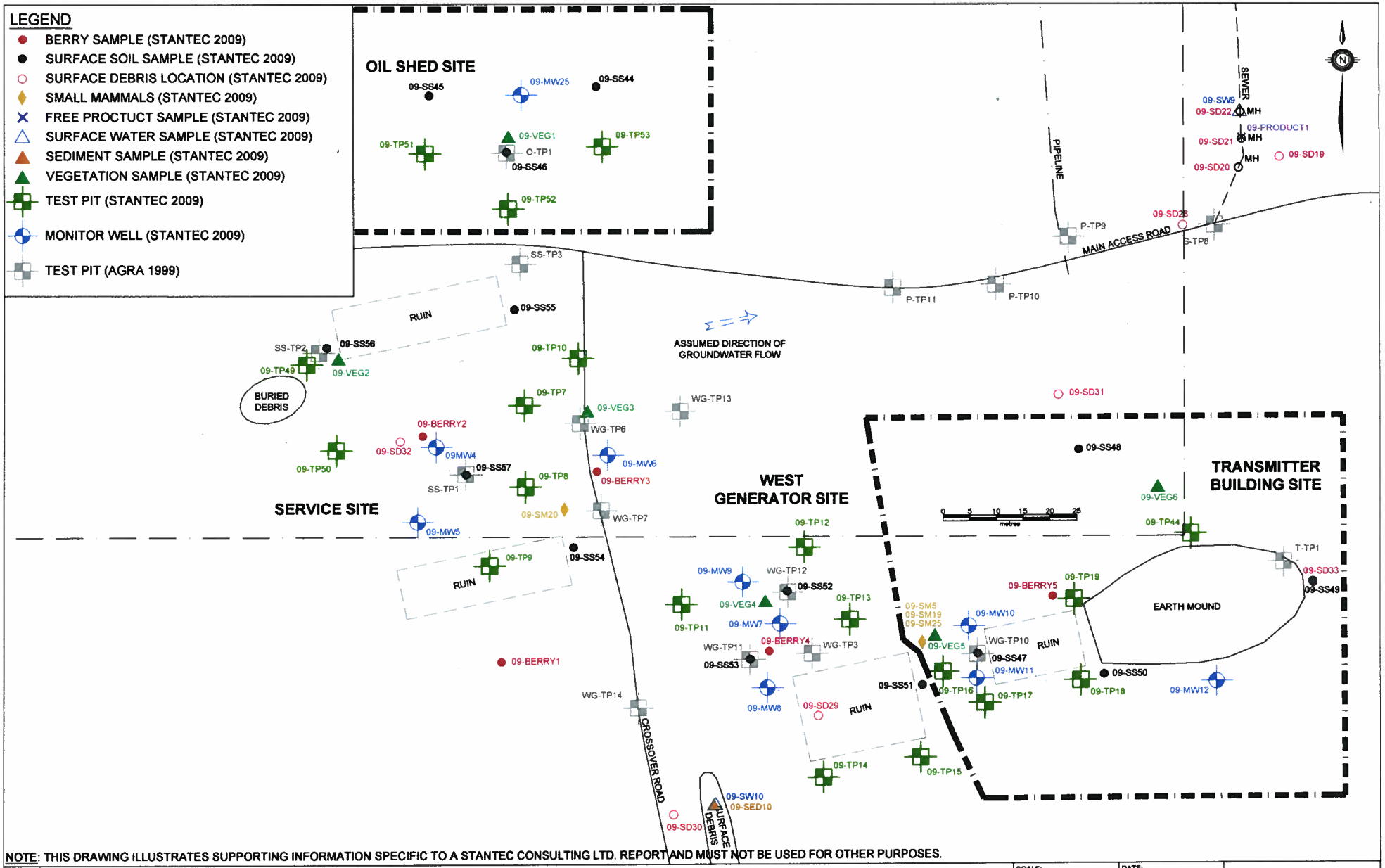
Appendix 7a

Site Drawings

– Transmitter Building



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CLIENT:
NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE:
PHASE III ENVIRONMENTAL SITE ASSESSMENT, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL

DRAWING TITLE:
SITE PLAN - TRANSMITTER BUILDING SITE

SCALE: 1:800	DATE: JUNE 17, 2010
DRAWN BY: N.M.	CHECKED BY: A.R.
EDITED BY: R.L.	REV. No. 0
DRAWING No: 121410105-EE-07A	
CAD FILE: 1044857-EE-07.DWG	

Stantec

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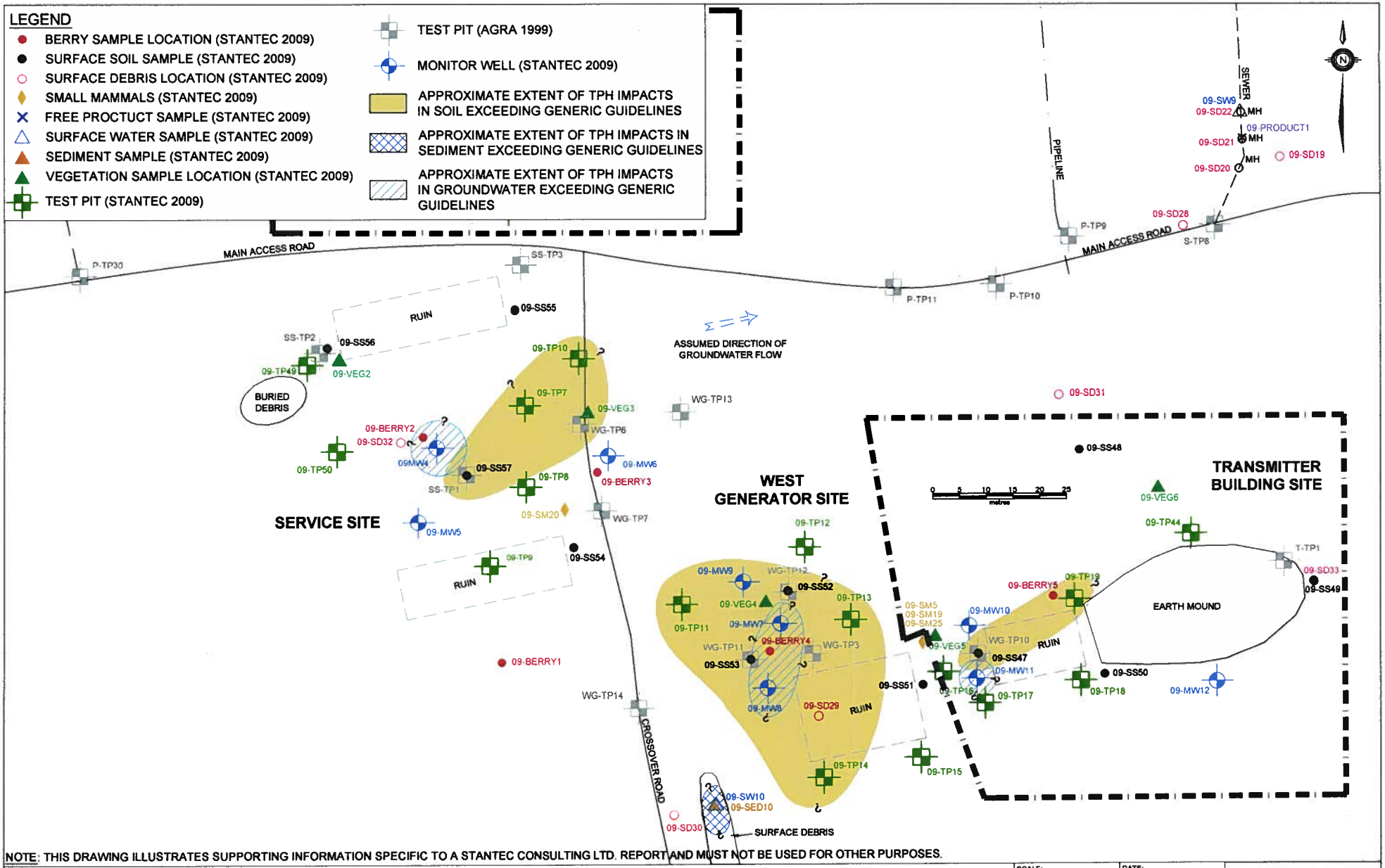

