12280 Jefferson Avenue	Newport News	Leak had previously been discovered at 11:00 pm on 9/19 and flow was diverted until repairs could be made. When repair crew arrived on site, it was discovered that line pressure had increased and leak had restarted.	1500
NF-026	1	2/19/2007	2007-T-101134	Wythe Creek Road	Hampton	A 2" ball valve on the air vent froze. The ball valve body expanded and came apart causing spill at approximate flow rate of 100 gpm.	5000
NF-032	1	1/16/2006	2006-T-100492	Normandy Lane Pump Station	Newport News	Failure of 18" force main located under marsh beside Deep Creek. Citizen reported the problem to HRSD.	-1
NF-037	1	9/11/2007	2008-T-101267	Alpine Street & Marrow Drive	Newport News	Contractor hit 36 inch force main causing it to leak intermittently. Discharge flow rate estimated at 50 gpm for about 5 minutes at a time.	800

Table D-2. Force Main SSOs

Line No.	Occurrences	Date	ID No.	Location	Jurisdiction	Reported Cause	Volume (gal)
NF-039	1	10/10/2005	2006-T-100399	694-696 J. Clyde Morris Blvd.	Newport News	Force main (36 in) failed about 5 miles west of previous reported problem on same system. Sewage/storm water was spilled for at rate of 100 gpm until this system could be shut down. 750 gallons was storm water and 2250 gallons was wastewater.	3000
NF-042	1	10/25/2006	2007-T-100947	225 Tyler Avenue	Newport News	Force main leaking at joint. Wastewater leaked into large drainage ditch intermittently when the pump station pumps operated.	-1
NF-048	1	10/30/2002	2003-T-0797	Big Bethel Road FM	Hampton	Corrosion of air vent riser pipe.	12000
NF-049	1	8/19/2008	2009-T-101642	100 North Park Lane	Hampton	Landfill employee was mowing the right-of-way with a bush hog when he hit the 12" HDPE temporary by-pass line located near the back of the property.	1000
NF-055	1	3/15/2004	2004-T-1722	Hilton School PS	Newport News	Stress crack in 55-year-old cast iron force main.	100
NF-058	2	5/10/2003	2003-T-2229	N. King Street & Thornrose Ave	Hampton	Internal corrosion of PCCP FM. 2 sticks replaced. AV added.	3150
		12/2/2008	2009-T-101736	Hardy Cash Drive & Executive Drive	Hampton	Force main leaking at an estimated rate of 50 gpm. Upon further review, the flow rate was estimated at 100 gpm. The 30-inch PCCP failed due to sulfide corrosion on the crown of the pipe.	4000
NF-073	1	6/25/2008	2008-T-101599	1798 Armistead Avenue & Westminister Dr	Hampton	Line had been dewatered so that contractor could conduct a tie-in. The air vent was opened to help the line drain. Technician did not close air vent prior to re-opening the main valve to line after contractor completed work.	25
NF-090	1	12/8/2008	2009-T-101741	Old Buckroe Road & Ranalet Drive	Hampton	Force main leaking. 8-inch cast iron pipe had stress fracture.	100
NF-105	2	3/17/2004	2004-T-1744	Ferguson Park FM @ Railroad Overpass	Newport News	Internal corrosion.	50
		4/26/2004	2004-T-1922	Ferguson Park FM @ Railroad Overpass	Newport News	Internal corrosion. Replaced expansion joint.	60

Table D-2. Force Main SSOs

Line No.	Occurrences	Date	ID No.	Location	Jurisdiction	Reported Cause	Volume (gal)
NF-121	1	3/6/2008	2008-T-101444	2901 West Avenue	Newport News	Force main leaking intermittently 5 gpm when pump station operates. 12-inch cast iron pipe had a stress fracture which broke the bell joint. Fracture was most likely caused by ground settling.	900
NF-132	1	3/13/2006	2006-T-100546	217 Washington Street	Hampton	Crew discovered a failure of 14" force main near the Washington Street Pump Station. Pipe failed due to external corrosion.	200
NF-172	1	9/23/2005	2006-T-100335	Construction Road into brewery	Williamsburg	Automatic air vent on force main had a small leak. The sealing mechanism was not fully closing and spill went to storm drain.	50
NF-179	1	2/14/2003	2003-T-1475	949 Backspin Court (Kiln Creek)	Newport News	External corrosion of air vent riser pipe	90
NF-194	1	6/27/2006	2006-T-100678	Ivy Home Road & 3721 Victoria Boulevard	Hampton	Failure of 30" force main due to interior corrosion. Estimated discharge of 300 gpm going into storm drain. Area receiving heavy rains at the time.	73500
NF-204	2	10/17/2007	2008-T-101298	Fort Eustis Blvd & Warwick Blvd	Newport News	Leaking 24" force main. Estimated initial flow rate of 50 gpm which decreased to 25 gpm and stopped at 4:30 pm. Originally reported as entering reservoir but NN waterworks staff informed HRSD that catch basin drained to river.	4500
		11/2/2007	2008-T-101317	Fort Eustis Blvd & Warwick Blvd	Newport News	Leaking 24" force main at an estimated flow rate of 10 gpm.	300
SF-009	1	9/20/2006	2007-T-100893	Bi-County and Eagle Roads	Norfolk	Force main failure. This force main was scheduled to be taken out of service within two weeks New replacement force main is in ground awaiting tie-in to system by contractor.	53000
SF-016	1	5/2/2008	2008-T-101517	649 Newtown Road	Virginia Beach	Air vent had a hole in it which caused it to leak at an estimated rate of 15 gpm. Air vent had corroded around threads which caused it to leak at the corporation stop.	225
SF-040	3	9/2/2003	2004-T-0411	Myrtle Pkwy & Surrey Cresc (near Richmond Cresc PS)	Norfolk	External corrosion of 55-yr old CI pipe.	300
		3/18/2005	2005-T-100231	Surry Crescent and Hampton Boulevard	Norfolk	Contractor hit an 8" force main which had been	-1

Table D-2. Force Main SSOs

Line No.	Occurrences	Date	ID No.	Location	Jurisdiction	Reported Cause	Volume (gal)
						marked.	
		4/25/2005	2005-T-100251	Surrey Crescent and Hampton Boulevard	Norfolk	Portable generator and pumping system that was containing leak on force main failed.	0
SF-042	1	6/6/2006	2006-T-100633	900 Jamestown Crescent & Magnolia Avenue	Norfolk	Failure of 6" force main. Crew found 3 foot long crack in pipe	50
SF-045	2	2/18/2003	2003-T-1491	Bluestone Ave & Monterey Ave (Norfolk)	Norfolk	Stress crack in this 56-year-old cast iron force main.	525
		1/31/2005	2005-T-100163	Brunswick Avenue & Hampton Boulevard	Norfolk	Cracked bell on 12" force main caused line to leak. Approximately 50 gallons were contained in the gutter when crew arrived at site. Additional 150 gallons spilled into storm drain before leak could be stopped.	150
SF-046	1	1/15/2006	2006-T-100494	Powhatan and Bolling Avenues	Norfolk	Circumference crack in force main.	250
SF-059	1	11/15/2002	2003-T-0907	1110 Llewellyn Ave (S. Trunk Section "C" FM)	Norfolk	Leaking coupling on HDPE pipe.	50
SF-066	1	10/9/2003	2004-T-0827	Chesapeake Blvd & Robin Hood Rd	Norfolk	Corrosion failure of air vent not shown on HRSD Valve Guides.	2250
SF-069	1	5/18/2006	2006-T-100605	Intersection of Robin Hood Rd. & Hurley Ave	Norfolk	Corroded fittings on air vent in force main Line # 69 caused leak estimated at 25 gpm. Leak was stopped at 6:50 PM on May 18, 2006. Air vent was not on drawings.	750
SF-082	2	3/22/2004	2004-T-1761	Olney Road west of Roswell Avenue	Norfolk	Lead joint failure in 20" cast iron FM.	2400
		3/24/2006	2006-T-100556	2539 Corprew Avenue & Oaklawn Street	Norfolk	Failure of 20" cast iron force main	12000
SF-086	1	1/19/2007	2007-T-101106	Between Middletown Arch & Colchester Crescent	Norfolk	Circular crack in 8-inch force main.	150
SF-095	2	8/28/2002	2003-T-0423	Waterside Dr & St. Paul's Blvd	Norfolk	Suspected corrosion of 24" CIFM. Line abandoned.	33750
		9/11/2002	2003-T-0504	Waterside Dr & St. Paul's Blvd	Norfolk	Leaking isolation valve. Pinched down on valve & dewatered FM.	50
SF-100	1	11/22/2002	2003-T-0963	Selden Ave & Cypress St	Norfolk	Stress crack in 54-year old CI pipe.	600
SF-125	1	10/21/2003	2004-T-0890	Great Neck Rd & Virginia Beach Blvd	Virginia Beach	Packing on 16" valve leaked.	75

Table D-2. Force Main SSOs

Line No.	Occurrences	Date	ID No.	Location	Jurisdiction	Reported Cause	Volume (gal)
SF-126	1	10/20/2003	2004-T-0878	2020 Laskin Road	Virginia Beach	Human error. Incorrect valve status provided to contractor.	60000
SF-130	1	9/3/2004	2005-T-0532	Great Neck Road	Virginia Beach	Contractor hit coupling. Line had been marked.	15000
SF-138	1	3/14/2004	2004-T-1717	3900 South Military Highway	Chesapeake	External corrosion of air vent riser pipe.	27000
SF-142	1	4/14/2005	2005-T-100245	804 Canal Drive	Chesapeake	24" ductile iron force main leaking from hole caused by external corrosion.	32250
SF-147	3	6/13/2005	2005-T-100284	1127 Perry Street	Chesapeake	Discovered force main leaking intermittently with approximately 100 gallons on ground.	70
		11/1/2007	2008-T-101313	Bainbridge Boulevard & Buchanan Street	Chesapeake	Contractor bore through 20" force main causing spill of 75 gpm.	2625
		12/17/2007	2008-T-101370	Perry Street and Park Avenue	Chesapeake	Failure of bell joint on new 20" force main caused minor leak to storm drain. Further investigation after pipe was excavated indicated that pipe had not seated tightly in joint.	500
SF-164	1	1/8/2007	2007-T-101085	865 Great Bridge Boulevard	Chesapeake	Internal corrosion caused 30" force main failure. Estimate leak rate averaged 1000 gpm until 1:45 pm. Staff was forced to dewater pipe (est. 20,000 gallons) into storm drain to make repairs because gravity system was too small to accept flow.	339000
SF-165	1	10/11/2002	2003-T-0694	Military Highway and Rokeby Ave	Chesapeake	Internal corrosion of RC pipe.	1800000
SF-167	1	2/10/2005	2005-T-100191	5000 block of Ferrell Parkway	Virginia Beach	Flow overwhelmed a crew that was attempting to install a valve in a 42" force main. Flow had been diverted into a city gravity line but it increased to the point of endangering the people in the excavation. Flow was pumped to the ditch.	9000
SF-177	1	1/28/2008	2008-T-101413	Line # 177Map page #22Grid E-9	Virginia Beach	Galvanized air vent riser pipe had deteriorated around threads causing it to separate from the corp stop. Material sprayed out which prevented a recovery of material from the ground.	0
SF-178	1	8/22/2002	2003-T-0382	Great Bridge Blvd & Willow Point Arch	Chesapeake	Corrosion of air vent riser pipe	900

Table D-2. Force Main SSOs

Line No.	Occurrences	Date	ID No.	Location	Jurisdiction	Reported Cause	Volume (gal)
SF-182	1	1/27/2004	2004-T-1440	113 Cedar Road (air vent)	Chesapeake	Contractor mistook air vent for cleanout.	2400
SF-183	1	9/20/2005	2006-T-100334	Intersection of Mt. Pleasant and S. Battlefield Blvd	Chesapeake	Valve leaking past o-ring on 16" force main. HRSD was notified by City of Chesapeake. Found 150 gallons on ground when arrived on site.	-1
SF-184	1	10/12/2002	2003-T-0696	S. Battlefield Blvd & Luray Terrace	Chesapeake	Corrosion of bolts in repair clamp.	37500
		1/11/2007	2007-T-101091	601 S Battlefield Blvd & Ashley Road	Chesapeake	16" force main failure. Spill flow rate is estimated at 300 gpm. A full circle clamp which had previously been installed on the force main failed.	1000
SF-185	1	6/22/2006	2006-T-100672	Kempsville Road & Sharon Drive	Virginia Beach	24" force main failure	50
SF-197	1	5/13/2005	2005-T-100263	101 Aragona Boulevard	Virginia Beach	Contractor hit air vent on force main.	0
SF-199	2	6/15/2003	2003-T-2395	1008 Fentress Road	Chesapeake	Internal corrosion of AC force main.	42000
		11/1/2008	2009-T-101702	Fentress Avenue & Etheridge Road	Chesapeake	16-inch force main failure. Spill flow rate initially 200 gpm. Decreased to 150 gpm @ 3:00 pm. Flow rate then reduced to 50 gpm. Cause of problem was 2-year old PVC force main split on the bottom for 12 feet.	5200
SF-213	2	11/16/2005	2006-T-100421	Intersection of Roundhill Road and Pirandello Road	Virginia Beach	Contractor bore through 30" Force Main. Pipe had been marked properly. Initial flow rate was estimated at 125 gallons per minute and then decreased to 50 gpm.	14700
		10/24/2007	2008-T-101303	Round Hill Drive	Virginia Beach	An 8" branch valve broke off during maintenance causing water to spill into storm drain. The bolts that fasten the bonnet to the valve body deteriorated which caused the flanges to separate and leak.	1365
SF-228	1	7/28/2004	2005-T-0175	Seaboard Ave (Portsmouth Marine Terminal)	Portsmouth	External corrosion of air vent riser pipe.	6000

¹ Source HRSD Records and SSORS for September 2002 to December 2008.

Table D-3. Force Main Prioritization

Prioritization Group	Contract Number	Force Main Segment Number	Pipe Diam. (in)	Pipe Material	Inspection Length (ft)	Consequence of Failure Score	Number of Failures	Failure Dates	Cumulative Footage
1	SS-007	AB-SS-0039	20	RCP	2,701	280	1	9/23/2000	2,701
1	NS-026	YR-NS-0076	18	RCP	3,530	280	1	2/19/2007	6,231
1	SS-159	AT-SS-0063	36	PCCP	4,001	276	1	9/16/2002	10,232
1	SS-213	AT-SS-0191	30	PCCP	4,273	262	1	10/24/2007	14,505
1	SS-164	AT-SS-0044	30	DI	4,288	240	1	1/8/2007	18,793
1	NS-153	BH-NS-0005	30	RCP	2,930	240	1	7/2/2001	21,723
1	NS-031	JR-NS-0035	18	CI	670	240	1	6/16/2006	22,393
1	SS-142	NA-SS-0168	24	DI	3,291	240	1	4/14/2005	25,684
1	SS-082	VIP-SS-0092	20	CI	205	240	4	7/23/1990, 07/30/1990, 12/24/1991, 03/22/2004	25,889
1	NS-039	JR-NS-0011	36	RCP	5,000	236	2	10/8/2005, 10/10/2005	30,889
1	NS-026	YR-NS-0075	18	RCP	5,000	226	1	4/9/2000	35,889
1	NS-005/006	WMBG-NS-0021	36	PCCP	5,000	218	1	7/21/1999	40,889
1	NS-172	WMBG-NS-0052	36	PCCP	860	218	1	9/1/2006	41,749
1	NS-090	BH-NS-0029	8	CI	4,150	200	2	01/03/1990, 3/24/1998	45,899
1	NS-031	BH-NS-0035	14	CI	997	200	1	3/13/2006	46,896
1	SS-040	VIP-SS-0052	8	CI	1,510	200	2	4/8/2002, 09/02/2003	48,406
1	SS-210	AT-SS-0033	30	DI	3,188	186	1	6/22/2006	51,594
1	SS-097	VIP-SS-0128	30	DI	5,000	186	1	2/4/1998	56,594
1	NS-006	WMBG-NS-0018	36	PCCP	5,000	186	1	9/2/2005	61,594
1	NS-089	YR-NS-0110	20	AC	1,687	186	1	11/28/2000	63,281
1	SS-165	AT-SS-0065	36	DI	103	178	1	10/11/2002	63,384
1	NS-042	JR-NS-	20	AC	5,000	168	1	10/25/2006	68,384