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CLIENT: NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE: PHASE III ENVIRONMENTAL SITE ASSESSMENT, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL

DRAWING TITLE: SITE PLAN SHOWING CURRENT INVESTIGATION - TRANSMITTER BUILDING SITE

SCALE: 1:800	DATE: JUNE 18, 2010
DRAWN BY: N.M.	CHECKED BY: A.R.
EDITED BY: -	REV. No. 0
DRAWING No: 121410105-EE-07B	
CAD FILE: 1044857-EE-10.DWG	

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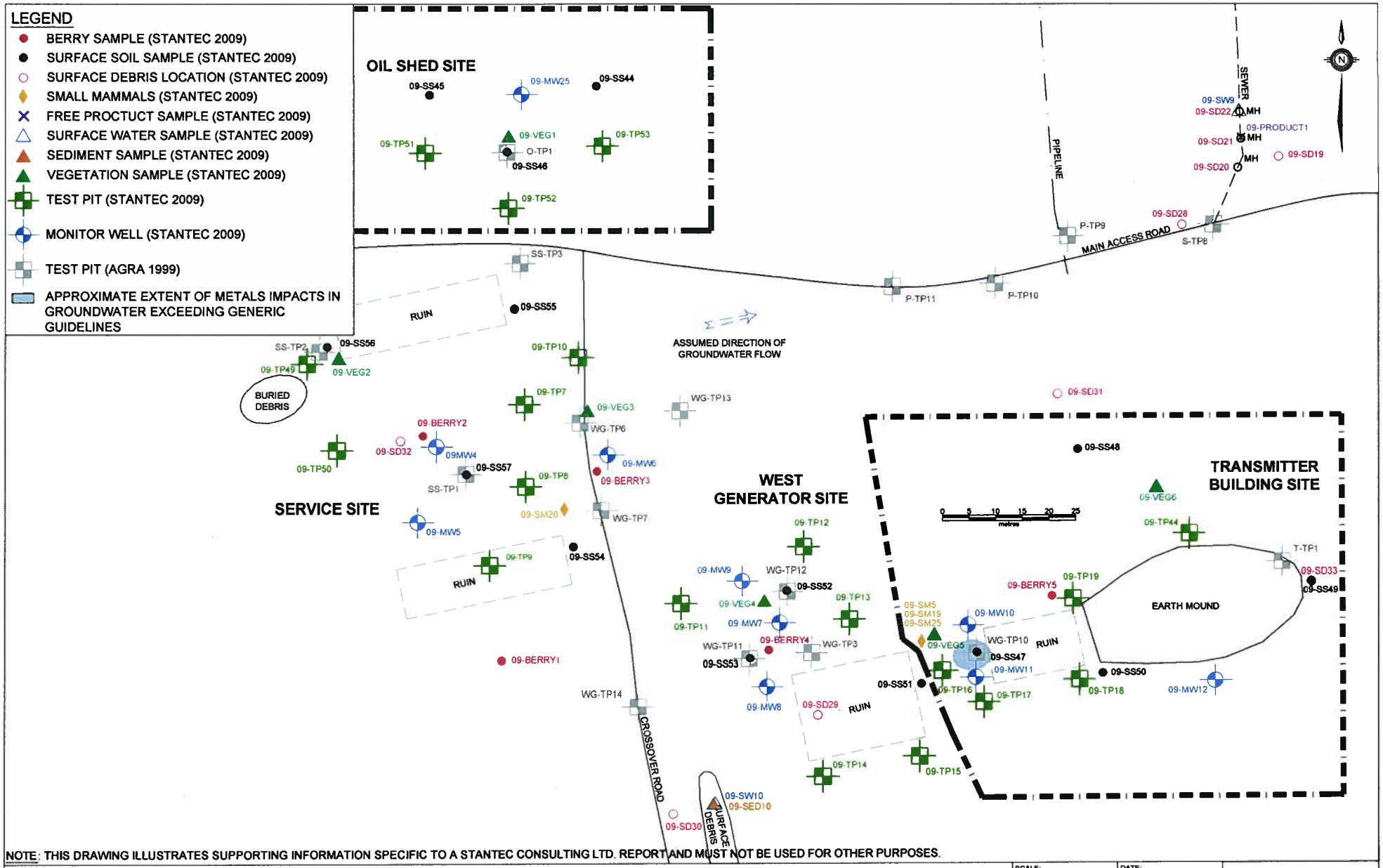
18JUN10 1:00PM



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CLIENT: NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE: PHASE III ENVIRONMENTAL SITE ASSESSMENT, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL

DRAWING TITLE: APPROXIMATE EXTENT OF METALS IMPACTS EXCEEDING GENERIC GUIDELINES - TRANSMITTER BUILDING SITE

SCALE: 1:800	DATE: JUNE 17, 2010
DRAWN BY: N.M.	CHECKED BY: A.R.
EDITED BY: R.L.	REV. No. 0
DRAWING No: 121410105-EE-07C	
CAD FILE: 1044857-EE-07.DWG	