Table D-3. Force Main Prioritization

Prioritization Group	Contract Number	Force Main Segment Number	Pipe Diam. (in)	Pipe Material	Inspection Length (ft)	Consequence of Failure Score	Number of Failures	Failure Dates	Cumulative Footage
		0023							
1	NS-179	JR-NS-0062	24	DI	3,478	168	1	2/14/2003	71,862
1	NS-020	JR-NS-0074	14	CI	1,585	168	1	9/20/2005	73,447
1	SS-216/217	VIP-SS-0026	24	RCP	555	168	1	1/29/1998	74,002
1	SS-046/052	VIP-SS-0040	10	CI	405	146	2	2/8/2000, 06/15/2006	74,407
1	SS-045	VIP-SS-0043	12	CI	4,276	146	3	6/15/1996, 02/18/2003, 06/31/2005	78,683
1	NS-105	BH-NS-0045	10	DI	730	128	2	3/17/2004, 04/26/2004	79,413
1	NS-055	JR-NS-0109	6	CI	546	110	1	3/15/2004	79,959
2	SS-168/169	AT-SS-0014	36	PCCP	3,559	312	2	10/28/1989, 10/28/1989	83,518
2	SS-167	AT-SS-0021	42	PCCP	3,371	294	1	8/28/1997	86,889
2	SS-134	AT-SS-0218	30	RCP	5,000	280	1	8/21/1991	91,889
2	SS-213	AT-SS-0190	30	PCCP	4,374	280	1	11/11/1989	96,263
2	SS-081	VIP-SS-0089	36	RCP	630	258	1	5/11/1992	96,893
2	SS-120	CE-SS-0073	24	RCP	2,788	244	3	3/28/1990, 08/11/1992, 09/21/1992	99,681
2	SS-160	AT-SS-0054	30	DI	5,000	240	1	5/19/1992	104,681
2	SS-258/259	AT-SS-0148	16	DI	1,119	240	1	1/18/1992	105,800
2	NS-016	JR-NS-0047	30	PCCP	5,000	240	1	7/24/1989	110,800
2	SS-190	NA-SS-0052	30	PCCP	4,290	240	1	12/17/1992	115,090
2	SS-143	NA-SS-0173	24	CI	1,260	240	1	5/16/1996	116,350
2	SS-070	VIP-SS-0069	16	CI	2,688	240	3	7/7/1991, 12/02/1991, 12/10/1991	119,038
2	SS-189	NA-SS-0059	24	PCCP	1,129	226	2	4/14/1992, 08/17/1992	120,167
2	SS-122	AT-SS-	24	RCP	5,000	208	1	10/23/1989	125,167

Table D-3. Force Main Prioritization

Prioritization Group	Contract Number	Force Main Segment Number	Pipe Diam. (in)	Pipe Material	Inspection Length (ft)	Consequence of Failure Score	Number of Failures	Failure Dates	Cumulative Footage
		0230							
2	SS-137	NA-SS-0163	30	PCCP	3,035	208	1	2/3/1992	128,202
2	SS-218	VIP-SS-0023	30	PCCP	642	208	1	4/29/1992	128,844
2	SS-219	VIP-SS-0024	24	RCP	3,805	208	1	7/29/1996	132,649
2	SS-121	AT-SS-0238	24	CI	5,000	204	3	9/13/1989, 03/04/1991, 02/02/1992	137,649
2	NS-157	BH-NS-0020	30	RCP	342	204	1	9/8/1993	137,991
2	SS-143	NA-SS-0170	24	DI	2,621	200	1	12/18/1996	140,612
2	SS-066	VIP-SS-0068	18	CI	1,030	168	1	2/25/1991	141,642
2	SS-039	VIP-SS-0048	6	CI	55	160	3	8/15/1992, 09/05/1993, 10/12/1993	141,697
2	SS-099	VIP-SS-0132	20	PVC	1,550	128	3	2/26/1990, 04/14/1994, 01/15/1996	143,247
SUMMARY OF SEGMENTS TO BE INSPECTED									
Segment Selection Criteria							No. of Segments	Segment Length	
Group 1: Lines with failures in last 10 years							29	79,959	
Group 2: Lines with failures between 10 years and 20 years and High Consequence of Failure							23	63,288	
Total Number of Segments on FM Inspection List							52	143,247	

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Table D-4. Ferrous FM Segments within 3,000 feet Downstream of HRSD PS

Force Main Segment Number	Contract Number	Diameter (Inches)	HRSD PS	HRSD PS Number	Length of Segment for Inspection (Feet)	Pipe Material	Consequence of Failure Score
JR-NS-0041	NS-17	36	LUCAS CREEK	216	2,696	CI	290
AT-SS-0194	SS-170	16	SHIPPS CORNER PRS	143	2,970	DI	240
AT-SS-0228	SS-128	24	PINE TREE PRS	120	3,000	DI	240
JR-NS-0036	NS-31/32	18	NORMANDY LANE	220	2,950	DI	240
JR-NS-0043	NS-15	24	LUCAS CREEK	216	225	DI	240
JR-NS-0050	NS-171	24	PATRICK HENRY	221	450	DI	240
JR-NS-0054	NS-18	18	PATRICK HENRY	221	500	CI	240
VIP-SS-0031	SS-216	20	ELMHURST LANE	144	900	CI	240
VIP-SS-0066	SS-65	18	LUXEMBOURG AVE	113	1,100	CI	240
VIP-SS-0121	SS-268/270	30	STATE ST	127	2,608	DI	240
WMBG-NS-0105	NS-204	20	GREEN SPRINGS	232	3,000	DI	240
JR-NS-0051	NS-171/19	24	PATRICK HENRY	221	1,334	DI	222
JR-NS-0056	NS-18	18	PATRICK HENRY	221	67	CI	222
VIP-SS-0141	SS-103	16	STEAMBOAT CREEK	128	199	DI	222
NA-SS-0151	SS-27	36	ROUTE 337 PRS	154	376	DI	218
WMBG-NS-0038	NS-27	16	FORT EUSTIS	227	2,530	DI	204
AT-SS-0056	SS-163	10	DOZIER'S CORNER	109	2,136	CI	200
BH-NS-0044	NS-105	10	FERGUSON PARK	210	3,000	CI	200
JR-NS-0042	NS-17	36	LUCAS CREEK	216	304	CI	200
WMBG-NS-0110	NS-177	24	FORDS COLONY	231	1,390	DI	200
BH-NS-0026	NS-75	14	PINE CHAPEL	222	304	CI	186
NA-SS-0169	SS-143	24	DEEP CREEK PRS	138	3,000	DI	182
AB-SS-0030	SS-08	20	DOVERCOURT RD	117	2,990	CI	168
BH-NS-0025	NS-85	14	PINE CHAPEL	222	760	CI	168
BH-NS-0042	NS-113	16	COPELAND PARK	209	3,000	CI	168
BH-NS-0043	NS-107	16	NEWMARKET CREEK	219	3,000	CI	168
NA-SS-0012	SS-31	24	CEDAR LANE	104	949	DI	168
NA-SS-0164	SS-138	24	BOWERS HILL PRS	137	323	DI	168
NA-SS-0174	SS-143	24	WASHINGTON DISTRICT	131	2,272	DI	168
VIP-SS-0097	SS-90	16	VIRGINIA BEACH BLVD	130	2,069	CI	168
VIP-SS-0129	SS-97	30	QUAIL AVE PRS	139	2,975	DI	168
YR-NS-0125	NS-48	30	BIG BETHEL	205	3,000	DI	168
NA-SS-0176	SS-143	30	WASHINGTON DISTRICT	131	328	DI	164
NA-SS-0177	SS-143	14	WASHINGTON DISTRICT	131	366	CI	164
VIP-SS-0109	SS-94	8	INGELSIDE RD	148	2,642	DI	164
VIP-SS-0122	SS-97/270	30	STATE ST	127	392	DI	164
BH-NS-0036	NS-162	12	HAMPTON INSTITUTE	211	1,155	CI	160
VIP-SS-0072	SS-64	6	ASHLAND CIRCLE	102	1,269	CI	160
VIP-SS-0075	SS-62	6	GRANBY ST	111	70	CI	160
VIP-SS-0076	SS-76	8	NORVIEW AVE	118	1,800	CI	160

Table D-4. Ferrous FM Segments within 3,000 feet Downstream of HRSD PS

Force Main Segment Number	Contract Number	Diameter (Inches)	HRSD PS	HRSD PS Number	Length of Segment for Inspection (Feet)	Pipe Material	Consequence of Failure Score
VIP-SS-0144	SS-101	10	STEAMBOAT CREEK	128	206	DI	160
WMBG-NS-0111	NS-177	24	FORDS COLONY	231	1,560	DI	150
NA-SS-0011	SS-31	24	CEDAR LANE	104	2,051	DI	146
NA-SS-0148	SS-27	36	ROUTE 337 PRS	154	260	DI	146
BH-NS-0037	NS-121	12	25TH ST	201	2,510	CI	142
VIP-SS-0142	SS-101/103	10	STEAMBOAT CREEK	128	99	DI	142
BH-NS-0023	NS-97/96	14	BAY SHORE LANE	203	3,000	CI	132
NA-SS-0175	SS-143	24	WASHINGTON DISTRICT	131	2	DI	132
AB-SS-0019	SS-235	24	TAUSSIG BLVD	129	1,938	DI	128
AB-SS-0022	SS-06	10	NORTH SHORE RD	117	99	CI	128
BH-NS-0028	NS-90	8	BLOXOMS CORNER	204	1,731	CI	128
JR-NS-0030	NS-41	12	MORRISON	218	1,850	CI	128
VIP-SS-0106	SS-92	10	SEAY AVE	125	931	DI	128
VIP-SS-0145	SS-101	8	STEAMBOAT CREEK	128	2	CI	128
VIP-SS-0146	SS-101	8	STEAMBOAT CREEK	128	7	CI	128
VIP-SS-0153	SS-146	12	QUAIL AVE	123	2,168	DI	128
WMBG-NS-0032	NS-163	18	COLONIAL WILLIAMSBURG	229	2,900	DI	128
VIP-SS-0047	SS-43	8	JAMESTOWN CRESCENT	142	200	CI	124
AB-SS-0017	SS-235	24	TAUSSIG BLVD	129	696	DI	96
AB-SS-0020	SS-235	16	TAUSSIG BLVD	129	364	DI	96
VIP-SS-0130	SS-97	24	QUAIL AVE PRS	139	5	DI	96
VIP-SS-0131	SS-97	24	QUAIL AVE PRS	139	20	DI	96
JR-NS-0066	NS-42	12	MORRISON	218	597	CI	88
VIP-SS-0107	SS-93	10	INGELSIDE RD	148	1,354	DI	88
JR-NS-0031	NS-41	12	MORRISON	218	1,185	CI	74
VIP-SS-0148	SS-146	12	QUAIL AVE	123	29	CI	56
VIP-SS-0149	SS-146	12	QUAIL AVE	123	10	CI	56
VIP-SS-0150	SS-146	12	QUAIL AVE	123	4	CI	56
VIP-SS-0151	SS-146	12	QUAIL AVE	123	180	CI	56
			TOTAL		90,357		

Table D-5. Force Main Segments within 500 feet of a Drinking Water Reservoir					
Segment ID	Pipe Diameter (in)	Material	Water Body	Segment Length (ft)	Consequence of Failure Score
CE-SS-0001	48	PCCP	Lake Smith - Lake Whitehurst	3419	420
CE-SS-0041	42	RC	Lake Smith	1172	420
CE-SS-0026	42	RC	Lake Smith	103	380
CE-SS-0035	20	AC	Lake Whitehurst	1111	370
NA-SS-0065	14	AC	Lake Meade - Lake Kilby	871	370
NA-SS-0066	14	AC	Lake Kilby - LAKE MEADE - PORTSMOUTH	141	370
NA-SS-0067	14	AC	Lake Kilby - Lake Meade	1449	370
WMBG-NS-0011	24	PCCP	Skiffes Creek Reservoir	849	370
WMBG-NS-0012	24	PCCP	Skiffes Creek Reservoir	1651	352
CE-SS-0002	48	PCCP	Lake Whitehurst	835	334
CE-SS-0030	24	DI	Lake Whitehurst	4358	330
CE-SS-0032	24	DI	Little Creek Reservoir	612	312
WMBG-NS-0009	24	PCCP	Skiffes Creek Reservoir	1370	312
AT-SS-0119	48	STEEL	Stumpy Lake	1763	304
WMBG-NS-0010	24	PCCP	Skiffes Creek Reservoir	15	280
CE-SS-0027	24	DI	Lake Smith	1199	258
CE-SS-0024	16	DI	Lake Whitehurst	60	244
CE-SS-0028	24	DI	Lake Smith	1039	244
CE-SS-0103	24	DI	Little Creek Reservoir	21	240
CE-SS-0025	16	DI	Lake Whitehurst	4	204
			TOTAL	22,042	

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Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AB-SS-0001	SF-02	2,878	36	PCCP	1979	AB	NORFOLK
AB-SS-0002	SF-02	12	24	DIP	1979	AB	NORFOLK
AB-SS-0003	SF-02	22	24	DIP	1979	AB	NORFOLK
AB-SS-0004	SF-02	439	36	PCCP	1979	AB	NORFOLK
AB-SS-0005	SF-04	5,000	24	CIP	1973	AB	NORFOLK
AB-SS-0006	SF-04	5,001	24	CIP	1973	AB	NORFOLK
AB-SS-0007	SF-04	1,631	24	CIP	1973	AB	NORFOLK
AB-SS-0008	SF-04	435	24	CIP	1973	AB	NORFOLK
AB-SS-0009	SF-05	15	20	CIP	1973	AB	NORFOLK
AB-SS-0010	SF-05	62	20	CIP	1973	AB	NORFOLK
AB-SS-0011	SF-05	65	20	CIP	1973	AB	NORFOLK
AB-SS-0012	SF-05	467	20	RCP	1973	AB	NORFOLK
AB-SS-0013	SF-05	5,000	20	RCP	1973	AB	NORFOLK
AB-SS-0014	SF-05	3,882	20	RCP	1973	AB	NORFOLK
AB-SS-0015	SF-05	2,775	20	RCP	1973	AB	NORFOLK
AB-SS-0016	SF-235	4,866	24	DIP	1984	AB	NORFOLK
AB-SS-0017	SF-235	696	24	DIP	1984	AB	NORFOLK
AB-SS-0018	SF-235	1	30	DIP	1984	AB	NORFOLK
AB-SS-0019	SF-235	1,938	24	DIP	1984	AB	NORFOLK
AB-SS-0020	SF-235	364	16	DIP	1984	AB	NORFOLK
AB-SS-0021	SF-195	140	30	RCP	1984	AB	NORFOLK
AB-SS-0022	SF-06	129	10	CIP	1962	AB	NORFOLK
AB-SS-0023	SF-06	107	10	CIP	1962	AB	NORFOLK
AB-SS-0024	SF-06	2,566	12	CIP	1962	AB	NORFOLK
AB-SS-0025	SF-05	5	20	CIP	1973	AB	NORFOLK
AB-SS-0026	SF-05	5,001	20	CIP	1973	AB	NORFOLK
AB-SS-0027	SF-05	140	20	CIP	1973	AB	NORFOLK
AB-SS-0028	SF-05/08	3,243	20	CIP	1963	AB	NORFOLK
AB-SS-0029	SF-05	1,523	20	CIP	1973	AB	NORFOLK
AB-SS-0030	SF-08	3,122	20	CIP	1963	AB	NORFOLK
AB-SS-0031	SF-08	356	20	CIP	1963	AB	NORFOLK
AB-SS-0032	SF-09	5,001	20	CIP	1965	AB	NORFOLK
AB-SS-0033	SF-09	3,662	20	CIP	2006	AB	NORFOLK
AB-SS-0034	SF-09/10	1,803	20	CIP	1965	AB	NORFOLK
AB-SS-0035	SF-10/11	3,185	20	CIP	1960	AB	NORFOLK
AB-SS-0036	SF-07	2	20	RCP	2001	AB	NORFOLK
AB-SS-0037	SF-07	5,001	20	RCP	2001	AB	NORFOLK
AB-SS-0038	SF-07	5,000	20	RCP	2001	AB	NORFOLK
AB-SS-0039	SF-07	2,681	20	PCCP	2001	AB	NORFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0001	SF-175	5,000	42	PCCP	1976	AT	VIRGINIA BEACH
AT-SS-0002	SF-175	3,216	42	PCCP	1976	AT	VIRGINIA BEACH
AT-SS-0003	SF-175	64	42	PCCP	1976	AT	VIRGINIA BEACH
AT-SS-0004	SF-175/171	720	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0005	SF-171	5,000	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0006	SF-171	5,001	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0007	SF-171	1,574	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0008	SF-171	5,001	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0009	SF-171	3,775	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0010	SF-171/169	3,456	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0011	SF-169	4,326	36	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0012	SF-169	5,002	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0013	SF-169	3,132	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0014	SF-168/169	3,559	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0015	SF-213	45	42	DIP	1987	AT	VIRGINIA BEACH
AT-SS-0016	SF-213	8	42	DIP	1987	AT	VIRGINIA BEACH
AT-SS-0017	SF-213	248	42	DIP	1987	AT	VIRGINIA BEACH
AT-SS-0018	SF-213	16	42	DIP	1987	AT	VIRGINIA BEACH
AT-SS-0019	SF-213	3,561	36	PCCP	1987	AT	VIRGINIA BEACH
AT-SS-0020	SF-167	5,001	42	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0021	SF-167	3,371	42	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0022	SF-167	1,707	42	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0023	SF-212	15	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0024	SF-212	5,002	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0025	SF-212	863	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0026	SF-212	20	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0027	SF-212	2,139	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0028	SF-212	218	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0029	SF-211	333	24	DIP	1973	AT	VIRGINIA BEACH
AT-SS-0030	SF-211	5,000	30	DIP	1998	AT	CHESAPEAKE
AT-SS-0031	SF-210	3,857	30	DIP	1998	AT	CHESAPEAKE
AT-SS-0032	SF-210	4,203	30	DIP	1998	AT	CHESAPEAKE
AT-SS-0033	SF-210	3,188	30	DIP	1998	AT	CHESAPEAKE
AT-SS-0034	SF-185	34	24	DIP	1976	AT	CHESAPEAKE
AT-SS-0035	SF-185	1,717	24	DIP	1976	AT	CHESAPEAKE
AT-SS-0036	SF-185	45	24	PCCP	1976	AT	CHESAPEAKE
AT-SS-0037	SF-210	4,938	30	DIP	1998	AT	CHESAPEAKE
AT-SS-0038	SF-179	21	24	CIP	1998	AT	CHESAPEAKE
AT-SS-0040	SF-178/179	1,650	24	DIP	1976	AT	CHESAPEAKE