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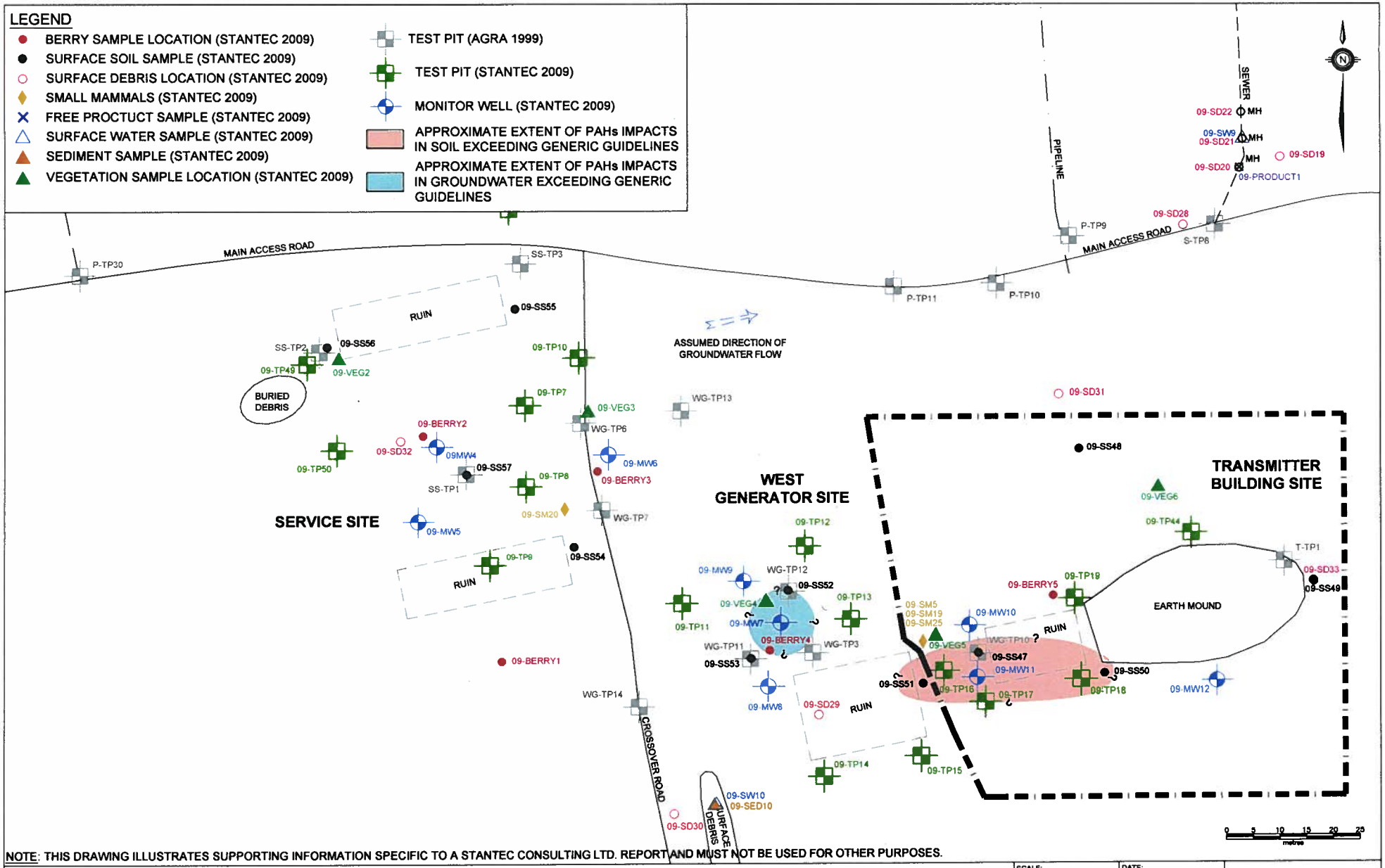

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT:
NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE:
PHASE III ENVIRONMENTAL SITE ASSESSMENT, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL

DRAWING TITLE:
APPROXIMATE EXTENT OF PAHs IMPACTS EXCEEDING GENERIC GUIDELINES - TRANSMITTER BUILDING SITE

SCALE: 1:800	DATE: JUNE 21, 2010
DRAWN BY: N.M.	CHECKED BY: A.R.
EDITED BY: R.L.	REV. No. 0
DRAWING No: 121410105-EE-7D	
CAD FILE: 1044857-EE-12.DWG	

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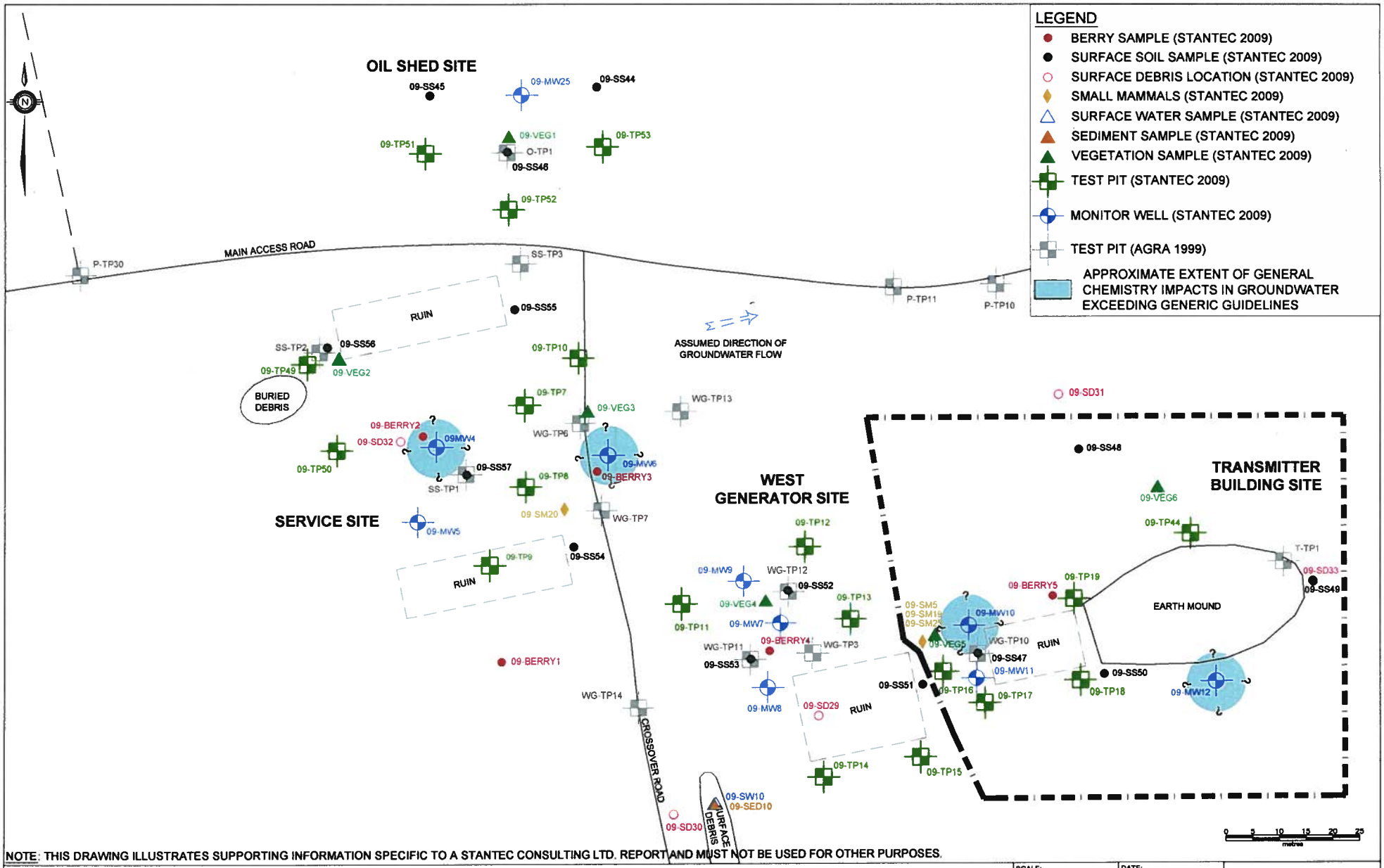

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT:
NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION

PROJECT TITLE:
PHASE III ENVIRONMENTAL SITE ASSESSMENT, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL

DRAWING TITLE:
APPROXIMATE EXTENT OF GENERAL CHEMISTRY IMPACTS EXCEEDING GENERIC GUIDELINES - TRANSMITTER BUILDING SITE

SCALE: 1:800	DATE: JUNE 21, 2010
DRAWN BY: N.M.	CHECKED BY: A.R.
EDITED BY: R.L.	REV. No. 0
DRAWING No: 121410105-EE-7E	
CAD FILE: 1044857-EE-13.DWG	

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Appendix 7b

Sample Coordinates

– Transmitter Building

Sample Coordinates - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample ID	Coordinates (NAD27)	
	Easting	Northing
TEST PITS		
09-TP16	694239	5931135
09-TP17	694251	5931126
09-TP18	694267	5931135
09-TP19	694273	5931144
09-TP44	694285	5931161
MONITOR WELLS		
09-MW10	694244	5931142
09-MW11	694250	5931137
09-MW12	694282	5931121
SURFACE SOIL		
09-SS47	694250	5931143
09-SS48	694270	5931168
09-SS49	694288	5931150
09-SS50	694257	5931114
VEGETATION		
09-VEG5	694244	5931132
09-VEG6	694285	5931161
BERRIES		
09-BERRY5	694266	5931140
SMALL MAMMALS		
09-SM5	694242	5931131
09-SM19	694242	5931131
09-SM25	694242	5931131