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0041	SF-178	5,001	24	DIP	1976	AT	CHESAPEAKE
AT-SS-0042	SF-178	1,608	24	DIP	1976	AT	CHESAPEAKE
AT-SS-0043	SF-178	5	24	DIP	1976	AT	CHESAPEAKE
AT-SS-0044	SF-164	4,288	30	DIP	1976	AT	CHESAPEAKE
AT-SS-0045	SF-164	819	30	PVC	1976	AT	CHESAPEAKE
AT-SS-0046	SF-164	205	66	STEEL	1976	AT	CHESAPEAKE
AT-SS-0047	SF-164	48	30	PVC	1976	AT	CHESAPEAKE
AT-SS-0048	SF-164	979	30	DIP	1976	AT	CHESAPEAKE
AT-SS-0050	SF-164	5,000	30	DIP	1976	AT	CHESAPEAKE
AT-SS-0051	SF-164	1,623	30	DIP	1976	AT	CHESAPEAKE
AT-SS-0052	SF-164	116	30	DIP	1976	AT	CHESAPEAKE
AT-SS-0053	SF-160	8	14	DIP	1975	AT	CHESAPEAKE
AT-SS-0054	SF-160	5,001	30	DIP	1975	AT	CHESAPEAKE
AT-SS-0055	SF-164	16	30	DIP	1976	AT	CHESAPEAKE
AT-SS-0056	SF-163	2,136	10	CIP	1961	AT	CHESAPEAKE
AT-SS-0057	SF-163	85	10	CIP	1961	AT	CHESAPEAKE
AT-SS-0058	SF-160	5,000	30	DIP	1975	AT	CHESAPEAKE
AT-SS-0059	SF-160	3,934	30	DIP	1975	AT	CHESAPEAKE
AT-SS-0060	SF-159	1,526	36	DIP	1974	AT	CHESAPEAKE
AT-SS-0061	SF-159	702	36	PCCP	1974	AT	CHESAPEAKE
AT-SS-0062	SF-159	5,000	36	PCCP	1974	AT	CHESAPEAKE
AT-SS-0063	SF-159	4,001	36	PCCP	1974	AT	CHESAPEAKE
AT-SS-0064	SF-165	20	36	DIP	1971	AT	CHESAPEAKE
AT-SS-0065	SF-165	103	36	DIP	1971	AT	CHESAPEAKE
AT-SS-0066	SF-165	1,499	36	RCP	1971	AT	CHESAPEAKE
AT-SS-0067	SF-165	5,001	36	RCP	1971	AT	CHESAPEAKE
AT-SS-0068	SF-165	3,160	36	RCP	1971	AT	VIRGINIA BEACH
AT-SS-0069	SF-166	1,911	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0070	SF-166	11	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0071	SF-166	4	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0072	SF-166	3	42	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0073	SF-166	11	36	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0074	SF-176	2,677	12	DIP	1976	AT	VIRGINIA BEACH
AT-SS-0075	SF-177	19	42	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0076	SF-177	179	30	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0077	SF-177	5,000	30	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0078	SF-177	4,139	30	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0079	SF-177	175	30	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0080	SF-177	30	30	PCCP	1974	AT	VIRGINIA BEACH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0081	SF-257	33	42	DIP	2001	AT	VIRGINIA BEACH
AT-SS-0082	SF-257	3,206	42	DIP	2001	AT	VIRGINIA BEACH
AT-SS-0083	SF-257	7	42	DIP	2001	AT	VIRGINIA BEACH
AT-SS-0084	SF-257	2,747	54	DIP	2001	AT	VIRGINIA BEACH
AT-SS-0085	SF-257	11	54	DIP	2001	AT	VIRGINIA BEACH
AT-SS-0086	SF-257	143	54	DIP	2001	AT	VIRGINIA BEACH
AT-SS-0087	SF-256	2,184	54	DIP	1998	AT	VIRGINIA BEACH
AT-SS-0088	SF-256	24	48	DIP	1998	AT	VIRGINIA BEACH
AT-SS-0089	SF-256	76	48	DIP	1998	AT	VIRGINIA BEACH
AT-SS-0090	SF-256	1,516	54	DIP	1998	AT	VIRGINIA BEACH
AT-SS-0091	SF-256	4,644	54	STEEL	1998	AT	VIRGINIA BEACH
AT-SS-0092	SF-256	3	48	STEEL	1998	AT	VIRGINIA BEACH
AT-SS-0093	SF-256	5	48	STEEL	1998	AT	VIRGINIA BEACH
AT-SS-0094	SF-256	60	54	STEEL	1998	AT	VIRGINIA BEACH
AT-SS-0095	SF-279	2,233	16	DIP	2007	AT	VIRGINIA BEACH
AT-SS-0096	SF-177	30	30	PCCP	1974	AT	VIRGINIA BEACH
AT-SS-0097	SF-172	5,001	30	PCCP	1975	AT	VIRGINIA BEACH
AT-SS-0098	SF-172	5,001	30	PCCP	1975	AT	VIRGINIA BEACH
AT-SS-0099	SF-172	3,246	30	PCCP	1975	AT	VIRGINIA BEACH
AT-SS-0100	SF-172	79	30	PCCP	1975	AT	VIRGINIA BEACH
AT-SS-0101	SF-172	21	30	PCCP	1975	AT	VIRGINIA BEACH
AT-SS-0102	SF-172	16	42	DIP	1975	AT	VIRGINIA BEACH
AT-SS-0103	SF-172/263	2,550	42	DIP	2003	AT	VIRGINIA BEACH
AT-SS-0104	SF-263	54	36	DIP	2003	AT	VIRGINIA BEACH
AT-SS-0105	SF-263	35	36	DIP	2003	AT	VIRGINIA BEACH
AT-SS-0106	SF-263	17	36	DIP	2003	AT	VIRGINIA BEACH
AT-SS-0107	SF-262	4,085	42	DIP	2004	AT	VIRGINIA BEACH
AT-SS-0108	SF-262	5,001	42	DIP	2004	AT	VIRGINIA BEACH
AT-SS-0109	SF-262	1,585	42	DIP	2004	AT	VIRGINIA BEACH
AT-SS-0110	SF-260	1,185	42	DIP	2004	AT	VIRGINIA BEACH
AT-SS-0111	SF-260	5,001	42	DIP	1999	AT	VIRGINIA BEACH
AT-SS-0112	SF-260	526	42	DIP	1999	AT	VIRGINIA BEACH
AT-SS-0113	SF-260	5,000	42	DIP	1999	AT	VIRGINIA BEACH
AT-SS-0114	SF-260	268	42	DIP	1999	AT	VIRGINIA BEACH
AT-SS-0115	SF-275	3,919	42	DIP	2008	AT	VIRGINIA BEACH
AT-SS-0116	SF-275	6	42	DIP	2008	AT	VIRGINIA BEACH
AT-SS-0117	SF-274	1,793	42	STEEL	2006	AT	VIRGINIA BEACH
AT-SS-0118	SF-274	3	42	STEEL	2006	AT	VIRGINIA BEACH
AT-SS-0119	SF-273/S74	2,776	48	STEEL	2005	AT	CHESAPEAKE

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0120	SF-272	3,457	48	STEEL	2006	AT	CHESAPEAKE
AT-SS-0121	SF-272	5,001	48	STEEL	2006	AT	CHESAPEAKE
AT-SS-0122	SF-272	63	48	STEEL	2006	AT	CHESAPEAKE
AT-SS-0123	SF-271	5,000	48	STEEL	2006	AT	CHESAPEAKE
AT-SS-0124	SF-271	646	48	STEEL	2006	AT	CHESAPEAKE
AT-SS-0125	SF-271	3,126	48	STEEL	2006	AT	CHESAPEAKE
AT-SS-0126	SF-236	2,600	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0127	SF-236	2,725	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0128	SF-236	5,000	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0129	SF-236	1,698	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0130	SF-277	5,001	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0131	SF-277	1,325	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0132	SF-277	4,843	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0133	SF-276	5,001	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0134	SF-276	8	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0135	SF-276	5,000	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0136	SF-276	227	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0137	SF-276	454	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0138	SF-276	101	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0139	SF-276	2	36	DIP	2004	AT	CHESAPEAKE
AT-SS-0140	SF-258	184	24	DIP	2003	AT	CHESAPEAKE
AT-SS-0141	SF-258	3,311	24	DIP	2003	AT	CHESAPEAKE
AT-SS-0142	SF-258	3,043	24	DIP	2003	AT	CHESAPEAKE
AT-SS-0143	SF-258	14	24	DIP	2003	AT	CHESAPEAKE
AT-SS-0144	SF-258	2	20	DIP	2003	AT	CHESAPEAKE
AT-SS-0145	SF-258	3,518	20	DIP	2003	AT	CHESAPEAKE
AT-SS-0146	SF-258	1,892	20	DIP	2003	AT	CHESAPEAKE
AT-SS-0147	SF-258	2,238	16	DIP	2003	AT	CHESAPEAKE
AT-SS-0148	SF-258/259	1,128	16	DIP	1997	AT	CHESAPEAKE
AT-SS-0149	SF-184	5,000	16	AC	1976	AT	CHESAPEAKE
AT-SS-0150	SF-184	612	16	AC	1976	AT	CHESAPEAKE
AT-SS-0151	SF-252	1,983	20	DIP	1995	AT	CHESAPEAKE
AT-SS-0152	SF-252	71	18	DIP	1995	AT	CHESAPEAKE
AT-SS-0153	SF-252	899	18	DIP	1995	AT	CHESAPEAKE
AT-SS-0154	SF-199	14	12	AC	1981	AT	CHESAPEAKE
AT-SS-0155	SF-199	2,129	12	AC	1981	AT	CHESAPEAKE
AT-SS-0156	SF-199	2,872	12	AC	1981	AT	CHESAPEAKE
AT-SS-0157	SF-199	1,205	12	AC	1981	AT	CHESAPEAKE
AT-SS-0158	SF-199	4	12	AC	1981	AT	CHESAPEAKE

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0159	SF-229	780	12	DIP	1966	AT	CHESAPEAKE
AT-SS-0160	SF-183	5,001	12	DIP	1976	AT	CHESAPEAKE
AT-SS-0161	SF-183	60	12	DIP	1976	AT	CHESAPEAKE
AT-SS-0162	SF-183	48	12	DIP	1976	AT	CHESAPEAKE
AT-SS-0163	SF-183	2,249	12	AC	1976	AT	CHESAPEAKE
AT-SS-0164	SF-183	16	12	AC	1976	AT	CHESAPEAKE
AT-SS-0165	SF-183	1,809	20	DIP	1976	AT	CHESAPEAKE
AT-SS-0166	SF-183/182	8	16	AC	1979	AT	CHESAPEAKE
AT-SS-0167	SF-182	5,001	16	AC	1979	AT	CHESAPEAKE
AT-SS-0168	SF-182	4,119	16	AC	1979	AT	CHESAPEAKE
AT-SS-0169	SF-209	5,001	16	DIP	1984	AT	CHESAPEAKE
AT-SS-0170	SF-209	858	16	DIP	1984	AT	CHESAPEAKE
AT-SS-0171	SF-233	5,001	18	DIP	1991	AT	CHESAPEAKE
AT-SS-0172	SF-233	1,043	18	DIP	1991	AT	CHESAPEAKE
AT-SS-0173	SF-234	3,256	24	DIP	1996	AT	CHESAPEAKE
AT-SS-0174	SF-234	5,000	24	DIP	1996	AT	CHESAPEAKE
AT-SS-0175	SF-234	1,247	24	DIP	1996	AT	CHESAPEAKE
AT-SS-0176	SF-234	3,245	24	DIP	1996	AT	CHESAPEAKE
AT-SS-0177	SF-232/234	3,656	24	DIP	1996	AT	CHESAPEAKE
AT-SS-0178	SF-232	3,190	24	DIP	1990	AT	CHESAPEAKE
AT-SS-0179	SF-181	2,125	20	DIP	1976	AT	CHESAPEAKE
AT-SS-0180	SF-180	974	20	DIP	2002	AT	CHESAPEAKE
AT-SS-0181	SF-180	510	20	DIP	2002	AT	CHESAPEAKE
AT-SS-0182	SF-180	3,467	20	CIP	2002	AT	CHESAPEAKE
AT-SS-0183	SF-236	329	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0184	SF-236	4,713	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0185	SF-236	5,000	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0186	SF-236	187	36	DIP	1995	AT	CHESAPEAKE
AT-SS-0187	SF-236	8	30	DIP	1995	AT	CHESAPEAKE
AT-SS-0188	SF-278	754	16	DIP	2006	AT	CHESAPEAKE
AT-SS-0189	SF-213	310	30	STEEL	1987	AT	VIRGINIA BEACH
AT-SS-0190	SF-213	4,374	30	PCCP	1987	AT	VIRGINIA BEACH
AT-SS-0191	SF-213	4,273	30	PCCP	1987	AT	VIRGINIA BEACH
AT-SS-0192	SF-213	5,000	30	PCCP	1987	AT	VIRGINIA BEACH
AT-SS-0193	SF-213	810	30	PCCP	1987	AT	VIRGINIA BEACH
AT-SS-0194	SF-170	3,036	16	DIP	1972	AT	VIRGINIA BEACH
AT-SS-0195	SF-174	149	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0196	SF-174	5,000	42	PCCP	1972	AT	VIRGINIA BEACH
AT-SS-0197	SF-174	123	42	RCCP	1972	AT	VIRGINIA BEACH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0198	SF-135	5,001	42	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0199	SF-135	2,977	42	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0200	SF-135	5,000	42	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0201	SF-135	5,001	42	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0202	SF-135	1,325	42	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0203	SF-135	1,112	42	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0204	SF-135	24	24	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0205	SF-135	43	24	RCP	1972	AT	VIRGINIA BEACH
AT-SS-0206	SF-173	4,320	12	AC	1972	AT	VIRGINIA BEACH
AT-SS-0207	SF-173	2	10	AC	1972	AT	VIRGINIA BEACH
AT-SS-0208	SF-131	57	12	DIP	2000	AT	VIRGINIA BEACH
AT-SS-0209	SF-131	2	12	DIP	2000	AT	VIRGINIA BEACH
AT-SS-0210	SF-131	5,001	16	AC	2000	AT	VIRGINIA BEACH
AT-SS-0211	SF-131	505	16	AC	2000	AT	VIRGINIA BEACH
AT-SS-0212	SF-131	5,000	16	AC	2000	AT	VIRGINIA BEACH
AT-SS-0213	SF-131	23	16	AC	2000	AT	VIRGINIA BEACH
AT-SS-0214	SF-132	308	20	AC	2005	AT	VIRGINIA BEACH
AT-SS-0215	SF-132	800	19	TBD	2005	AT	VIRGINIA BEACH
AT-SS-0216	SF-134	1,094	30	RCP	1965	AT	VIRGINIA BEACH
AT-SS-0217	SF-134	5,000	30	RCP	1965	AT	VIRGINIA BEACH
AT-SS-0218	SF-134	4,998	30	RCP	1965	AT	VIRGINIA BEACH
AT-SS-0219	SF-134	3,195	30	RCP	1965	AT	VIRGINIA BEACH
AT-SS-0220	SF-126	5,000	30	RCP	1965	AT	VIRGINIA BEACH
AT-SS-0221	SF-126	1,544	30	RCP	1965	AT	VIRGINIA BEACH
AT-SS-0222	SF-129	2,265	16	DIP	1998	AT	VIRGINIA BEACH
AT-SS-0223	SF-123	116	24	RCP	1969	AT	VIRGINIA BEACH
AT-SS-0224	SF-123	607	24	RCP	1969	AT	VIRGINIA BEACH
AT-SS-0225	SF-129	4,416	24	RCP	1969	AT	VIRGINIA BEACH
AT-SS-0226	SF-129	224	24	DIP	1998	AT	VIRGINIA BEACH
AT-SS-0227	SF-128	11	24	DIP	1990	AT	VIRGINIA BEACH
AT-SS-0228	SF-128	5,001	24	DIP	1990	AT	VIRGINIA BEACH
AT-SS-0229	SF-122/128	303	24	DIP	1990	AT	VIRGINIA BEACH
AT-SS-0230	SF-122	5,001	24	RCP	1990	AT	VIRGINIA BEACH
AT-SS-0231	SF-122	50	24	RCP	1990	AT	VIRGINIA BEACH
AT-SS-0232	SF-127	20	16	AC	1979	AT	VIRGINIA BEACH
AT-SS-0233	SF-127	5,000	18	AC	1979	AT	VIRGINIA BEACH
AT-SS-0234	SF-127	204	18	AC	1979	AT	VIRGINIA BEACH
AT-SS-0235	SF-127	5,001	18	AC	1979	AT	VIRGINIA BEACH
AT-SS-0236	SF-127	700	18	AC	1979	AT	VIRGINIA BEACH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0237	SF-127	35	18	AC	1979	AT	VIRGINIA BEACH
AT-SS-0238	SF-121	5,000	24	CIP	1969	AT	VIRGINIA BEACH
AT-SS-0239	SF-121	248	24	CIP	1969	AT	VIRGINIA BEACH
AT-SS-0240	SF-121	1,015	24	CIP	1969	AT	VIRGINIA BEACH
AT-SS-0241	SF-198	4,137	20	CIP	1969	AT	VIRGINIA BEACH
AT-SS-0242	SF-198	2	16	CIP	1969	AT	VIRGINIA BEACH
AT-SS-0243	SF-198	2	16	CIP	1969	AT	VIRGINIA BEACH
AT-SS-0244	SF-130	2,238	16	AC	2005	AT	VIRGINIA BEACH
AT-SS-0245	SF-130	2,043	16	DIP	2005	AT	VIRGINIA BEACH
AT-SS-0246	SF-130	3,582	16	DIP	2005	AT	VIRGINIA BEACH
AT-SS-0247	SF-130	2	16	DIP	2005	AT	VIRGINIA BEACH
AT-SS-0248	SF-130	408	16	DIP	2005	AT	VIRGINIA BEACH
AT-SS-0249	SF-126	9	16	DIP	1965	AT	VIRGINIA BEACH
AT-SS-0250	SF-125	3,057	16	DIP	1965	AT	VIRGINIA BEACH
AT-SS-0251	SF-124	1,422	16	DIP	1965	AT	VIRGINIA BEACH
AT-SS-0252	SF-124	5,001	16	DIP	1965	AT	VIRGINIA BEACH
AT-SS-0253	SF-124	541	16	DIP	1965	AT	VIRGINIA BEACH
AT-SS-0254	SF-123	2,484	16	DIP	1969	AT	VIRGINIA BEACH
AT-SS-0255	SF-22	5,000	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0256	SF-22	1,741	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0257	SF-22	3,901	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0258	SF-22	2,860	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0259	SF-22	1,154	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0260	SF-22	2,436	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0261	SF-22	6	16	DIP	1977	AT	VIRGINIA BEACH
AT-SS-0262	SF-150	5,001	30	DIP	1980	AT	CHESAPEAKE
AT-SS-0263	SF-150	390	30	DIP	1980	AT	CHESAPEAKE
AT-SS-0264	SF-150	4,819	30	DIP	1980	AT	CHESAPEAKE
AT-SS-0265	SF-156	788	24	DIP	1980	AT	CHESAPEAKE
AT-SS-0266	SF-158	4,536	24	DIP	1995	AT	CHESAPEAKE
AT-SS-0267	SF-158	2	24	DIP	1995	AT	CHESAPEAKE
AT-SS-0268	SF-158	17	16	DIP	1995	AT	CHESAPEAKE
AT-SS-0269	SF-106	4,648	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0270	SF-106	49	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0271	SF-106	534	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0272	SF-106	1,276	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0273	SF-106	941	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0274	SF-106	812	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0275	SF-106	555	12	CIP	1964	AT	CHESAPEAKE

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
AT-SS-0276	SF-106	301	12	CIP	1964	AT	CHESAPEAKE
AT-SS-0277	SF-200	556	10	CIP	1964	AT	CHESAPEAKE
AT-SS-0278	SF-200	847	10	CIP	1964	AT	CHESAPEAKE
AT-SS-0279	SF-200	12	8	CIP	1964	AT	CHESAPEAKE
AT-SS-0280	SF-200	16	8	CIP	1964	AT	CHESAPEAKE
AT-SS-0281	SF-106	18	12	CIP	1964	AT	NORFOLK
AT-SS-0282	SF-203	2,454	12	DIP	1980	AT	NORFOLK
AT-SS-0283	SF-160	2	30	DIP	1975	AT	CHESAPEAKE
AT-SS-0284	SF-160	471	30	DIP	1973	AT	CHESAPEAKE
AT-SS-0285	SF-160	6	16	DIP	1973	AT	CHESAPEAKE
AT-SS-0286	SF-160	5	16	DIP	1973	AT	CHESAPEAKE
AT-SS-0287	SF-279	8	16	DIP	2007	AT	VIRGINIA BEACH
AT-SS-0288	SF-274	55	10	DIP	2006	AT	VIRGINIA BEACH
AT-SS-0289	SF-274	95	30	STEEL	2006	AT	VIRGINIA BEACH
AT-SS-0290	SF-278	10	16	DIP	2006	AT	CHESAPEAKE
BH-NS-0001	NF-128	38	12	DIP	1976	BH	NEWPORT NEWS
BH-NS-0002	NF-128	1,395	12	DIP	1976	BH	NEWPORT NEWS
BH-NS-0003	NF-130	5,025	30	DIP	1991	BH	NEWPORT NEWS
BH-NS-0004	NF-131	1,215	36	RCP	1946	BH	NEWPORT NEWS
BH-NS-0005	NF-153	2,929	30	DIP	1946	BH	NEWPORT NEWS
BH-NS-0006	NF-153	738	36	HDPE	2002	BH	NEWPORT NEWS
BH-NS-0007	NF-153	3,262	30	RCP	1946	BH	HAMPTON
BH-NS-0008	NF-193	2,692	30	DIP	1994	BH	HAMPTON
BH-NS-0009	NF-193	5,006	30	DIP	1994	BH	HAMPTON
BH-NS-0010	NF-193	351	30	DIP	1994	BH	HAMPTON
BH-NS-0011	NF-193	3,786	30	DIP	1994	BH	HAMPTON
BH-NS-0012	NF-194	4,999	30	DIP	1994	BH	HAMPTON
BH-NS-0013	NF-194	2,277	30	DIP	1994	BH	HAMPTON
BH-NS-0015	NF-170	213	30	DIP	1986	BH	HAMPTON
BH-NS-0016	NF-133	98	30	RCP	1967	BH	HAMPTON
BH-NS-0017	NF-133	1,157	30	RCP	1945	BH	HAMPTON
BH-NS-0018	NF-133	5,002	30	RCP	1945	BH	HAMPTON
BH-NS-0019	NF-158	994	30	RCP	1970	BH	HAMPTON
BH-NS-0020	NF-157	310	30	RCP	1945	BH	HAMPTON
BH-NS-0021	NF-160/97	5,387	16	CIP	1945	BH	HAMPTON
BH-NS-0022	NF-97	1,388	16	CIP	1946	BH	HAMPTON
BH-NS-0023	NF-97/96	4,203	14	CIP	1946	BH	HAMPTON
BH-NS-0024	NF-85	960	14	CIP	1957	BH	HAMPTON
BH-NS-0025	NF-85	5,000	14	CIP	1957	BH	HAMPTON

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
BH-NS-0026	NF-75	304	14	CIP	1978	BH	HAMPTON
BH-NS-0027	NF-77	1,587	14	CIP	1948	BH	HAMPTON
BH-NS-0028	NF-90	1,731	8	CIP	1965	BH	HAMPTON
BH-NS-0029	NF-90	4,190	8	CIP	1965	BH	HAMPTON
BH-NS-0030	NF-93	5,000	16	CIP	1961	BH	HAMPTON
BH-NS-0031	NF-93	376	16	CIP	1961	BH	HAMPTON
BH-NS-0032	NF-93	90	16	CIP	1961	BH	HAMPTON
BH-NS-0033	NF-91	4,780	16	AC	1960	BH	HAMPTON
BH-NS-0034	NF-120	709	16	AC	1975	BH	HAMPTON
BH-NS-0035	NF-132	1,060	14	CIP	1946	BH	HAMPTON
BH-NS-0036	NF-162	1,155	12	CIP	1945	BH	HAMPTON
BH-NS-0037	NF-121	2,510	12	CIP	1945	BH	NEWPORT NEWS
BH-NS-0038	NF-121	49	12	CIP	1945	BH	NEWPORT NEWS
BH-NS-0039	NF-121/119	861	20	CIP	1945	BH	NEWPORT NEWS
BH-NS-0040	NF-122	266	18	CIP	1945	BH	NEWPORT NEWS
BH-NS-0041	NF-113	952	16	CIP	1963	BH	NEWPORT NEWS
BH-NS-0042	NF-113	4,588	16	CIP	1963	BH	NEWPORT NEWS
BH-NS-0043	NF-107	3,245	16	CIP	1954	BH	NEWPORT NEWS
BH-NS-0044	NF-105	3,246	10	CIP	1950	BH	NEWPORT NEWS
BH-NS-0045	NF-105	738	10	DIP	1989	BH	NEWPORT NEWS
BH-NS-0046	NF-105	323	10	CIP	1950	BH	NEWPORT NEWS
BH-NS-0047	NF-130	672	30	DIP	1991	BH	NEWPORT NEWS
CE-SS-0001	SF-16	5,001	48	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0002	SF-16	4,645	48	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0003	SF-16	5	42	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0004	SF-16	5	42	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0005	SF-16	4,997	48	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0006	SF-16	5,001	48	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0007	SF-16	516	48	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0008	SF-16	5,001	48	PCCP	1976	CE	VIRGINIA BEACH
CE-SS-0009	SF-16	4,630	48	PCCP	1976	CE	NORFOLK
CE-SS-0010	SF-16/118	419	42	RCP	1974	CE	VIRGINIA BEACH
CE-SS-0011	SF-118	4,781	42	RCP	1974	CE	NORFOLK
CE-SS-0012	SF-118	1,075	42	DIP	1974	CE	NORFOLK
CE-SS-0013	SF-118	4,999	42	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0014	SF-118	1,849	42	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0015	SF-118	14	42	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0016	SF-118	14	36	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0017	SF-118	39	36	PCCP	1974	CE	VIRGINIA BEACH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
CE-SS-0018	SF-118	46	36	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0019	SF-118	15	36	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0020	SF-118	39	36	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0021	SF-118	33	42	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0022	SF-118	4,999	42	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0023	SF-118	4,354	42	PCCP	1974	CE	VIRGINIA BEACH
CE-SS-0024	SF-16	60	16	DIP	1974	CE	VIRGINIA BEACH
CE-SS-0025	SF-16	4	16	DIP	1976	CE	VIRGINIA BEACH
CE-SS-0026	SF-17	103	42	RCP	1967	CE	VIRGINIA BEACH
CE-SS-0027	SF-14	1,199	24	DIP	1967	CE	VIRGINIA BEACH
CE-SS-0028	SF-14	2,804	24	DIP	1967	CE	VIRGINIA BEACH
CE-SS-0029	SF-15	7	20	CIP	1967	CE	VIRGINIA BEACH
CE-SS-0030	SF-13	4,999	24	DIP	1973	CE	NORFOLK
CE-SS-0031	SF-13	2,713	24	DIP	1973	CE	NORFOLK
CE-SS-0032	SF-12/13	991	24	DIP	1962	CE	NORFOLK
CE-SS-0033	SF-12	3,554	20	CIP	1962	CE	NORFOLK
CE-SS-0034	SF-15	931	20	AC	1967	CE	VIRGINIA BEACH
CE-SS-0035	SF-15	5,001	20	AC	1967	CE	VIRGINIA BEACH
CE-SS-0036	SF-15	1,321	20	AC	1967	CE	VIRGINIA BEACH
CE-SS-0037	SF-15	1,180	20	AC	1967	CE	VIRGINIA BEACH
CE-SS-0038	SF-109	1,972	16	AC	1967	CE	VIRGINIA BEACH
CE-SS-0039	SF-110	1,711	14	AC	1967	CE	NORFOLK
CE-SS-0040	SF-110	177	14	AC	1967	CE	NORFOLK
CE-SS-0041	SF-17	5,000	42	RCP	1967	CE	VIRGINIA BEACH
CE-SS-0042	SF-17	713	42	RCP	1967	CE	VIRGINIA BEACH
CE-SS-0043	SF-119	110	36	STEEL	1968	CE	VIRGINIA BEACH
CE-SS-0044	SF-119	64	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0045	SF-119	68	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0046	SF-18	15	24	DIP	1967	CE	VIRGINIA BEACH
CE-SS-0047	SF-18	3,058	24	DIP	1967	CE	VIRGINIA BEACH
CE-SS-0048	SF-18	2,338	24	DIP	1967	CE	VIRGINIA BEACH
CE-SS-0049	SF-18	94	24	DIP	1967	CE	VIRGINIA BEACH
CE-SS-0050	SF-19	4,644	20	AC	1971	CE	VIRGINIA BEACH
CE-SS-0051	SF-19	4,572	18	AC	1971	CE	VIRGINIA BEACH
CE-SS-0052	SF-20	5	18	CIP	1971	CE	VIRGINIA BEACH
CE-SS-0053	SF-20	2,197	18	CIP	1971	CE	VIRGINIA BEACH
CE-SS-0054	SF-20	263	16	AC	1971	CE	VIRGINIA BEACH
CE-SS-0055	SF-20	5,002	16	AC	1971	CE	VIRGINIA BEACH
CE-SS-0056	SF-20	264	16	AC	1971	CE	VIRGINIA BEACH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
CE-SS-0057	SF-20	79	16	AC	1971	CE	VIRGINIA BEACH
CE-SS-0058	SF-119	110	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0059	SF-119	59	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0060	SF-119	4,999	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0061	SF-119	5,000	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0062	SF-119	5,001	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0063	SF-119	5,002	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0064	SF-119	5,001	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0065	SF-119	607	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0066	SF-119	33	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0067	SF-119	8	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0068	SF-119	17	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0069	SF-119	3	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0070	SF-119/120	47	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0071	SF-120	3	24	RCP	1998	CE	VIRGINIA BEACH
CE-SS-0072	SF-120	109	30	RCP	1998	CE	VIRGINIA BEACH
CE-SS-0073	SF-120	2,788	24	RCP	1998	CE	VIRGINIA BEACH
CE-SS-0074	SF-120	522	24	RCP	1998	CE	VIRGINIA BEACH
CE-SS-0075	SF-120	4,999	24	RCP	1998	CE	VIRGINIA BEACH
CE-SS-0076	SF-120	276	24	CIP	1998	CE	VIRGINIA BEACH
CE-SS-0077	SF-197	12	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0078	SF-197	5,000	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0079	SF-197	202	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0080	SF-197	941	30	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0081	SF-117	61	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0082	SF-117	1,377	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0083	SF-117	5,002	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0084	SF-117	2,154	24	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0085	SF-114	283	24	AC	1968	CE	NORFOLK
CE-SS-0086	SF-114	43	24	CIP	1968	CE	NORFOLK
CE-SS-0087	SF-114	54	24	CIP	1968	CE	NORFOLK
CE-SS-0088	SF-114	111	12	CIP	1968	CE	NORFOLK
CE-SS-0089	SF-114	66	24	CIP	1968	CE	NORFOLK
CE-SS-0090	SF-114	43	24	CIP	1968	CE	NORFOLK
CE-SS-0091	SF-114	350	24	AC	1968	CE	NORFOLK
CE-SS-0092	SF-116	1,730	16	AC	1968	CE	NORFOLK
CE-SS-0093	SF-116	2,421	16	AC	1968	CE	NORFOLK
CE-SS-0094	SF-116	405	16	AC	1968	CE	NORFOLK
CE-SS-0095	SF-116/115	1,624	14	AC	1968	CE	NORFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
CE-SS-0096	SF-115	342	14	CIP	1968	CE	NORFOLK
CE-SS-0097	SF-115	260	14	AC	1968	CE	NORFOLK
CE-SS-0098	SF-115	5	12	CIP	1968	CE	NORFOLK
CE-SS-0099	SF-115	2	12	CIP	1968	CE	NORFOLK
CE-SS-0100	SF-115	4	14	AC	1968	CE	NORFOLK
CE-SS-0101	SF-115	6	8	AC	1968	CE	NORFOLK
CE-SS-0102	SF-118	22	22	PCCP	1974	CE	NORFOLK
CE-SS-0103	SF-12	21	24	DIP	1962	CE	NORFOLK
CE-SS-0104	SF-119	13	36	RCP	1968	CE	VIRGINIA BEACH
CE-SS-0105	SF-119	19	36	RCP	1968	CE	VIRGINIA BEACH
JR-NS-0001	NF-28/29	5,002	36	DIP	1965	JR	NEWPORT NEWS
JR-NS-0002	NF-28	641	36	DIP	1965	JR	NEWPORT NEWS
JR-NS-0003	NF-28	11	36	DIP	1965	JR	NEWPORT NEWS
JR-NS-0004	NF-30/33	5,004	36	RCP	1967	JR	NEWPORT NEWS
JR-NS-0005	NF-33	5,011	36	RCCP	1967	JR	NEWPORT NEWS
JR-NS-0006	NF-33/37	4,998	36	RCCP	1967	JR	NEWPORT NEWS
JR-NS-0007	NF-37	3,097	36	RCP	1967	JR	NEWPORT NEWS
JR-NS-0008	NF-39	112	36	STEEL	2006	JR	NEWPORT NEWS
JR-NS-0009	NF-39	43	30	RCP	1967	JR	NEWPORT NEWS
JR-NS-0010	NF-39	36	30	RCP	1967	JR	NEWPORT NEWS
JR-NS-0011	NF-39	5,002	36	CIP	1967	JR	NEWPORT NEWS
JR-NS-0012	NF-39/49	1,074	36	RCP	1967	JR	NEWPORT NEWS
JR-NS-0013	NF-49	4,899	30	CIP	1967	JR	HAMPTON
JR-NS-0014	NF-50	4	30	CIP	1967	JR	NEWPORT NEWS
JR-NS-0015	NF-50	2,443	30	CIP	1967	JR	NEWPORT NEWS
JR-NS-0016	NF-50	6	30	CIP	1967	JR	NEWPORT NEWS
JR-NS-0017	NF-50	5	30	CIP	1967	JR	NEWPORT NEWS
JR-NS-0018	NF-42	23	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0019	NF-42	5,003	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0020	NF-42	2,002	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0021	NF-42	5,002	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0022	NF-42	471	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0023	NF-42	5,001	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0024	NF-42	900	20	AC	1973	JR	NEWPORT NEWS
JR-NS-0025	NF-100	943	20	AC	1948	JR	NEWPORT NEWS
JR-NS-0026	NF-100	153	20	AC	1948	JR	NEWPORT NEWS
JR-NS-0027	NF-40	5	16	AC	1973	JR	NEWPORT NEWS
JR-NS-0028	NF-40	4,132	16	AC	1973	JR	NEWPORT NEWS
JR-NS-0029	NF-41	14	12	CIP	1967	JR	NEWPORT NEWS