Appendix 7c

Test Pit Records and Monitor Well Records

– Transmitter Building

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TEST PIT RECORD

CLIENT **NL Department of Environment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): DUG **8-5-09** WATER LEVEL **1.5m** **8-5-09**

TEST PIT No. **09-TP16**
PROJECT No. **121410105**
DATUM

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES HYDROCARBON ODOUR	SAMPLES OTHER TESTS	PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm) TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0														
		Compact, brown to grey, SAND (SP-SM); trace to some silt			BS	1	0		2.0	-	-	-	-	-
1				▽	BS	2	0		0.0	nd	nd	nd	nd	nd
2		End of Test Pit Very slow groundwater seepage observed at 1.5 m depth. Bedrock not encountered.												
3														
4														
5														

TEST PIT RECORD

CLIENT: NL Department of Environment and Conservation
PROJECT: Phase III ESA, HHRA & ERA, Former US Military Facility
LOCATION: Northwest Point, NL
DATES (mm-dd-yy): DUG 8-5-09 WATER LEVEL 0.9m 8-5-09

TEST PIT No. 09-TP17
PROJECT No. 121410105
DATUM

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES HYDROCARBON ODOUR	SAMPLES OTHER TESTS	PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm) TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0														
		Loose to compact, brown, SAND (SP-SM); trace to some silt, occasional cobbles			BS	1	0		4.2	-	-	-	-	-
1				▽	BS	2	0		0.0	-	-	-	-	-
		End of Test Pit Rapid groundwater seepage observed at 0.9 m depth. Bedrock not encountered.												
2														
3														
4														
5														

Stantec

TEST PIT RECORD

CLIENT **NL Department of Environment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): DUG **8-5-09** WATER LEVEL **1.3m** **8-5-09**

TEST PIT No. **09-TP18**
PROJECT No. **121410105**
DATUM

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES HYDROCARBON ODOUR	SAMPLES OTHER TESTS	PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm) TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0														
		Compact, brown to grey, SAND (SP-SM); trace to some silt, occasional cobbles			BS	1	0		0.0	-	-	-	-	-
1				▽	BS	2	0		0.1	28	nd	nd	nd	nd
		End of Test Pit Rapid groundwater seepage observed at 1.3 m depth. Bedrock not encountered.												
2														
3														
4														
5														

Stantec

TEST PIT RECORD

CLIENT **NL Department of Environment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): DUG **8-5-09** WATER LEVEL **2.4m** **8-5-09**

TEST PIT No. **09-TP19**
PROJECT No. **121410105**
DATUM

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	HYDROCARBON ODOUR	SAMPLES OTHER TESTS	PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm) TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0		Grey, SAND (SP); some debris (concrete, metal, pipe, etc.)												
1		Compact, brown to grey, SAND (SP); trace silt			BS	1	0		0.0	-	-	-	-	-
2				▽	BS	2	1-2		25.0	5800	nd	nd	nd	nd
3		End of Test Pit Rapid groundwater seepage observed at 2.4 m depth. Bedrock not encountered.												
4														
5														

Stantec

TEST PIT RECORD

CLIENT **NL Department of Environment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): DUG **8-7-09** WATER LEVEL **N/A**

TEST PIT No. **09-TP44**
PROJECT No. **121410105**
DATUM

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES HYDROCARBON ODOUR	SAMPLES OTHER TESTS	PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm) TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0		Loose, brown, SAND with gravel (SP)												
1		Compact to loose, brown, SAND with gravel (SP); trace to some debris (concrete, metal, wire, roots)			BS	1	0		1.2	-	-	-	-	-
2		Compact, brown to greyish brown, SILT with sand (ML)												
3					BS	2	0		2.2	-	-	-	-	-
4		End of Test Pit No groundwater seepage observed. Bedrock not encountered.												
5														

MONITOR WELL RECORD

BOREHOLE No. **09-MW10**
PAGE **1** of **1**
PROJECT No. **121410105**
DRILLING METHOD **Auger**
SIZE **100mm HS**
DATUM

CLIENT **NL Department of Enviroment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): BORING **8-8-09** WATER LEVEL **2.44m** **8-8-09**

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY mm	SAMPLES N-VALUE OR RQD %	HYDROCARBON ODOUR	APPARENT MOISTURE CONTENT	PID (ppm)	TPH (ppm)	WELL CONSTRUCTION DETAILS (0.91 m STICK UP)
0													CAST IRON WELL HEAD
		Brown, SAND (SP)			SS	1	355	11	1		58.8	-	BENTONITE
1		Brown, SAND with gravel (SP)			SS	2	355	10	1		35.2	-	
		Grey, SILT (ML)			SS	3	355	17	1		26.8	-	50 mm DIAMETER No. 10 SLOT PVC SCREEN IN No. 2 SILICA SAND PACK
2		Grey, SILT (ML) with layers of grey, CLAY (CL)		▼	SS	4	355	39	1		49.2	27	
		Grey, SILT (ML)			SS	5	305	28	1		510	-	
3													END CAP
		End of Borehole											
4													
5													
6													
7													
8													
9													
10													

MONITOR WELL RECORD

Stantec

BOREHOLE No. **09-MW11**
PAGE **1** of **1**
PROJECT No. **121410105**
DRILLING METHOD **Auger**
SIZE **100mm HS**
DATUM

CLIENT **NL Department of Enviroment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): BORING **8-8-09** WATER LEVEL **1.83m** **8-8-09**

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY mm	SAMPLES N-VALUE OR RQD %	HYDROCARBON ODOUR	APPARENT MOISTURE CONTENT	PID (ppm)	TPH (ppm)	WELL CONSTRUCTION DETAILS (0.91 m STICK UP)
0		Organics			SS	1	205	6	0		23.1	-	CAST IRON WELL HEAD; BENTONITE
		Brown, SAND with gravel (SP); some debris											
1		Brown, SAND with gravel (SP)			SS	2	355	11	0		17.7	-	
					SS	3	510	18	0		12.8	nd	50 mm DIAMETER No. 10 SLOT PVC SCREEN IN No. 2 SILICA SAND PACK
2		Grey, SILT (ML)		▼									
		Dark grey, CLAY (CL)			SS	4	305	36	0		10.2	-	
		Dark brown, SAND with gravel (SP)											
3													END CAP
		End of Borehole											
4													
5													
6													
7													
8													
9													
10													

MONITOR WELL RECORD

BOREHOLE No. **09-MW12**
PAGE **1** of **1**
PROJECT No. **121410105**
DRILLING METHOD **Auger**
SIZE **100mm HS**
DATUM

CLIENT **NL Department of Enviroment and Conservation**
PROJECT **Phase III ESA, HHRA & ERA, Former US Military Facility**
LOCATION **Northwest Point, NL**
DATES (mm-dd-yy): BORING **8-8-09** WATER LEVEL **1.52m** **8-8-09**