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
JR-NS-0030	NF-41	5,001	12	CIP	1967	JR	NEWPORT NEWS
JR-NS-0031	NF-41	1,185	12	CIP	1967	JR	NEWPORT NEWS
JR-NS-0032	NF-41	63	12	CIP	1967	JR	NEWPORT NEWS
JR-NS-0033	NF-43	3,947	12	CIP	1955	JR	NEWPORT NEWS
JR-NS-0034	NF-31	10	18	CIP	2006	JR	NEWPORT NEWS
JR-NS-0035	NF-31	997	12	Polyethylene	2006	JR	NEWPORT NEWS
JR-NS-0036	NF-31/32	4,720	18	DIP	1967	JR	NEWPORT NEWS
JR-NS-0037	NF-32	22	6	DIP	1967	JR	NEWPORT NEWS
JR-NS-0038	NF-36	3,363	12	AC	1967	JR	NEWPORT NEWS
JR-NS-0039	NF-17	5,000	36	CIP	1968	JR	NEWPORT NEWS
JR-NS-0040	NF-17	5,000	36	CIP	1968	JR	NEWPORT NEWS
JR-NS-0041	NF-17	5,000	36	CIP	1968	JR	NEWPORT NEWS
JR-NS-0042	NF-17	304	36	CIP	1968	JR	NEWPORT NEWS
JR-NS-0043	NF-15	5,000	24	DIP	1969	JR	NEWPORT NEWS
JR-NS-0044	NF-15	259	24	DIP	1969	JR	NEWPORT NEWS
JR-NS-0045	NF-15	5,000	24	DIP	1969	JR	NEWPORT NEWS
JR-NS-0046	NF-15	3,571	24	DIP	1969	JR	NEWPORT NEWS
JR-NS-0047	NF-16	5,000	30	PCCP	1975	JR	NEWPORT NEWS
JR-NS-0048	NF-16	2,291	30	PCCP	1968	JR	NEWPORT NEWS
JR-NS-0049	NF-17	14	30	PCCP	1968	JR	NEWPORT NEWS
JR-NS-0050	NF-171	4,999	24	DIP	1992	JR	NEWPORT NEWS
JR-NS-0051	NF-171/19	1,334	24	DIP	1992	JR	NEWPORT NEWS
JR-NS-0052	NF-171	37	30	PCCP	1992	JR	NEWPORT NEWS
JR-NS-0053	NF-18	28	18	CIP	1992	JR	NEWPORT NEWS
JR-NS-0054	NF-18	5,001	18	CIP	1992	JR	NEWPORT NEWS
JR-NS-0055	NF-18	1,144	18	CIP	1992	JR	NEWPORT NEWS
JR-NS-0056	NF-18	67	18	CIP	1992	JR	NEWPORT NEWS
JR-NS-0057	NF-19	85	30	PCCP	1992	JR	NEWPORT NEWS
JR-NS-0058	NF-19	1,162	30	PCCP	1992	JR	NEWPORT NEWS
JR-NS-0059	NF-179	2,481	24	DIP	1992	JR	NEWPORT NEWS
JR-NS-0060	NF-179	5,000	24	DIP	1992	JR	NEWPORT NEWS
JR-NS-0061	NF-179	3,206	24	DIP	1992	JR	NEWPORT NEWS
JR-NS-0062	NF-179	3,478	24	DIP	1992	JR	YORK
JR-NS-0063	NF-179	178	24	DIP	1992	JR	YORK
JR-NS-0064	NF-179	40	24	DIP	1992	JR	YORK
JR-NS-0065	NF-42	20	12	CIP	1973	JR	NEWPORT NEWS
JR-NS-0066	NF-42	597	12	CIP	1973	JR	NEWPORT NEWS
JR-NS-0067	NF-42	5	12	CIP	1973	JR	NEWPORT NEWS
JR-NS-0068	NF-179	5	16	DIP	1992	JR	YORK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
JR-NS-0069	NF-179	2	16	DIP	1992	JR	YORK
JR-NS-0070	NF-179	5	12	DIP	1992	JR	YORK
JR-NS-0071	NF-179	2	12	DIP	1992	JR	YORK
JR-NS-0072	NF-20	2	14	DIP	1992	JR	NEWPORT NEWS
JR-NS-0073	NF-20	707	14	DIP	1992	JR	NEWPORT NEWS
JR-NS-0074	NF-20	1,585	14	CIP	1992	JR	NEWPORT NEWS
JR-NS-0075	NF-20	2,988	16	CIP	1992	JR	NEWPORT NEWS
JR-NS-0076	NF-20/21	1,686	12	CIP	1966	JR	NEWPORT NEWS
JR-NS-0077	NF-21	2	10	CIP	1966	JR	NEWPORT NEWS
JR-NS-0078	NF-15	7	16	CIP	1969	JR	NEWPORT NEWS
JR-NS-0080	NF-14	3,456	16	CIP	1965	JR	NEWPORT NEWS
JR-NS-0093	NF-13	1,703	14	CIP	1965	JR	NEWPORT NEWS
JR-NS-0096	NF-13	69	24	PCCP	1965	JR	NEWPORT NEWS
JR-NS-0097	NF-13	1,848	14	CIP	1965	JR	NEWPORT NEWS
JR-NS-0101	NF-09	2	14	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0102	NF-09	208	14	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0103	NF-09	3,349	14	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0104	NF-09	10	12	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0105	NF-09	16	12	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0106	NF-09	1	12	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0107	NF-09	7	12	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0108	NF-09	3	12	HDPE	2004	JR	NEWPORT NEWS
JR-NS-0109	NF-55	590	6	CIP	1949	JR	NEWPORT NEWS
NA-SS-0001	OUTFALL	3,751	54	PCCP	1981	NA	SUFFOLK
NA-SS-0002	SF-23	5,000	48	PCCP	1979	NA	SUFFOLK
NA-SS-0003	SF-23	3,350	48	PCCP	1979	NA	SUFFOLK
NA-SS-0004	SF-23	31	42	PCCP	1979	NA	SUFFOLK
NA-SS-0005	SF-23	23	48	PCCP	1979	NA	SUFFOLK
NA-SS-0006	SF-23	878	48	PCCP	1979	NA	SUFFOLK
NA-SS-0007	SF-29	17	30	PCCP	1985	NA	SUFFOLK
NA-SS-0008	SF-29	5,001	30	PCCP	1985	NA	CHESAPEAKE
NA-SS-0009	SF-29	2,658	30	PCCP	1985	NA	CHESAPEAKE
NA-SS-0010	SF-29	1,657	30	PCCP	1985	NA	CHESAPEAKE
NA-SS-0011	SF-31	5,001	24	DIP	1985	NA	PORTSMOUTH
NA-SS-0012	SF-31	949	24	DIP	1985	NA	PORTSMOUTH
NA-SS-0013	SF-38	5,001	20	CIP	1985	NA	PORTSMOUTH
NA-SS-0014	SF-38	38	20	CIP	1985	NA	PORTSMOUTH
NA-SS-0015	SF-32	2,193	14	CIP	1985	NA	PORTSMOUTH
NA-SS-0016	SF-36	1,738	14	DIP	1985	NA	PORTSMOUTH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
NA-SS-0017	SF-37	2,491	12	CIP	1985	NA	PORTSMOUTH
NA-SS-0018	SF-37/206	87	12	CIP	1985	NA	PORTSMOUTH
NA-SS-0019	SF-206	5,000	16	DIP	1985	NA	PORTSMOUTH
NA-SS-0020	SF-206	420	16	DIP	1985	NA	PORTSMOUTH
NA-SS-0021	SF-206	8	16	DIP	1985	NA	PORTSMOUTH
NA-SS-0022	SF-30	5,000	14	AC	1985	NA	CHESAPEAKE
NA-SS-0023	SF-30	384	14	AC	1985	NA	CHESAPEAKE
NA-SS-0024	SF-30	6	14	AC	1985	NA	CHESAPEAKE
NA-SS-0025	SF-23	15	42	PCCP	1979	NA	SUFFOLK
NA-SS-0026	SF-24	4,289	42	PCCP	1975	NA	SUFFOLK
NA-SS-0027	SF-25	31	36	PCCP	1975	NA	SUFFOLK
NA-SS-0028	SF-25	5,001	36	PCCP	1975	NA	SUFFOLK
NA-SS-0029	SF-25	3,485	36	PCCP	1975	NA	SUFFOLK
NA-SS-0030	SF-27	6	30	PCCP	1979	NA	SUFFOLK
NA-SS-0031	SF-26	5,001	30	PCCP	1975	NA	SUFFOLK
NA-SS-0032	SF-26	1,614	30	PCCP	1975	NA	SUFFOLK
NA-SS-0033	SF-26	64	24	PCCP	1975	NA	SUFFOLK
NA-SS-0034	SF-26	14	24	PCCP	1975	NA	SUFFOLK
NA-SS-0035	SF-26	13	24	PCCP	1975	NA	SUFFOLK
NA-SS-0036	SF-26	17	24	CIP	1975	NA	SUFFOLK
NA-SS-0037	SF-26	22	24	CIP	1975	NA	SUFFOLK
NA-SS-0038	SF-26	13	24	CIP	1975	NA	SUFFOLK
NA-SS-0039	SF-26	45	24	CIP	1975	NA	SUFFOLK
NA-SS-0040	SF-26	5	24	CIP	1975	NA	SUFFOLK
NA-SS-0041	SF-26	5	24	CIP	1975	NA	SUFFOLK
NA-SS-0042	SF-28	5,000	30	PCCP	1979	NA	SUFFOLK
NA-SS-0043	SF-28	1,947	30	PCCP	1979	NA	SUFFOLK
NA-SS-0044	SF-28	5,001	30	PCCP	1979	NA	SUFFOLK
NA-SS-0045	SF-28	5,001	30	PCCP	1979	NA	SUFFOLK
NA-SS-0046	SF-28	463	30	PCCP	1979	NA	SUFFOLK
NA-SS-0047	SF-28/194	5,001	30	PCCP	1979	NA	SUFFOLK
NA-SS-0048	SF-194	4,235	30	PCCP	1979	NA	SUFFOLK
NA-SS-0049	SF-194	5,000	30	PCCP	1979	NA	SUFFOLK
NA-SS-0050	SF-190/194	2,632	30	PCCP	1979	NA	SUFFOLK
NA-SS-0051	SF-190	5,000	30	PCCP	1979	NA	SUFFOLK
NA-SS-0052	SF-190	4,290	30	PCCP	1979	NA	SUFFOLK
NA-SS-0053	SF-190	5,000	30	PCCP	1979	NA	SUFFOLK
NA-SS-0054	SF-190	4,635	30	PCCP	1979	NA	SUFFOLK
NA-SS-0055	SF-190	3	24	PCCP	1979	NA	SUFFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
NA-SS-0056	SF-190	3	24	PCCP	1979	NA	SUFFOLK
NA-SS-0057	SF-189	219	24	PCCP	1979	NA	SUFFOLK
NA-SS-0058	SF-189	5,000	24	PCCP	1979	NA	SUFFOLK
NA-SS-0059	SF-189	1,129	24	PCCP	1979	NA	SUFFOLK
NA-SS-0060	SF-189	1,369	20	DIP	1979	NA	SUFFOLK
NA-SS-0061	SF-189	7	8	TBD	1979	NA	SUFFOLK
NA-SS-0062	SF-187	3	18	DIP	1981	NA	SUFFOLK
NA-SS-0063	SF-187	4,690	18	DIP	1981	NA	SUFFOLK
NA-SS-0064	SF-186	12	14	AC	1981	NA	SUFFOLK
NA-SS-0065	SF-186	2,971	14	AC	1981	NA	SUFFOLK
NA-SS-0066	SF-186	141	14	AC	1981	NA	SUFFOLK
NA-SS-0067	SF-186	5,001	14	AC	1981	NA	SUFFOLK
NA-SS-0068	SF-186	1,043	14	AC	1981	NA	SUFFOLK
NA-SS-0069	SF-264	4	18	DIP	2002	NA	SUFFOLK
NA-SS-0070	SF-264	722	30	DIP	2002	NA	SUFFOLK
NA-SS-0071	SF-264	5,001	30	DIP	2002	NA	SUFFOLK
NA-SS-0072	SF-264	205	30	DIP	2002	NA	SUFFOLK
NA-SS-0073	SF-265	4,376	30	DIP	2001	NA	SUFFOLK
NA-SS-0074	SF-266	5,000	30	DIP	2001	NA	SUFFOLK
NA-SS-0075	SF-266	1,806	30	DIP	2001	NA	SUFFOLK
NA-SS-0076	SF-267	5,000	30	DIP	2001	NA	SUFFOLK
NA-SS-0077	SF-267	917	30	DIP	2001	NA	SUFFOLK
NA-SS-0078	SF-231	22	14	AC	1981	NA	SUFFOLK
NA-SS-0079	SF-231	355	14	DIP	1981	NA	SUFFOLK
NA-SS-0080	SF-188	3,125	14	AC	1981	NA	SUFFOLK
NA-SS-0081	SF-188	69	8	DIP	1981	NA	SUFFOLK
NA-SS-0082	SF-214	5	24	DIP	1988	NA	SUFFOLK
NA-SS-0083	SF-214	1,334	24	DIP	1988	NA	SUFFOLK
NA-SS-0084	SF-214	1,827	24	STEEL	1988	NA	SUFFOLK
NA-SS-0085	SF-214	5,001	24	DIP	1988	NA	SUFFOLK
NA-SS-0086	SF-214	2,249	24	DIP	1988	NA	SUFFOLK
NA-SS-0087	SF-214/253	5,000	24	DIP	1988	NA	SUFFOLK
NA-SS-0088	SF-253	2,865	24	DIP	1997	NA	SUFFOLK
NA-SS-0089	SF-253	72	24	DIP	1997	NA	SUFFOLK
NA-SS-0090	SF-253	4,837	24	DIP	1997	NA	SUFFOLK
NA-SS-0091	SF-253	2,859	24	DIP	1997	NA	SUFFOLK
NA-SS-0092	SF-253	9	20	DIP	1997	NA	SUFFOLK
NA-SS-0093	SF-253	4,768	20	DIP	1997	NA	SUFFOLK
NA-SS-0094	SF-253	5,000	20	DIP	1997	NA	SUFFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
NA-SS-0095	SF-253	440	20	DIP	1997	NA	SUFFOLK
NA-SS-0096	SF-254	5,001	20	DIP	1997	NA	SUFFOLK
NA-SS-0097	SF-254	384	20	DIP	1997	NA	SUFFOLK
NA-SS-0098	SF-254	4,597	20	DIP	1997	NA	SUFFOLK
NA-SS-0099	SF-254	4,927	20	DIP	1997	NA	SUFFOLK
NA-SS-0100	SF-254	4,826	20	DIP	1997	NA	ISLE OF WIGHT
NA-SS-0101	SF-254	573	20	DIP	1997	NA	ISLE OF WIGHT
NA-SS-0102	SF-254	2,265	20	DIP	1997	NA	ISLE OF WIGHT
NA-SS-0103	SF-255	2,630	20	DIP	1997	NA	ISLE OF WIGHT
NA-SS-0104	SF-255	3,952	20	DIP	1997	NA	ISLE OF WIGHT
NA-SS-0105	SF-255	18	20	DIP	1997	NA	ISLE OF WIGHT
NA-SS-0106	SF-237	43	30	CONCRETE	1995	NA	SUFFOLK
NA-SS-0107	SF-237	11	30	CONCRETE	1995	NA	SUFFOLK
NA-SS-0108	SF-237	3,299	36	DIP	1995	NA	SUFFOLK
NA-SS-0109	SF-237	4,971	36	DIP	1995	NA	SUFFOLK
NA-SS-0110	SF-237	3,747	36	DIP	1995	NA	SUFFOLK
NA-SS-0111	SF-238	1,576	36	STEEL	1995	NA	SUFFOLK
NA-SS-0112	SF-240	2,681	36	DIP	1995	NA	SUFFOLK
NA-SS-0113	SF-239	177	36	STEEL	1995	NA	SUFFOLK
NA-SS-0114	SF-240	4,838	30	DIP	1995	NA	SUFFOLK
NA-SS-0115	SF-241	4,733	30	DIP	1995	NA	SUFFOLK
NA-SS-0116	SF-242	4,207	30	DIP	1996	NA	SUFFOLK
NA-SS-0117	SF-242	4,012	30	DIP	1996	NA	SUFFOLK
NA-SS-0118	SF-243	3,600	30	STEEL	1996	NA	SUFFOLK
NA-SS-0119	SF-244	5,000	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0120	SF-244	1,455	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0121	SF-244	5,001	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0122	SF-244	1,703	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0123	SF-245	5,001	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0124	SF-245	782	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0125	SF-245	3,971	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0126	SF-245	5,001	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0127	SF-245	5,001	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0128	SF-245	167	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0129	SF-245	162	30	STEEL	1996	NA	ISLE OF WIGHT
NA-SS-0130	SF-246	5,000	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0131	SF-246	1,859	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0132	SF-247	1,918	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0133	SF-248	5,000	30	DIP	1996	NA	ISLE OF WIGHT