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY mm	SAMPLES N-VALUE OR RQD %	HYDROCARBON ODOUR	APPARENT MOISTURE CONTENT	PID (ppm)	TPH (ppm)	WELL CONSTRUCTION DETAILS (0.91 m STICK UP)
0													CAST IRON WELL HEAD
0		Dark brown, SAND with gravel (SP); some organics			SS	1	305	4	0		10.4	-	BENTONITE
1					SS	2	255	20	0		10.2	-	
		Brown, SAND with gravel (SP) with layers of CLAY (CL)		▼	SS	3	205	10	0		12.1	55	50 mm DIAMETER No. 10 SLOT PVC SCREEN IN No. 2 SILICA SAND PACK
2		Dark grey, CLAY (CL)			SS	4	-	-	0		7.8	-	
					SS	5	-	-	0		4.3	-	
3													END CAP
		End of Borehole											
4													
5													
6													
7													
8													
9													
10													

Appendix 7d

Laboratory Analytical Results Summary Tables

– Transmitter Building

Table 7.1 Results of Laboratory Analysis of TPH/BTEX in Soil - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Sample Depth (m)	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH Purgeable ($<C_{10}$)	TPH Extractable (C_{10}-C_{32})	C_6-C_{10} (Gas Range)	C_{10}-C_{21} (Fuel Range)	C_{21}-C_{32} (Lube Range)	Modified TPH - Tier I[2]	Resemblance
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Tier I RBSLs[1]		0.16	14	58	17	-	-	-	-	-	140	-
1999 Sampling (AGRA)												
WG-TP10	1.5	<0.002	<0.002	0.038	0.242	13.8	90	-	-	-	923	D
MDL	-	0.002	0.002	0.002	0.002	0.02	0.20	-	-	-	0.20	-
2009 Sampling (Stantec)												
09-TP16-BS2	1.3 - 1.8	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	<15	<20	-
09-TP18-BS2	1.1 - 1.6	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	28	28	NRL
09-TP19-BS2	2.2 - 2.6	<0.03	<0.03	<0.03	<0.05	-	-	27	5,600	140	5,800	WFO
09-MW10-SS4	1.8 - 2.4	<0.03	<0.03	<0.03	<0.05	-	-	<3	27	<15	27	WFO
09-MW11-SS3	1.2 - 1.8	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	<15	<20	-
09-MW11-SS3 Lab-Dup	1.2 - 1.8	<0.03	<0.03	<0.03	<0.05	-	-	<3	-	-	-	-
09-MW12-SS3	1.2 - 1.8	<0.03	<0.03	<0.03	<0.05	-	-	<3	28	27	55	OPF/L
RDL	-	0.03	0.03	0.03	0.05	-	-	3	15	15	20	-

Notes:

1 = Partnership in RBCA (Risk-Based Corrective Action) Implementation (PIRI) Tier I Risk Based Screening Levels (RBSLs) for a residential site with non-potable groundwater and coarse grained soil, fuel oil impacts (September, 2003)

2 = Modified TPH - Tier I does not include BTEX

MDL = Method Detection Limit; RDL = Reportable Detection Limit for routine analysis

Lab-dup = laboratory duplicate sample

< # = Not detected above MDL/RDL noted

"-" = Indicates value is not available or does not apply

D = Diesel; WFO = Weathered fuel oil; NRL = No resemblance to petroleum products in lube oil range; OPF/L= One product in the fuel/lube oil range

Shaded = Value exceeds generic guideline for a residential site, non-potable groundwater, coarse grained soil and fuel oil impacts

Table 7.2 Results of Laboratory Analysis of Metals in Soil - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Parameters	Units	Criteria[1]	1999 Sampling (AGRA)		2009 Sampling (Stantec)							
			WG-TP10	MDL	09-MW10-SS1	09-MW11-SS2	RDL	09-SS47	09-SS48	09-SS49	09-SS50	RDL
Sample Depth (m)			1.5	-	0.0 - 0.6	0.6 - 1.2	-	0.0 - 0.15	0.0 - 0.15	0.0 - 0.15	0.0 - 0.15	-
Aluminum	mg/kg	-	4,680	5	4,500	4,000	10	4,800	3,100	2,700	5,900	10
Antimony	mg/kg	20	-	-	<2	<2	2	<2	<2	<2	<2	2
Arsenic	mg/kg	12	-	-	<2	<2	2	<2	<2	<2	<2	2
Barium	mg/kg	500	37	0.5	47	45	5	50	32	25	57	5
Beryllium	mg/kg	4	<0.2	0.2	<2	<2	2	<2	<2	<2	<2	2
Bismuth	mg/kg	-	<0.2	0.2	<2	<2	2	<2	<2	<2	<2	2
Boron	mg/kg	-	-	-	<5	<5	5	<5	<5	<5	<5	5
Cadmium	mg/kg	10	<0.5	0.5	<0.3	0.5	0.3	<0.3	<0.3	<0.3	<0.3	0.3
Calcium	mg/kg	-	1,990	5	-	-	-	-	-	-	-	-
Chromium	mg/kg	64	7	1	13	11	2	11	8	6	13	2
Cobalt	mg/kg	50	2	1	3	3	1	4	3	2	4	1
Copper	mg/kg	63	7	1	9	39	2	14	7	5	13	2
Iron	mg/kg	-	5,530	5	7,800	6,900	50	7,600	6,000	5,100	8,400	50
Lead	mg/kg	140	<5	5	17	46	0.5	8.6	6.4	3.2	14	0.5
Lithium	mg/kg	-	-	-	4	4	2	4	3	3	5	2
Magnesium	mg/kg	-	1,840	5	-	-	-	-	-	-	-	-
Manganese	mg/kg	-	89	1	110	130	2	120	74	61	120	2
Mercury	mg/kg	6.6	-	-	<0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Molybdenum	mg/kg	10	<4	4	<2	<2	2	<2	<2	<2	<2	2
Nickel	mg/kg	50	-	-	6	7	2	7	5	5	8	2
Phosphorous	mg/kg	-	293	5	-	-	-	-	-	-	-	-
Potassium	mg/kg	-	932	5	-	-	-	-	-	-	-	-
Rubidium	mg/kg	-	-	-	9	11	2	10	6	6	11	2
Selenium	mg/kg	1	-	-	<2	<2	2	<1	<1	<1	<1	1
Silver	mg/kg	20	<5	5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.5
Sodium	mg/kg	-	414	5	-	-	-	-	-	-	-	-
Strontium	mg/kg	-	-	-	17	49	5	21	7	6	13	5
Thallium	mg/kg	1	-	-	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Tin	mg/kg	-	-	-	<2	<2	2	<2	<2	<2	<2	2
Uranium	mg/kg	23	-	-	0.3	0.2	0.1	0.4	0.2	0.2	0.3	0.1
Vanadium	mg/kg	130	13	5	17	15	2	17	15	11	19	2
Zinc	mg/kg	200	13	2	37	98	5	31	20	23	31	5

Notes:
1 = CCME Canadian Soil Quality Guidelines for Protection of Environmental and Human Health at a Residential/Parkland site (2007)
MDL = Method detection limit; RDL = Reportable Detection Limit for routine analysis
< # = Not detected above MDL/RDL noted
"-" = No applicable guideline