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
NA-SS-0134	SF-248	3,077	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0135	SF-248	3,819	30	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0136	SF-248	5	24	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0137	SF-250	1,334	24	STEEL	1996	NA	ISLE OF WIGHT
NA-SS-0138	SF-251	4,493	24	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0139	SF-251	14	24	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0140	SF-249	25	24	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0141	SF-249	344	36	STEEL	1996	NA	ISLE OF WIGHT
NA-SS-0142	SF-249	54	24	DIP	1996	NA	ISLE OF WIGHT
NA-SS-0143	SF-27	7	36	PCCP	1979	NA	SUFFOLK
NA-SS-0144	SF-27	5,001	36	PCCP	1979	NA	CHESAPEAKE
NA-SS-0145	SF-27	3,432	36	PCCP	1979	NA	CHESAPEAKE
NA-SS-0146	SF-27	558	36	PCCP	1979	NA	CHESAPEAKE
NA-SS-0147	SF-27	530	36	PCCP	1979	NA	CHESAPEAKE
NA-SS-0148	SF-27	260	36	DIP	1979	NA	CHESAPEAKE
NA-SS-0149	SF-208	5,000	16	AC	1979	NA	CHESAPEAKE
NA-SS-0150	SF-208	306	16	AC	1979	NA	CHESAPEAKE
NA-SS-0151	SF-27	376	36	DIP	1979	NA	CHESAPEAKE
NA-SS-0152	SF-27	3,667	36	DIP	1979	NA	CHESAPEAKE
NA-SS-0153	SF-27	69	36	PCCP	1979	NA	CHESAPEAKE
NA-SS-0154	SF-27	38	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0155	SF-27	2	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0156	SF-136	5,000	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0157	SF-136	2,860	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0158	SF-136	5,001	30	DIP	1979	NA	CHESAPEAKE
NA-SS-0159	SF-136	4,840	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0160	SF-137	5,001	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0161	SF-137	3,256	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0162	SF-137	5,000	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0163	SF-137	3,035	30	PCCP	1979	NA	CHESAPEAKE
NA-SS-0164	SF-138	323	24	DIP	1974	NA	CHESAPEAKE
NA-SS-0165	SF-138	5,000	24	DIP	1974	NA	CHESAPEAKE
NA-SS-0166	SF-138	219	24	DIP	1974	NA	CHESAPEAKE
NA-SS-0167	SF-138/142	5,000	24	DIP	1974	NA	CHESAPEAKE
NA-SS-0168	SF-142	3,291	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0169	SF-143	3,361	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0170	SF-143	1,558	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0171	SF-143	258	24	CIP	1975	NA	CHESAPEAKE
NA-SS-0172	SF-143	806	24	PCCP	1975	NA	CHESAPEAKE

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
NA-SS-0173	SF-143	1,260	24	CIP	1975	NA	CHESAPEAKE
NA-SS-0174	SF-143	2,272	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0175	SF-143	2	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0176	SF-143	328	30	DIP	1975	NA	CHESAPEAKE
NA-SS-0177	SF-143	366	14	CIP	1975	NA	CHESAPEAKE
NA-SS-0178	SF-143	30	18	DIP	1975	NA	CHESAPEAKE
NA-SS-0179	SF-143	41	18	DIP	1975	NA	CHESAPEAKE
NA-SS-0180	SF-142	71	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0181	SF-143	58	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0182	SF-144	5,000	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0183	SF-144	5,001	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0184	SF-144	2,631	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0185	SF-144	5	12	CIP	1975	NA	CHESAPEAKE
NA-SS-0186	SF-144	5	10	CIP	1975	NA	CHESAPEAKE
NA-SS-0187	SF-144	3	10	CIP	1975	NA	CHESAPEAKE
NA-SS-0188	SF-230	72	20	DIP	1987	NA	CHESAPEAKE
NA-SS-0189	SF-230	604	24	DIP	1987	NA	CHESAPEAKE
NA-SS-0190	SF-142	114	24	DIP	1975	NA	CHESAPEAKE
NA-SS-0191	SF-141	10	16	CIP	1961	NA	CHESAPEAKE
NA-SS-0192	SF-141	1,500	16	CIP	1961	NA	CHESAPEAKE
NA-SS-0193	SF-141	1,349	16	CIP	1961	NA	CHESAPEAKE
NA-SS-0194	SF-141	3,363	16	CIP	1961	NA	CHESAPEAKE
NA-SS-0195	SF-141	47	14	CIP	1961	NA	CHESAPEAKE
NA-SS-0196	SF-141	30	10	CIP	1961	NA	CHESAPEAKE
NA-SS-0197	SF-133	1,994	14	CIP	1961	NA	CHESAPEAKE
NA-SS-0198	SF-133	6	12	CIP	1961	NA	CHESAPEAKE
NA-SS-0199	SF-140	4,277	12	CIP	1961	NA	CHESAPEAKE
NA-SS-0200	SF-139	4,108	12	CIP	1964	NA	CHESAPEAKE
VIP-SS-0001	SF-227	5,001	48	DIP	1989	VIP	NORFOLK
VIP-SS-0002	SF-227	1,430	48	DIP	1989	VIP	NORFOLK
VIP-SS-0003	SF-227	5,001	48	DIP	1989	VIP	NORFOLK
VIP-SS-0004	SF-227	993	48	DIP	1989	VIP	NORFOLK
VIP-SS-0005	SF-227	2	42	STEEL	1989	VIP	NORFOLK
VIP-SS-0006	SF-228	3,607	42	STEEL	1990	VIP	NORFOLK
VIP-SS-0007	SF-228	1,532	48	PCCP	1990	VIP	PORTSMOUTH
VIP-SS-0008	SF-228	153	48	PCCP	1990	VIP	PORTSMOUTH
VIP-SS-0009	SF-221	3,849	48	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0010	SF-221	5,000	48	DIP	1946	VIP	PORTSMOUTH
VIP-SS-0011	SF-221	1,914	48	DIP	1946	VIP	PORTSMOUTH

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
VIP-SS-0012	SF-221	87	48	DIP	1946	VIP	PORTSMOUTH
VIP-SS-0013	SF-222	664	48	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0014	SF-222	5,000	24	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0015	SF-222/223	51	24	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0016	SF-223	1,395	24	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0017	SF-224	2,017	24	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0018	SF-224	85	24	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0019	SF-225	34	30	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0020	SF-225	1,645	30	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0021	SF-226	2,528	36	CIP	1946	VIP	PORTSMOUTH
VIP-SS-0022	SF-218	5,000	30	PCCP	1971	VIP	PORTSMOUTH
VIP-SS-0023	SF-218	641	30	PCCP	1971	VIP	PORTSMOUTH
VIP-SS-0024	SF-219	3,805	30	RCP	2006	VIP	PORTSMOUTH
VIP-SS-0025	SF-217/219	5,001	24	RCP	2005	VIP	PORTSMOUTH
VIP-SS-0026	SF-216/217	556	24	RCP	2004	VIP	PORTSMOUTH
VIP-SS-0027	SF-216	14	18	CIP	2004	VIP	PORTSMOUTH
VIP-SS-0028	SF-216	7	18	CIP	2004	VIP	PORTSMOUTH
VIP-SS-0029	SF-216	3,162	20	CIP	2004	VIP	PORTSMOUTH
VIP-SS-0030	SF-216	389	20	CIP	2004	VIP	PORTSMOUTH
VIP-SS-0031	SF-216	4,709	20	CIP	2004	VIP	PORTSMOUTH
VIP-SS-0032	SF-219	5,000	30	RCP	1971	VIP	PORTSMOUTH
VIP-SS-0033	SF-219	3,146	30	RCP	1971	VIP	PORTSMOUTH
VIP-SS-0034	SF-219	7	24	CIP	1971	VIP	PORTSMOUTH
VIP-SS-0035	SF-219	23	24	CIP	1971	VIP	PORTSMOUTH
VIP-SS-0036	SF-219	5	24	CIP	1971	VIP	PORTSMOUTH
VIP-SS-0037	SF-220	45	30	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0038	SF-220	2,422	30	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0039	SF-220	9	30	RCP	1946	VIP	PORTSMOUTH
VIP-SS-0040	SF-46/52	3,596	16	PVC	2008	VIP	NORFOLK
VIP-SS-0040	SF-46/52	1,415	10	CIP	2008	VIP	NORFOLK
VIP-SS-0041	SF-52	10	10	CIP	2008	VIP	NORFOLK
VIP-SS-0042	SF-52	35	10	CIP	2008	VIP	NORFOLK
VIP-SS-0043	SF-45	4,233	12	CIP	2008	VIP	NORFOLK
VIP-SS-0044	SF-45	10	8	CIP	2008	VIP	NORFOLK
VIP-SS-0045	SF-45	18	8	CIP	2008	VIP	NORFOLK
VIP-SS-0046	SF-45	2	8	CIP	2008	VIP	NORFOLK
VIP-SS-0047	SF-43	1,232	8	CIP	1963	VIP	NORFOLK
VIP-SS-0048	SF-39	1,477	6	CIP	1963	VIP	NORFOLK
VIP-SS-0049	SF-42	957	6	CIP	1963	VIP	NORFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
VIP-SS-0050	SF-41	31	8	CIP	1948	VIP	NORFOLK
VIP-SS-0051	SF-41	777	12	CIP	1948	VIP	NORFOLK
VIP-SS-0052	SF-40	1,553	8	CIP	1948	VIP	NORFOLK
VIP-SS-0053	SF-51	8	24	DIP	2005	VIP	NORFOLK
VIP-SS-0054	SF-51	268	24	DIP	2005	VIP	NORFOLK
VIP-SS-0055	SF-51	30	24	DIP	2005	VIP	NORFOLK
VIP-SS-0056	SF-51	887	24	DIP	2005	VIP	NORFOLK
VIP-SS-0057	SF-51	751	24	DIP	2005	VIP	NORFOLK
VIP-SS-0058	SF-51	753	24	DIP	2005	VIP	NORFOLK
VIP-SS-0059	SF-51	1,810	24	RCP	2005	VIP	NORFOLK
VIP-SS-0060	SF-51	1,763	24	RCP	2005	VIP	NORFOLK
VIP-SS-0061	SF-51	12	18	RCP	2005	VIP	NORFOLK
VIP-SS-0062	SF-51	352	24	RCP	2005	VIP	NORFOLK
VIP-SS-0063	SF-51	3,392	24	RCP	2005	VIP	NORFOLK
VIP-SS-0064	SF-65	10	16	CIP	1949	VIP	NORFOLK
VIP-SS-0065	SF-65	7	16	CIP	1949	VIP	NORFOLK
VIP-SS-0066	SF-65	1,365	18	CIP	1949	VIP	NORFOLK
VIP-SS-0067	SF-66	4,603	18	CIP	1969	VIP	NORFOLK
VIP-SS-0068	SF-66	2,837	18	CIP	1969	VIP	NORFOLK
VIP-SS-0069	SF-70	2,674	16	CIP	1969	VIP	NORFOLK
VIP-SS-0070	SF-69	3,306	12	CIP	1969	VIP	NORFOLK
VIP-SS-0071	SF-64	24	6	CIP	1994	VIP	NORFOLK
VIP-SS-0072	SF-64	1,269	6	CIP	1994	VIP	NORFOLK
VIP-SS-0073	SF-64	2	6	CIP	1994	VIP	NORFOLK
VIP-SS-0074	SF-64	6	6	CIP	1994	VIP	NORFOLK
VIP-SS-0075	SF-62	981	6	CIP	1948	VIP	NORFOLK
VIP-SS-0076	SF-76	1,800	8	CIP	1955	VIP	NORFOLK
VIP-SS-0077	SF-57	1,061	39	HDPE	1948	VIP	NORFOLK
VIP-SS-0078	SF-57	2	30	HDPE	1948	VIP	NORFOLK
VIP-SS-0079	SF-57	110	30	HDPE	1948	VIP	NORFOLK
VIP-SS-0080	SF-57	82	42	DIP	1948	VIP	NORFOLK
VIP-SS-0081	SF-57	3	42	DIP	1948	VIP	NORFOLK
VIP-SS-0082	SF-57/58	4,472	48	RCP	1946	VIP	NORFOLK
VIP-SS-0083	SF-58	3	30	RCP	1946	VIP	NORFOLK
VIP-SS-0084	SF-59	4,347	42	RCP	1946	VIP	NORFOLK
VIP-SS-0085	SF-59	1,596	42	RCP	1946	VIP	NORFOLK
VIP-SS-0086	SF-81	15	30	RCP	1947	VIP	NORFOLK
VIP-SS-0087	SF-81	25	30	RCP	1947	VIP	NORFOLK
VIP-SS-0088	SF-81	2	30	RCP	1947	VIP	NORFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
VIP-SS-0089	SF-81	3,603	36	RCP	1947	VIP	NORFOLK
VIP-SS-0090	SF-80	2,253	24	DIP	1947	VIP	NORFOLK
VIP-SS-0091	SF-82	37	20	DIP	1947	VIP	NORFOLK
VIP-SS-0092	SF-82	3,700	20	CIP	1947	VIP	NORFOLK
VIP-SS-0093	SF-82	3,454	20	CIP	1947	VIP	NORFOLK
VIP-SS-0094	SF-86	1,011	8	CIP	1976	VIP	NORFOLK
VIP-SS-0095	SF-86	115	8	STEEL	1976	VIP	NORFOLK
VIP-SS-0096	SF-87	2,157	12	CIP	1976	VIP	NORFOLK
VIP-SS-0097	SF-90	2,069	16	CIP	1990	VIP	NORFOLK
VIP-SS-0098	SF-91	2,449	12	CIP	1960	VIP	NORFOLK
VIP-SS-0099	SF-91	6	12	CIP	1960	VIP	NORFOLK
VIP-SS-0100	SF-91	67	12	CIP	1960	VIP	NORFOLK
VIP-SS-0101	SF-91	790	12	DIP	1960	VIP	NORFOLK
VIP-SS-0102	SF-91	605	12	DIP	1960	VIP	NORFOLK
VIP-SS-0103	SF-91	3,826	12	DIP	1960	VIP	NORFOLK
VIP-SS-0104	SF-111	2,067	10	DIP	1960	VIP	NORFOLK
VIP-SS-0105	SF-111	4	10	DIP	1960	VIP	NORFOLK
VIP-SS-0106	SF-92	3,569	10	DIP	1955	VIP	NORFOLK
VIP-SS-0107	SF-93	1,354	10	DIP	1955	VIP	NORFOLK
VIP-SS-0108	SF-93	16	8	DIP	1955	VIP	NORFOLK
VIP-SS-0109	SF-94	2,642	8	DIP	1955	VIP	NORFOLK
VIP-SS-0110	SF-60	2	24	RCP	1946	VIP	NORFOLK
VIP-SS-0111	SF-60	1,988	24	RCP	1946	VIP	NORFOLK
VIP-SS-0112	SF-60	5	24	RCP	1946	VIP	NORFOLK
VIP-SS-0113	SF-60	296	24	RCP	1946	VIP	NORFOLK
VIP-SS-0114	SF-204	1	18	CIP	2002	VIP	NORFOLK
VIP-SS-0115	SF-204	5	12	CIP	2002	VIP	NORFOLK
VIP-SS-0116	SF-85/204	4,840	12	CIP	2002	VIP	NORFOLK
VIP-SS-0117	SF-83	1,010	24	RCP	1947	VIP	NORFOLK
VIP-SS-0118	SF-84	17	24	RCP	1947	VIP	NORFOLK
VIP-SS-0119	SF-84	1,642	30	RCP	1947	VIP	NORFOLK
VIP-SS-0120	SF-268	28	30	DIP	2003	VIP	NORFOLK
VIP-SS-0121	SF-268/270	2,892	30	DIP	2003	VIP	NORFOLK
VIP-SS-0122	SF-97/270	392	30	DIP	1979	VIP	NORFOLK
VIP-SS-0123	SF-97	33	20	DIP	1979	VIP	NORFOLK
VIP-SS-0124	SF-97	4	12	DIP	1979	VIP	NORFOLK
VIP-SS-0125	SF-97	8	12	DIP	1979	VIP	NORFOLK
VIP-SS-0126	SF-97	8	12	DIP	1979	VIP	NORFOLK
VIP-SS-0127	SF-97	25	24	DIP	1979	VIP	NORFOLK