Table 7.3 Results of Laboratory Analysis of PAHs in Soil - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Parameters	Units	Criteria[1,3]	Criteria[2,3]	1999 Sampling (AGRA)		2009 Sampling (Stantec)			
				WG-TP10	MDL	09-SS47	RDL	09-SS50	RDL
Sample Depth (m)				1.5	-	0.0 - 0.15	-	0.0 - 0.15	-
Non-carcinogenic PAHs									
1-Methylnaphthalene	mg/kg	-	-	-	-	0.097	0.005	0.26	0.005
2-Methylnaphthalene	mg/kg	-	-	-	-	0.13	0.005	0.40	0.005
Acenaphthene	mg/kg	-	-	<0.002	0,002	1.0	0.005	2.7	0.005
Acenaphthylene	mg/kg	-	-	<0.001	0.001	0.035	0.005	0.066	0.005
Anthracene	mg/kg	2.5	-	<0.001	0.001	2.5	0.005	7.6(1)	0.05
Fluoranthene	mg/kg	50	-	0.157	0.001	12(1)	0.03	32(1)	0.05
Fluorene	mg/kg	-	-	<0.001	0,001	0.99	0.005	3.2	0.005
Naphthalene	mg/kg	-	-	<0.002	0.002	0.37	0.005	0.88	0.005
Perylene	mg/kg	-	-	-	-	0.87	0.005	2.4	0.005
Phenanthrene	mg/kg	-	-	<0.001	0.001	8.9(1)	0.03	25(1)	0.05
Pyrene	mg/kg	-	-	0.149	0.003	8.9(1)	0.03	24(1)	0.05
Carcinogenic PAHs									
Benzo(a)anthracene	mg/kg	-	-	0.046	0.001	5.1	0.005	12(1)	0.05
Benzo(a)pyrene	mg/kg	20	-	0.045	0.003	3.7	0.005	10(1)	0.05
Benzo(b)fluoranthene	mg/kg	-	-	0.045	0.004	3.0	0.005	9.2(1)	0.05
Benzo(g,h,i)perylene	mg/kg	-	-	0.010	0.002	2.0	0.005	5.5(1)	0.05
Benzo(k)fluoranthene	mg/kg	-	-	0.038	0.004	3.0	0.005	9.2(1)	0.05
Chrysene	mg/kg	-	-	0.050	0.001	4.7	0.005	13(1)	0.05
Indeno(1,2,3-c,d) pyrene	mg/kg	-	-	0.016	0.003	2.5	0.005	6.4(1)	0.05
Dibenz(a,h,)anthracene	mg/kg	-	-	0.002	0.004	0.51	0.005	1.6	0.005
Benzo(a)pyrene TPE[4]		-	5.3	0.062	-	5.64	-	15.5	-

Notes:

1 = CCME Canadian Soil Quality Guidelines for the Protection of Environmental Health at a Residential/Parkland Site (2008)

2 = CCME Canadian Soil Quality Guidelines for Protection of Human Health for a Residential Site (Direct Soil Contact) (2008)

3 = As per CCME recommendations, soil samples are compared against the SQG for the protection of human health and environmental health separately

4 = Carcinogenic PAHs Assessed as Benzo(a)pyrene Total Potency Equivalent (TPE)

(1) = Elevated RDL(s) due to sample dilution

MDL = Method Detection Limit; RDL = Reportable Detection Limit for routine analysis

< # = Not detected above MDL/RDL noted

"-" = No applicable guideline or does not apply

Shaded = Value exceeds applicable criteria

Table 7.4 Results of Laboratory Analysis of PCBs in Soil - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Sample Depth (m)	Polychlorinated Biphenyls (PCBs)
	RDL	0.05
	Units	ug/g
	Criteria[1]	1.3
2009 Sampling (Stantec)		
09-MW10-SS4	1.8 - 2.4	<0.05
09-MW11-SS3	1.2 - 1.8	<0.05
09-SS47	0.0 - 0.15	<0.05

Notes:
1 = CCME Canadian Soil Quality Guidelines for a Residential/Parkland site (2007)
RDL = Reportable Detection Limit for routine analysis
< # = Not detected above RDL noted

Table 7.5 Results of Laboratory Analysis of TPH/BTEX in Groundwater - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH Purgeable ($<C_{10}$)	TPH Extractable (C_{10}-C_{32})	C_6-C_{10} (Gas Range)	C_{10}-C_{21} (Fuel Range)	C_{21}-C_{32} (Lube Range)	Modified TPH - Tier I[2]	Resemblance
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	-
Tier I RBSLs[1]	1	20	20	20	-	-	-	-	-	12/20/20	-
1999 Sampling (AGRA)											
WG-TP10	<0.0002	<0.0002	<0.00022	<0.00045	<0.005	<0.05	-	-	-	<0.055	-
MDL	0.0002	0.0002	0.00022	0.00045	0.005	0.05	-	-	-	0.05	-
2009 Sampling (Stantec)											
09-MW10	<0.001	<0.001	0.002	<0.002	-	-	0.12	1.5	0.4	2.1	WFO/LO
09-MW11	<0.001	<0.001	<0.001	<0.002	-	-	3.1	71	2.3	77	WFO
09-MW12	<0.001	<0.001	<0.001	<0.002	-	-	<0.01	0.29	0.1	0.4	WFO/NRL
09-MW12 Lab-Dup	<0.001	<0.001	<0.001	<0.002	-	-	<0.01	-	-	-	-
RDL	0.001	0.001	0.001	0.002	-	-	0.01	0.05	0.1	0.1	-

Notes:
1 = Partnership in RBCA (Risk-Based Corrective Action) Implementation (PIRI) Tier I Risk Based Screening Levels (RBSLs) for a residential site with non-potable groundwater and coarse grained soil, fuel oil impacts (September, 2003)
2 = Modified TPH - Tier I does not include BTEX
Lab-Dup = Laboratory duplicate sample
MDL = Method Detection Limit; RDL = Reportable Detection Limit for routine analysis
< # = Not detected above MDL/RDL noted
"-" = indicates value is not available or does not apply
WFO= Weathered fuel oil; LO= Lube oil; NRL=No resemblance to petroleum products in lube oil range
Shaded = Value exceeds applicable criteria

Table 7.6 Results of Laboratory Analysis of Dissolved Metals in Groundwater - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Parameters	Units	Criteria[1]	1999 Sampling (AGRA)		2009 Sampling (Stantec)			
			WG-TP10	MDL	09-MW10	09-MW11	09-MW12	RDL
Aluminum	ug/L	-	<5	5	154	68.2	574	5.0
Antimony	ug/L	20,000	<1	1	<2.0	<2.0	<2.0	2.0
Arsenic	ug/L	1,900	<1	1	<2.0	<2.0	<2.0	2.0
Barium	ug/L	29,000	94	5	22.5	31.2	21.2	5.0
Beryllium	ug/L	67	<1	1	<2.0	<2.0	<2.0	2.0
Bismuth	ug/L	-	<1	1	<2.0	<2.0	<2.0	2.0
Boron	ug/L	45,000	-	-	13.8	15.9	<5.0	5.0
Cadmium	ug/L	2.7	<0.015	0.015	<0.017	0.029	<0.017	0.017
Calcium	ug/L	-	37,000	50	-	-	-	-
Chromium	ug/L	810	1	1	2.8	1	3.3	1.0
Cobalt	ug/L	66	<5	5	<0.40	0.68	7.45	0.40
Copper	ug/L	87	7	1	6.8	3.8	12.6	2.0
Iron	ug/L	-	150	5	<50	253	5,360	50
Lead	ug/L	25	<1	1	<0.50	<0.50	<0.50	0.50
Magnesium	ug/L	-	4,220	50	-	-	-	-
Manganese	ug/L	-	219	5	10.1	252	525	2.0
Mercury	ug/L	0.29	0.9	0.1	0.027	0.028	0.24	0.02
Molybdenum	ug/L	9,200	<5	5	<2.0	<2.0	<2.0	2.0
Nickel	ug/L	490	<5	5	<2.0	<2.0	7.7	2.0
Phosphorous	ug/L	-	<5	5	-	-	-	-
Potassium	ug/L	-	2,960	50	-	-	-	-
Selenium	ug/L	63	<1	1	<1.0	<1.0	<1.0	1.0
Silver	ug/L	1.5	<0.1	0.1	<0.10	<0.10	<0.10	0.10
Sodium	ug/L	-	5,160	50	-	-	-	-
Strontium	ug/L	-	-	-	198	192	118	5.0
Thallium	ug/L	510	-	-	<0.10	<0.10	<0.10	0.10
Tin	ug/L	-	-	-	<2.0	<2.0	<2.0	2.0
Titanium	ug/L	-	-	-	<2.0	<2.0	4.7	2.0
Uranium	ug/L	420	-	-	0.65	0.23	0.14	0.10
Vanadium	ug/L	250	<50	50	4.8	<2.0	5.2	2.0
Zinc	ug/L	1,100	33	1	5.4	<5.0	18.7	5.0