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
VIP-SS-0128	SF-97	5,000	30	DIP	1979	VIP	NORFOLK
VIP-SS-0129	SF-97	4,666	30	DIP	1979	VIP	CHESAPEAKE
VIP-SS-0130	SF-97	5	24	DIP	1979	VIP	CHESAPEAKE
VIP-SS-0131	SF-97	20	24	DIP	1979	VIP	CHESAPEAKE
VIP-SS-0132	SF-99	1,630	20	PVC	2006	VIP	NORFOLK
VIP-SS-0133	SF-99	61	20	PVC	2006	VIP	NORFOLK
VIP-SS-0134	SF-99	1,054	20	PVC	2006	VIP	NORFOLK
VIP-SS-0135	SF-147	115	30	STEEL	1948	VIP	CHESAPEAKE
VIP-SS-0136	SF-147	58	20	DIP	1948	VIP	CHESAPEAKE
VIP-SS-0137	SF-147	2,971	20	PVC	1948	VIP	CHESAPEAKE
VIP-SS-0138	SF-147	334	20	DIP	1948	VIP	CHESAPEAKE
VIP-SS-0139	SF-147	1,447	20	PVC	1948	VIP	CHESAPEAKE
VIP-SS-0140	SF-103	4,604	16	AC	1979	VIP	CHESAPEAKE
VIP-SS-0141	SF-103	199	16	DIP	1979	VIP	NORFOLK
VIP-SS-0142	SF-101/103	99	10	DIP	1948	VIP	NORFOLK
VIP-SS-0143	SF-101	2	10	DIP	1948	VIP	NORFOLK
VIP-SS-0144	SF-101	206	10	DIP	1948	VIP	NORFOLK
VIP-SS-0145	SF-101	2	8	CIP	1948	VIP	NORFOLK
VIP-SS-0146	SF-101	7	8	CIP	1948	VIP	NORFOLK
VIP-SS-0147	SF-101	2	8	CIP	1948	VIP	NORFOLK
VIP-SS-0148	SF-146	29	12	CIP	1958	VIP	CHESAPEAKE
VIP-SS-0149	SF-146	10	12	CIP	1958	VIP	CHESAPEAKE
VIP-SS-0150	SF-146	4	12	CIP	1958	VIP	CHESAPEAKE
VIP-SS-0151	SF-146	180	12	CIP	1958	VIP	CHESAPEAKE
VIP-SS-0152	SF-103	29	12	DIP	1979	VIP	CHESAPEAKE
VIP-SS-0153	SF-146	2,168	12	DIP	1958	VIP	CHESAPEAKE
VIP-SS-0154	SF-146	177	12	PVC	1958	VIP	CHESAPEAKE
VIP-SS-0155	SF-146	5	12	PVC	1958	VIP	CHESAPEAKE
VIP-SS-0156	SF-100	1,217	10	PVC	2006	VIP	CHESAPEAKE
VIP-SS-0157	SF-100	223	8	PVC	2006	VIP	NORFOLK
VIP-SS-0158	SF-100	11	8	PVC	2006	VIP	NORFOLK
VIP-SS-0159	SF-100	18	6	PVC	2006	VIP	NORFOLK
WMBG-NS-0001	NF-08	6	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0002	NF-08	5,000	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0003	NF-08	4,525	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0004	NF-08	2	8	TBD	1976	WMBG	NEWPORT NEWS
WMBG-NS-0005	NF-08	2	8	TBD	1976	WMBG	NEWPORT NEWS
WMBG-NS-0006	NF-08	1,891	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0007	NF-08	4,079	24	PCCP	1976	WMBG	NEWPORT NEWS

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
WMBG-NS-0008	NF-08	3,882	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0009	NF-08	4,998	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0010	NF-08	15	24	PCCP	1976	WMBG	NEWPORT NEWS
WMBG-NS-0011	NF-08	849	24	PCCP	1976	WMBG	JAMES CITY
WMBG-NS-0012	NF-08	5,000	24	PCCP	1976	WMBG	JAMES CITY
WMBG-NS-0013	NF-08	357	24	PCCP	1976	WMBG	JAMES CITY
WMBG-NS-0014	NF-07	4,329	24	CIP	1972	WMBG	JAMES CITY
WMBG-NS-0015	NF-07	1,053	24	CIP	1972	WMBG	JAMES CITY
WMBG-NS-0016	NF-07	3,906	24	CIP	1972	WMBG	JAMES CITY
WMBG-NS-0017	NF-06	5,002	36	PCCP	1970	WMBG	JAMES CITY
WMBG-NS-0018	NF-06	5,003	36	PCCP	1970	WMBG	JAMES CITY
WMBG-NS-0019	NF-06	439	36	PCCP	1970	WMBG	JAMES CITY
WMBG-NS-0020	NF-06	50	36	PCCP	1970	WMBG	JAMES CITY
WMBG-NS-0021	NF-05/06	5,001	36	PCCP	1971	WMBG	JAMES CITY
WMBG-NS-0022	NF-05	1,639	36	PCCP	1971	WMBG	JAMES CITY
WMBG-NS-0023	NF-05	3,571	36	PCCP	1971	WMBG	JAMES CITY
WMBG-NS-0024	NF-04/05	5,001	36	PCCP	1971	WMBG	JAMES CITY
WMBG-NS-0025	NF-04	47	36	PCCP	1971	WMBG	WILLIAMSBURG
WMBG-NS-0026	NF-04	10	24	PCCP	1971	WMBG	WILLIAMSBURG
WMBG-NS-0027	NF-04	4,722	24	PCCP	1971	WMBG	WILLIAMSBURG
WMBG-NS-0028	NF-163	3	18	DIP	1983	WMBG	WILLIAMSBURG
WMBG-NS-0029	NF-163	409	18	DIP	1983	WMBG	WILLIAMSBURG
WMBG-NS-0030	NF-163	2,261	18	DIP	1983	WMBG	WILLIAMSBURG
WMBG-NS-0031	NF-163	3,657	18	DIP	1983	WMBG	WILLIAMSBURG
WMBG-NS-0032	NF-163	3,155	18	DIP	1983	WMBG	WILLIAMSBURG
WMBG-NS-0033	NF-27	2	16	DIP	2000	WMBG	NEWPORT NEWS
WMBG-NS-0034	NF-27	5,000	16	DIP	2000	WMBG	NEWPORT NEWS
WMBG-NS-0035	NF-27	15	16	DIP	2000	WMBG	NEWPORT NEWS
WMBG-NS-0036	NF-27	5,000	16	DIP	2000	WMBG	NEWPORT NEWS
WMBG-NS-0037	NF-27	5	16	DIP	2000	WMBG	NEWPORT NEWS
WMBG-NS-0038	NF-27	4,043	16	DIP	2000	WMBG	NEWPORT NEWS
WMBG-NS-0039	NF-205	2	16	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0040	NF-205	92	16	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0041	NF-205	2	20	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0042	NF-205	259	30	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0043	NF-205	22	30	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0044	NF-205	4,095	36	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0045	NF-205	5,002	36	DIP	1970	WMBG	NEWPORT NEWS
WMBG-NS-0046	NF-205	2,157	36	DIP	1970	WMBG	NEWPORT NEWS

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
WMBG-NS-0047	NF-172	3	24	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0048	NF-172	5	24	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0049	NF-172	5,006	36	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0050	NF-172	449	36	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0051	NF-172	4,997	36	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0052	NF-172	3,780	36	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0053	NF-172	12	30	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0054	NF-172	3	30	PCCP	1985	WMBG	JAMES CITY
WMBG-NS-0055	NF-165	2,873	16	DIP	1982	WMBG	JAMES CITY
WMBG-NS-0056	NF-165	4,999	16	DIP	1982	WMBG	YORK
WMBG-NS-0057	NF-165	774	16	DIP	1982	WMBG	YORK
WMBG-NS-0058	NF-03	2	30	PCCP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0059	NF-03	3,576	30	PCCP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0060	NF-03	30	30	PCCP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0061	NF-03	879	30	PCCP	1974	WMBG	JAMES CITY
WMBG-NS-0062	NF-03	3,042	30	PCCP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0063	NF-03	3,140	30	PCCP	1974	WMBG	JAMES CITY
WMBG-NS-0064	NF-03	181	30	PCCP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0065	NF-02	2,648	24	DIP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0066	NF-02	2,728	24	DIP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0067	NF-02	3,655	24	DIP	1974	WMBG	WILLIAMSBURG
WMBG-NS-0068	NF-02/01	1,593	24	DIP	1974	WMBG	JAMES CITY
WMBG-NS-0069	NF-01	2,898	24	DIP	1979	WMBG	JAMES CITY
WMBG-NS-0070	NF-01	468	24	PCCP	1979	WMBG	JAMES CITY
WMBG-NS-0071	NF-01	3,518	24	PCCP	1979	WMBG	JAMES CITY
WMBG-NS-0072	NF-01	4,840	24	PCCP	1979	WMBG	JAMES CITY
WMBG-NS-0073	NF-01	8	18	PCCP	1979	WMBG	WILLIAMSBURG
WMBG-NS-0074	NF-01	4	18	PCCP	1979	WMBG	WILLIAMSBURG
WMBG-NS-0075	NF-178	5,001	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0076	NF-178	163	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0077	NF-178	24	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0078	NF-178	3,489	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0079	NF-178	1,528	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0080	NF-178	4,499	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0081	NF-178/190	2,855	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0082	NF-190	5,002	24	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0083	NF-190	2,180	24	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0084	NF-190	3,882	24	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0085	NF-190	4,023	24	DIP	1995	WMBG	JAMES CITY

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
WMBG-NS-0086	NF-190	2,983	24	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0087	NF-190	3	20	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0088	NF-190	3,734	20	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0089	NF-190	3,829	20	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0090	NF-190	4,492	20	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0091	NF-190	3,747	20	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0092	NF-190	17	20	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0093	NF-02	1,101	24	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0094	NF-192	2	36	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0095	NF-192	3,849	36	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0096	NF-192	275	36	DIP	1995	WMBG	JAMES CITY
WMBG-NS-0097	NF-06	302	36	PCCP	1970	WMBG	JAMES CITY
WMBG-NS-0098	NF-195	23	24	DIP	2002	WMBG	JAMES CITY
WMBG-NS-0099	NF-195	2,993	30	DIP	2002	WMBG	JAMES CITY
WMBG-NS-0100	NF-195	4,070	30	DIP	2002	WMBG	JAMES CITY
WMBG-NS-0101	NF-196	5,000	30	DIP	2001	WMBG	JAMES CITY
WMBG-NS-0102	NF-196	1,595	30	DIP	2001	WMBG	JAMES CITY
WMBG-NS-0103	NF-196/204	2,174	30	DIP	2001	WMBG	JAMES CITY
WMBG-NS-0104	NF-204	2	20	DIP	2002	WMBG	JAMES CITY
WMBG-NS-0105	NF-204	4,104	20	DIP	2002	WMBG	JAMES CITY
WMBG-NS-0106	NF-177	6	20	DIP	1989	WMBG	JAMES CITY
WMBG-NS-0107	NF-177	10	20	DIP	1989	WMBG	JAMES CITY
WMBG-NS-0108	NF-177	5,002	24	DIP	1989	WMBG	JAMES CITY
WMBG-NS-0109	NF-177	403	24	DIP	1989	WMBG	JAMES CITY
WMBG-NS-0110	NF-177	5,001	24	DIP	1989	WMBG	JAMES CITY
WMBG-NS-0111	NF-177	1,560	24	DIP	1989	WMBG	JAMES CITY
WMBG-NS-0112	NF-178A	96	24	DIP	1991	WMBG	YORK
WMBG-NS-0113	NF-178A	1,747	18	DIP	1991	WMBG	YORK
WMBG-NS-0114	NF-178A	3,196	18	DIP	1991	WMBG	YORK
WMBG-NS-0115	NF-178A	146	18	DIP	1991	WMBG	YORK
WMBG-NS-0116	NF-178A	2,825	18	DIP	1991	WMBG	YORK
WMBG-NS-0117	NF-191	3	18	DIP	1996	WMBG	YORK
WMBG-NS-0118	NF-191/197	4,187	18	DIP	1996	WMBG	YORK
WMBG-NS-0119	NF-197	9	18	DIP	2002	WMBG	YORK
WMBG-NS-0120	NF-191A	350	12	DIP	1996	WMBG	YORK
WMBG-NS-0121	NF-178C	374	12	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0122	NF-178C	2	12	DIP	1991	WMBG	YORK
WMBG-NS-0123	NF-178B	6	24	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0124	NF-178B	78	24	DIP	1991	WMBG	JAMES CITY

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
WMBG-NS-0125	NF-178D	380	12	DIP	1991	WMBG	JAMES CITY
WMBG-NS-0126	NF-01A	159	18	DIP	1979	WMBG	WILLIAMSBURG
WMBG-NS-0127	NF-01A	5	12	DIP	1979	WMBG	WILLIAMSBURG
WMBG-NS-0128	NF-01A	82	12	DIP	1979	WMBG	JAMES CITY
YR-NS-0001	NF-12	5,000	48	PCCP	1978	YR	YORK
YR-NS-0002	NF-12	2,820	48	PCCP	1978	YR	YORK
YR-NS-0003	NF-12	1,700	48	PCCP	1978	YR	YORK
YR-NS-0004	NF-12	5,061	48	PCCP	1978	YR	YORK
YR-NS-0005	NF-12	5,117	48	PCCP	1978	YR	YORK
YR-NS-0006	NF-12	222	48	SCCP	1978	YR	YORK
YR-NS-0007	NF-11	11	36	PCCP	1976	YR	YORK
YR-NS-0008	NF-11	5,182	42	PCCP	1976	YR	YORK
YR-NS-0009	NF-11	4,369	42	PCCP	1976	YR	YORK
YR-NS-0010	NF-11	5,096	42	PCCP	1976	YR	YORK
YR-NS-0011	NF-11	4,092	42	PCCP	1976	YR	YORK
YR-NS-0012	NF-11	5,094	42	PCCP	1976	YR	YORK
YR-NS-0013	NF-11	5,040	42	PCCP	1976	YR	YORK
YR-NS-0014	NF-11	41	42	PCCP	1976	YR	YORK
YR-NS-0015	NF-11/24	5,006	30	PCCP	1972	YR	YORK
YR-NS-0016	NF-24	5,012	30	PCCP	1972	YR	YORK
YR-NS-0017	NF-24	5,008	30	PCCP	1972	YR	YORK
YR-NS-0018	NF-24/46	1,183	30	CIP	1969	YR	YORK
YR-NS-0019	NF-46	4,999	30	CIP	1969	YR	YORK
YR-NS-0020	NF-46	233	30	CIP	1969	YR	HAMPTON
YR-NS-0021	NF-46	5	24	CIP	1969	YR	HAMPTON
YR-NS-0022	NF-23	3,304	16	AC	1973	YR	YORK
YR-NS-0023	NF-11	81	30	PCCP	1976	YR	YORK
YR-NS-0024	NF-10	10	16	AC	1976	YR	YORK
YR-NS-0025	NF-10	2,772	16	AC	1976	YR	YORK
YR-NS-0026	NF-10	4,701	16	AC	1976	YR	YORK
YR-NS-0027	NF-173	4,788	16	AC	1974	YR	YORK
YR-NS-0028	NF-173	3,645	16	AC	1974	YR	YORK
YR-NS-0029	NF-173	4,986	16	AC	1974	YR	YORK
YR-NS-0030	NF-173	358	16	AC	1974	YR	YORK
YR-NS-0031	NF-173/180	4,963	16	AC	1974	YR	YORK
YR-NS-0032	NF-180	28	16	AC	1991	YR	YORK
YR-NS-0033	NF-180	4,963	30	DIP	1991	YR	YORK
YR-NS-0034	NF-181/182	4,659	30	DIP	1991	YR	GLOUCESTER
YR-NS-0035	NF-182	34	30	DIP	1992	YR	GLOUCESTER