Notes:

1 = Ontario Ministry of the Environment (MOE) Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. July 27, 2009. Table 3: full depth generic site condition standards in a non-potable groundwater condition, coarse-grained soil

MDL = Method Detection Limit; RDL = Reportable Detection Limit

< # = Not detected above MDL/RDL noted

"-" = No applicable guideline

Table 7.7 Results of Laboratory Analysis of PAHs in Groundwater - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Parameter	Units	Criteria[1]	1999 Sampling (AGRA)	
			WG-TP10	RDL
1-Methylnaphthalene	ug/L	18,000	-	-
2-Methylnaphthalene	ug/L	18,000	-	-
Acenaphthene	ug/L	600	0.26	0.04
Acenaphthylene	ug/L	1.8	<0.03	0.03
Acridine	ug/L	-	-	-
Anthracene	ug/L	2.4	0.020	0.010
Benzo[a]anthracene	ug/L	4.7	0.07	0.015
Benzo[a]pyrene	ug/L	0.81	0.08	0.010
Benzo[b]fluoranthene	ug/L	0.75	0.07	0.05
Benzo[ghi]perylene	ug/L	0.2	0.03	0.03
Benzo[k]fluoranthene	ug/L	0.4	0.06	0.05
Chrysene	ug/L	1	0.09	0.04
Dibenz[a,h]anthracene	ug/L	0.52	<0.05	0.05
Fluoranthene	ug/L	130	0.20	0.03
Fluorene	ug/L	400	0.10	0.03
Indeno[1,2,3-cd]pyrene	ug/L	0.2	0.06	0.05
Naphthalene	ug/L	1,400	<0.03	0.03
Perylene	ug/L	-	-	-
Phenanthrene	ug/L	580	0.09	0.04
Pyrene	ug/L	68	0.17	0.020
Quinoline	ug/L	-	-	-

Notes:
1 = Ontario Ministry of the Environment (MOE) Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. July 27, 2009. Table 3: full depth generic site condition standards in a non-potable groundwater condition, coarse-grained soil
MDL = Reportable Detection Limit
"-" = indicates value is not available or does not apply
< # = Not detected above MDL noted
Shaded = Value exceeds applicable criteria

Table 7.8 Results of Laboratory Analysis of General Chemistry in Groundwater - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Parameter	Units	Criteria[1]	2009 Sampling (Stantec)						
			09-MW10	09-MW10 Lab-Dup	RDL	09-MW11	RDL	09-MW12	RDL
Metals									
Dissolved Calcium	mg/L	-	28	28	0.1	40	0.1	21	0.1
Dissolved Magnesium	mg/L	-	0.7	0.7	0.1	3.1	0.1	3.0	0.1
Dissolved Phosphorus	mg/L	<0.004 to >0.1[3]	<0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1
Dissolved Potassium	mg/L	-	26	26	0.1	3.2	0.1	1.7	0.1
Dissolved Sodium	mg/L	-	33	-	0.1	3.8	0.1	16	0.1
Calculated Parameters									
Anion Sum	me/L	-	3.57	-	N/A	2.40	N/A	1.21	N/A
Bicarb. Alkalinity (calc. as $CaCO_3$)	mg/L	-	163	-	1	117	1	57	1
Calculated TDS	mg/L	-	219	-	1	134	1	90	1
Carb.Alkalinity (calc. as $CaCO_3$)	mg/L	-	<1	-	1	<1	1	<1	1
Cation Sum	me/L	-	3.55	-	N/A	2.49	N/A	1.62	N/A
Hardness (CaCO3)	mg/L	-	73	-	1	110	1	64	1
Ion Balance (% Difference)	%	-	0.280	-	N/A	1.84	N/A	14.5	N/A
Langelier Index (@ 20C)	N/A	-	0.0590	-	-	-0.361	-	-1.8	-
Langelier Index (@ 4C)	N/A	-	-0.191	-	-	-0.612	-	-2.05	-
Nitrate (N)	mg/L	2.9	2.9	-	0.05	<0.05	0.05	<0.05	0.05
Saturation pH (@20C)	N/A	-	7.73	-	-	7.69	-	8.27	-
Saturation pH (@4C)	N/A	-	7.98	-	-	7.94	-	8.52	-
Inorganics									
Total Alkalinity (Total as $CaCO_3$)	mg/L	-	160	-	30	120	30	57	5
Dissolved Chloride (Cl)	mg/L	-	2	-	1	2	1	2	1
Colour	TCU	-	28	-	5	30	5	84	30
Nitrate + Nitrite	mg/L	-	3.1	-	0.05	<0.05	0.05	<0.05	0.05
Nitrite (N)	mg/L	0.06	0.18	-	0.01	<0.01	0.01	<0.01	0.01
Nitrogen (Ammonia Nitrogen)	mg/L	-	<0.05	-	0.05	<0.05	0.05	<0.05	0.05
Total Organic Compound	mg/L	-	20	-	10	10	0.5	<50(1)	50
Orthophosphate (P)	mg/L	-	<0.01	-	0.01	<0.01	0.01	<0.01	0.01
pH	pH	6.5 - 9	7.79	-	N/A	7.33	N/A	6.47	N/A
Reactive Silica (SiO_2)	mg/L	-	16	-	0.5	12	0.5	20	0.5
Dissolved Sulphate (SO_4)	mg/L	-	<2	-	2	<2	2	<2	2
Turbidity	NTU	Narritive[2]	540	-	10	>1000	10	>1000	10
Conductivity	uS/cm	-	350	-	1	240	1	100	1

Notes:

1 = CCME Water Quality Guidelines for the protection of freshwater aquatic life (2007)

2 = Maximum increase of 8 NTUs from background levels when background levels are between 8 and 80 NTUs

3 = Phosphorous guideline is dependant on trophic status of the freswater environment

RDL = Reportable Detection Limit

< # = Not detected above RDL noted

"-" = indicates value is not available or does not apply

(1) Detection limit increased due to sample matrix

Lab-dup = Laboratory duplicate sample

Shaded = Value exceeds applicable criteria

Table 7.9 Results of Laboratory Analysis of PCBs in Vegetation - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Polychlorinated Biphenyls (PCBs)
RDL	0.05
Units	ug/L
Criteria	na
2009 Sampling (Stantec)	
09-VEG-05	<0.3
09-VEG-06	<0.3

RDL = Reportable Detection Limit
na = No applicable guideline
< # = Not detected above RDL noted

Table 7.10 Results of Laboratory Analysis of PCBs in Berries - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Polychlorinated Biphenyls (PCBs)
RDL	0.05
Units	ug/g
Criteria	na
2009 Sampling (Stantec)	
09-BERRY 5	<0.05