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
YR-NS-0036	NF-182	14	30	DIP	1992	YR	GLOUCESTER
YR-NS-0037	NF-182	2,755	30	DIP	1992	YR	GLOUCESTER
YR-NS-0038	NF-182	4,994	30	DIP	1992	YR	GLOUCESTER
YR-NS-0039	NF-182/183	3,830	30	DIP	1991	YR	GLOUCESTER
YR-NS-0040	NF-183	7	20	DIP	1991	YR	GLOUCESTER
YR-NS-0041	NF-185	5,009	20	DIP	1991	YR	GLOUCESTER
YR-NS-0042	NF-185	1,186	20	DIP	1991	YR	GLOUCESTER
YR-NS-0043	NF-185	4,995	20	DIP	1991	YR	GLOUCESTER
YR-NS-0044	NF-185	2,516	20	DIP	1991	YR	GLOUCESTER
YR-NS-0045	NF-185/186	2,493	20	DIP	1991	YR	GLOUCESTER
YR-NS-0046	NF-186	4,992	20	DIP	1991	YR	GLOUCESTER
YR-NS-0047	NF-186	5,009	20	DIP	1991	YR	GLOUCESTER
YR-NS-0048	NF-186	307	20	DIP	1991	YR	GLOUCESTER
YR-NS-0049	NF-186/187	4,681	18	DIP	1991	YR	GLOUCESTER
YR-NS-0050	NF-187	5,002	18	DIP	1991	YR	GLOUCESTER
YR-NS-0051	NF-187	25	18	DIP	1991	YR	GLOUCESTER
YR-NS-0052	NF-187	5,006	18	DIP	1991	YR	GLOUCESTER
YR-NS-0053	NF-187	21	18	DIP	1991	YR	GLOUCESTER
YR-NS-0054	NF-187	4,808	18	DIP	1991	YR	GLOUCESTER
YR-NS-0055	NF-187	5	16	DIP	1991	YR	GLOUCESTER
YR-NS-0056	NF-187/188	5,006	16	DIP	1991	YR	GLOUCESTER
YR-NS-0057	NF-188	1,847	16	DIP	1991	YR	GLOUCESTER
YR-NS-0058	NF-188	18	16	DIP	1991	YR	GLOUCESTER
YR-NS-0059	NF-189	9	16	DIP	1991	YR	GLOUCESTER
YR-NS-0060	NF-189	5,006	16	DIP	1991	YR	GLOUCESTER
YR-NS-0061	NF-189	2,596	16	DIP	1991	YR	GLOUCESTER
YR-NS-0062	NF-183	8	16	DIP	1991	YR	GLOUCESTER
YR-NS-0063	NF-183	4,008	16	DIP	1991	YR	GLOUCESTER
YR-NS-0064	NF-183	4,997	16	DIP	1991	YR	GLOUCESTER
YR-NS-0065	NF-183	72	16	DIP	1991	YR	GLOUCESTER
YR-NS-0066	NF-183	4,909	16	DIP	1991	YR	GLOUCESTER
YR-NS-0067	NF-183/184	5,006	16	DIP	1991	YR	GLOUCESTER
YR-NS-0068	NF-184	8	16	DIP	1991	YR	GLOUCESTER
YR-NS-0069	NF-184	4,977	16	DIP	1991	YR	GLOUCESTER
YR-NS-0070	NF-184	3,391	16	DIP	1991	YR	GLOUCESTER
YR-NS-0071	NF-184	23	16	DIP	1991	YR	GLOUCESTER
YR-NS-0072	NF-47	5,000	30	CIP	1968	YR	HAMPTON
YR-NS-0073	NF-47	815	30	CIP	1968	YR	HAMPTON
YR-NS-0074	NF-26	595	30	CIP	1970	YR	HAMPTON

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
YR-NS-0075	NF-26	5,009	18	RCCP	1970	YR	HAMPTON
YR-NS-0076	NF-26	4,997	18	RCCP	1970	YR	POQUOSON
YR-NS-0077	NF-26/25	5,004	18	RCCP	1970	YR	POQUOSON
YR-NS-0078	NF-25	2,296	18	RCCP	1970	YR	POQUOSON
YR-NS-0079	NF-25	2,802	18	RCCP	1970	YR	POQUOSON
YR-NS-0080	NF-25	4	14	RCP	1970	YR	POQUOSON
YR-NS-0081	NF-59	5	18	CIP	1970	YR	HAMPTON
YR-NS-0082	NF-59	68	12	AC	1968	YR	HAMPTON
YR-NS-0083	NF-59	2,662	12	AC	1968	YR	HAMPTON
YR-NS-0084	NF-59	29	12	AC	1968	YR	HAMPTON
YR-NS-0085	NF-61	9	30	CIP	1968	YR	HAMPTON
YR-NS-0086	NF-61	1,206	30	CIP	1968	YR	HAMPTON
YR-NS-0087	NF-61	1,228	30	CIP	1968	YR	HAMPTON
YR-NS-0088	NF-61	1,044	30	CIP	1968	YR	HAMPTON
YR-NS-0089	NF-61	3,830	30	CIP	1968	YR	HAMPTON
YR-NS-0090	NF-61	2,316	30	PCCP	1968	YR	HAMPTON
YR-NS-0091	NF-58	101	30	RCCP	1970	YR	HAMPTON
YR-NS-0092	NF-58	546	30	RCCP	1970	YR	HAMPTON
YR-NS-0093	NF-58	200	30	DIP	1990	YR	HAMPTON
YR-NS-0094	NF-58	154	30	DIP	1990	YR	HAMPTON
YR-NS-0095	NF-58	679	30	DIP	1990	YR	HAMPTON
YR-NS-0096	NF-58	4,075	30	CIP	1970	YR	HAMPTON
YR-NS-0097	NF-58	1,263	30	CIP	1970	YR	HAMPTON
YR-NS-0098	NF-58	1,363	30	CIP	1970	YR	HAMPTON
YR-NS-0099	NF-58	2,186	30	CIP	1970	YR	HAMPTON
YR-NS-0100	NF-68	98	12	DIP	1975	YR	HAMPTON
YR-NS-0101	NF-58	4,591	30	RCP	1970	YR	HAMPTON
YR-NS-0102	NF-58	1,032	30	RCP	1970	YR	HAMPTON
YR-NS-0103	NF-58	1,447	30	RCP	1970	YR	HAMPTON
YR-NS-0104	NF-58/65	5,010	24	DIP	1970	YR	HAMPTON
YR-NS-0105	NF-65	2,393	24	DIP	1975	YR	HAMPTON
YR-NS-0106	NF-65/66	3,372	24	DIP	1975	YR	HAMPTON
YR-NS-0107	NF-66	5,001	24	AC	1975	YR	HAMPTON
YR-NS-0108	NF-66	236	24	AC	1975	YR	HAMPTON
YR-NS-0109	NF-66/89	3,530	20	AC	1975	YR	HAMPTON
YR-NS-0110	NF-89	1,685	20	AC	1975	YR	HAMPTON
YR-NS-0111	NF-60	88	18	AC	1968	YR	HAMPTON
YR-NS-0112	NF-60	1,792	18	AC	1968	YR	HAMPTON
YR-NS-0113	NF-60	1,568	18	AC	1968	YR	HAMPTON

Table D-6. HRSD Force Main Segments (Added May 2010)

Segment ID	Line Number	Length (Feet)	Diameter (Inches)	Material	Install Date	Plant System	Primary Jurisdiction
YR-NS-0114	NF-60	105	18	AC	1968	YR	HAMPTON
YR-NS-0115	NF-60	18	18	AC	1968	YR	HAMPTON
YR-NS-0116	NF-60	881	18	AC	1968	YR	HAMPTON
YR-NS-0117	NF-68	1,371	12	DIP	1975	YR	HAMPTON
YR-NS-0118	NF-68	4,060	12	DIP	1975	YR	HAMPTON
YR-NS-0119	NF-74	2,700	16	DIP	1975	YR	HAMPTON
YR-NS-0120	NF-73	805	12	AC	1970	YR	HAMPTON
YR-NS-0121	NF-73	1,643	12	AC	1970	YR	HAMPTON
YR-NS-0122	NF-73	1,422	12	AC	1970	YR	HAMPTON
YR-NS-0123	NF-48	5	24	DIP	1981	YR	HAMPTON
YR-NS-0124	NF-48	24	24	DIP	1981	YR	HAMPTON
YR-NS-0125	NF-48	3,128	30	DIP	1981	YR	HAMPTON
YR-NS-0126	NF-47	3,108	30	CIP	1968	YR	HAMPTON
YR-NS-0127	NF-49	5,000	30	CIP	1967	YR	HAMPTON
YR-NS-0128	NF-49	2,034	30	CIP	1967	YR	HAMPTON

Plant System Table Legend

AB	Army Base
AT	Atlantic
BH	Boat Harbor
CE	Chesapeake-Elizabeth
JR	James River
NA	Nansemond
VIP	Virginia Initiative Plant
WMBG	Williamsburg
YR	York River

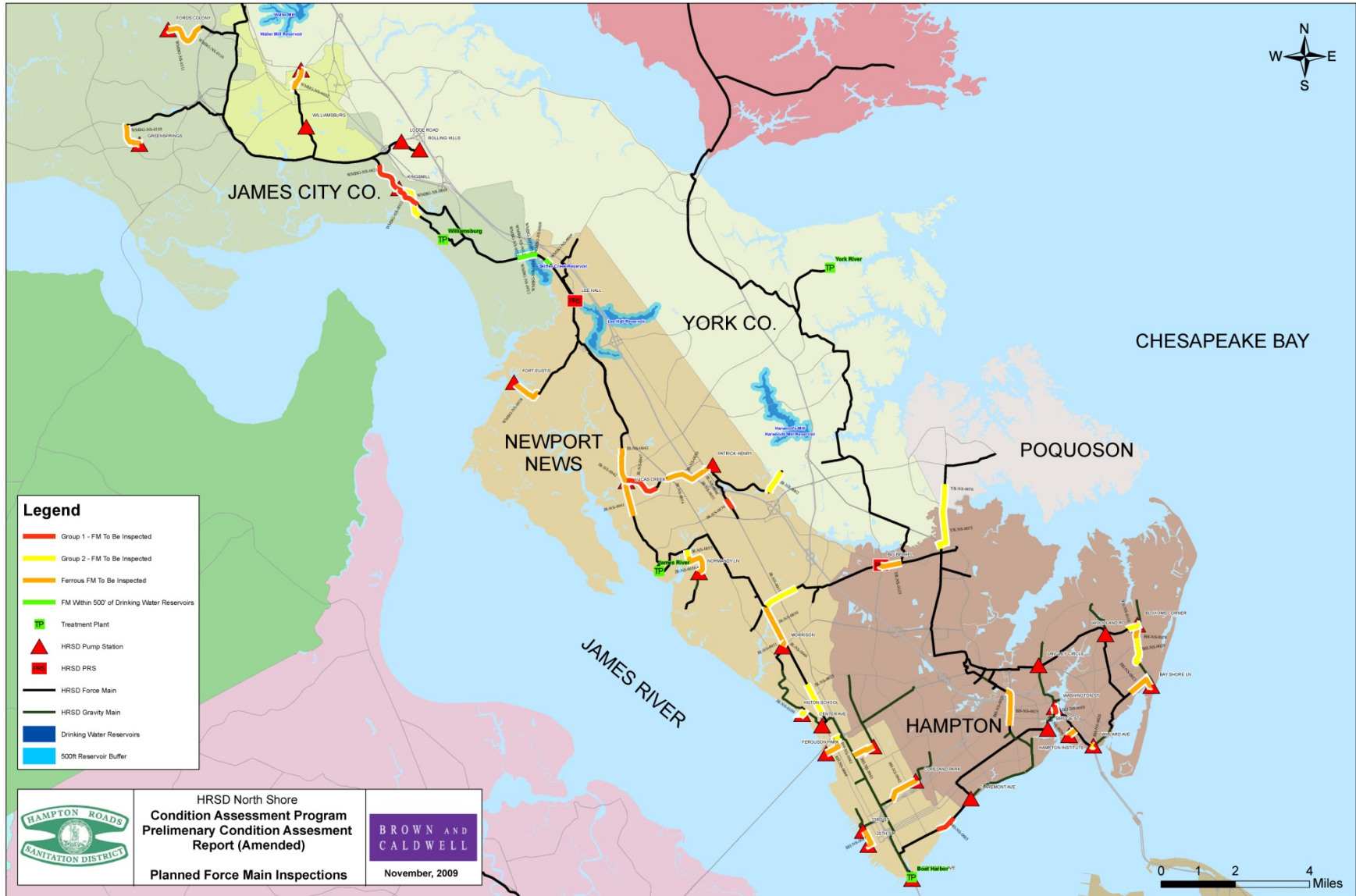


Figure D-1. HRSD North Shore Planned Force Main Inspections

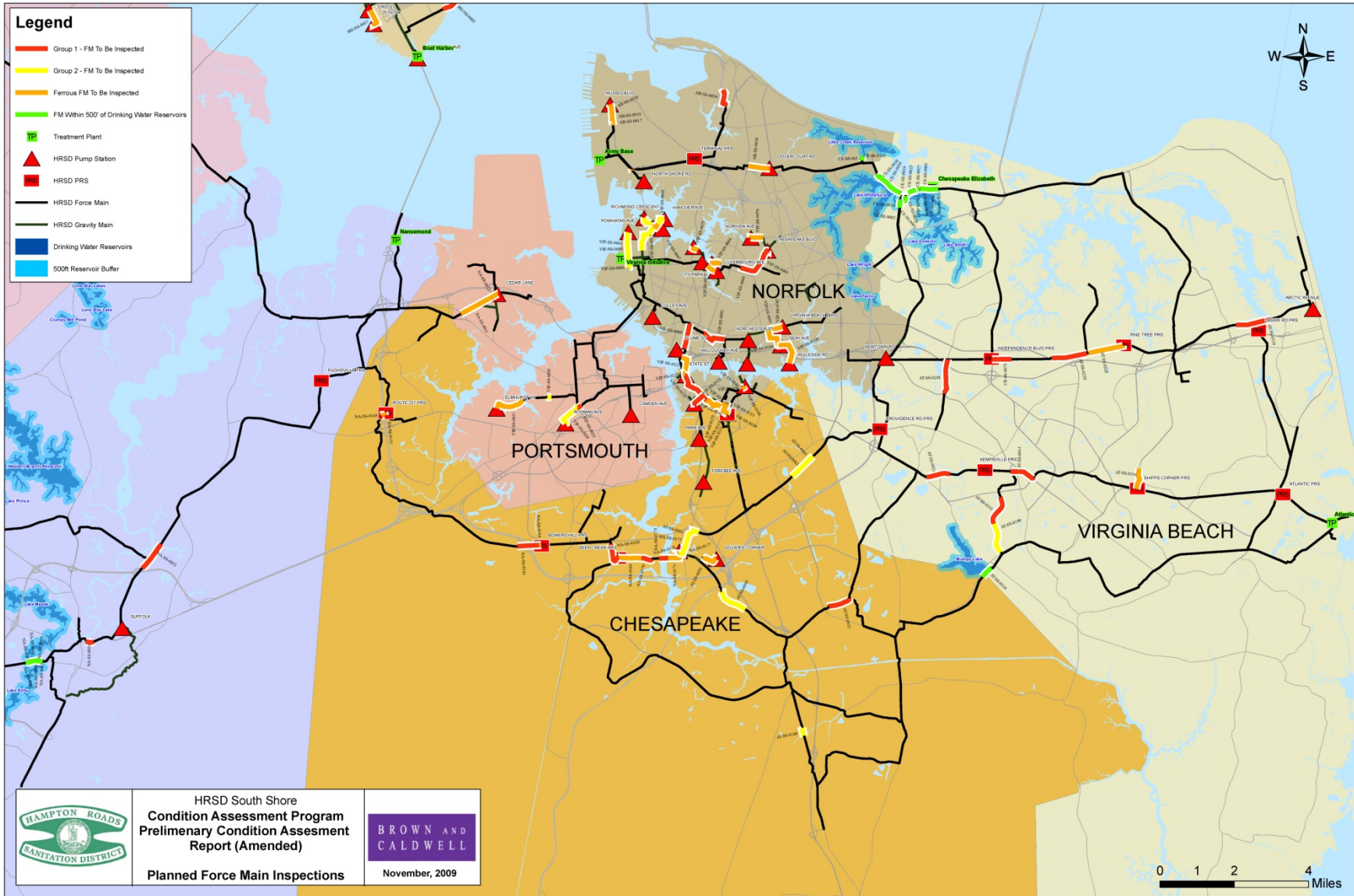


Figure D-2. HRSD South Shore Planned Force Main Inspections