Notes:
RDL = Reportable Detection Limit
na = No applicable guideline
< # = Not detected above RDL noted

Table 7.11 Results of Laboratory Analysis of PCBs/Crude Fat in Small Mammal Tissue Samples - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Polychlorinated Biphenyls (PCBs)	Crude Fat
RDL	0.05 / 0.07	0.5
Units	ug/g	%
Criteria	na	na
2009 Sampling (Stantec)		
09-SM5	<0.05	3.1
09-SM19	<0.07	-
09-SM25	<0.07	-

Notes:
RDL = Reportable Detection Limit
na = No applicable guideline
Lab-dup = Laboratory duplicate sample
< # = Not detected above RDL noted
"-" = Not analyzed

Table 7.12 Results of Laboratory Analysis of Metals in Small Mammals - Transmitter Building
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Parameters	RDL	Units	Criteria	2009 Sampling (Stantec)
				09-SM5
Aluminum	-	mg/kg	na	-
Antimony	-	mg/kg	na	-
Arsenic	-	mg/kg	na	-
Barium	-	mg/kg	na	-
Beryllium	-	mg/kg	na	-
Boron	-	mg/kg	na	-
Cadmium	-	mg/kg	na	-
Chromium	-	mg/kg	na	-
Cobalt	-	mg/kg	na	-
Copper	-	mg/kg	na	-
Iron	-	mg/kg	na	-
Lead	-	mg/kg	na	-
Lithium	-	mg/kg	na	-
Manganese	-	mg/kg	na	-
Mercury	0.10	mg/kg	na	<0.1
Molybdenum	-	mg/kg	na	-
Nickel	-	mg/kg	na	-
Selenium	-	mg/kg	na	-
Silver	-	mg/kg	na	-
Strontium	-	mg/kg	na	-
Thallium	-	mg/kg	na	-
Tin	-	mg/kg	na	-
Uranium	-	mg/kg	na	-
Vanadium	-	mg/kg	na	-
Zinc	-	mg/kg	na	-

Notes:
RDL = Reportable Detection Limit
na = No applicable guideline
< # = Not detected above RDL noted
"-" = Not analyzed

Appendix 7e

Results of Hydraulic Response (Bail-Down) Test

– Transmitter Building

Stantec Consulting Ltd.
607 Torbay Road
St. John's, NL, A1A 4Y6
Tel: (709) 576-1458

Slug Test Data Report
Project: Northwest Point
Number: 121410105
Client: NLDEC

Test Well:	**09-MW12**	**Slug Test:**	**09-MW12**
		Test Well:	09-MW12
Depth to Static WL:	1.31 [m]	Casing radius:	0.025 [m]
Location:		Boring radius:	0.05 [m]
Recorded by:	Stantec	Screen length:	3.05 [m]
Date:	8/27/2009	Aquifer Thickness:	2.98 [m]

	Time [s]	Depth to WL [m]	Drawdown [m]
1	10	1.43	0.12
2	20	1.41	0.10
3	30	1.41	0.09
4	40	1.40	0.09
5	50	1.40	0.08
6	60	1.39	0.08
7	90	1.37	0.06
8	120	1.37	0.06
9	150	1.36	0.05
10	180	1.35	0.04
11	240	1.34	0.03
12	300	1.34	0.02
13	360	1.33	0.02
14	420	1.33	0.01
15	480	1.33	0.01
16	540	1.32	0.01
17	600	1.32	0.00
18	720	1.31	0.00

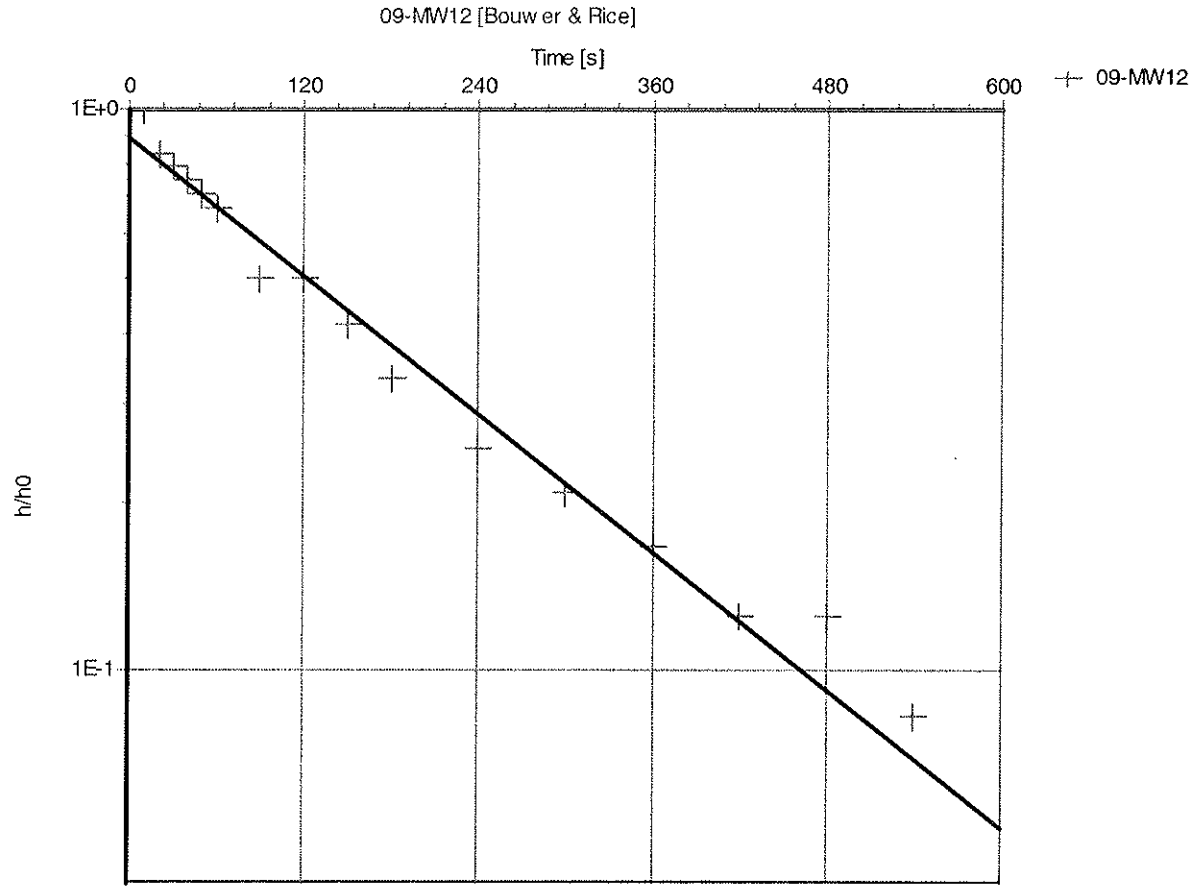
Stantec Consulting Ltd.
607 Torbay Road
St. John's, NL, A1A 4Y6
Tel: (709) 576-1458

Slug Test Analysis Report

Project: Northwest Point

Number: 121410105

Client: NLDEC



Slug Test: **09-MW12**

Analysis Method: **Bouwer & Rice**

Analysis Results:

Conductivity: 1.52E-6 [m/s]

Test parameters:

Test Well:	09-MW12	Aquifer Thickness:	2.98 [m]
Casing radius:	0.025 [m]	Gravel Pack Porosity (%)	25
Screen length:	3.05 [m]		
Boring radius:	0.05 [m]		
r(eff):	0.033 [m]		

Comments:

Evaluated by: AR

Evaluation Date: 6/9/2010

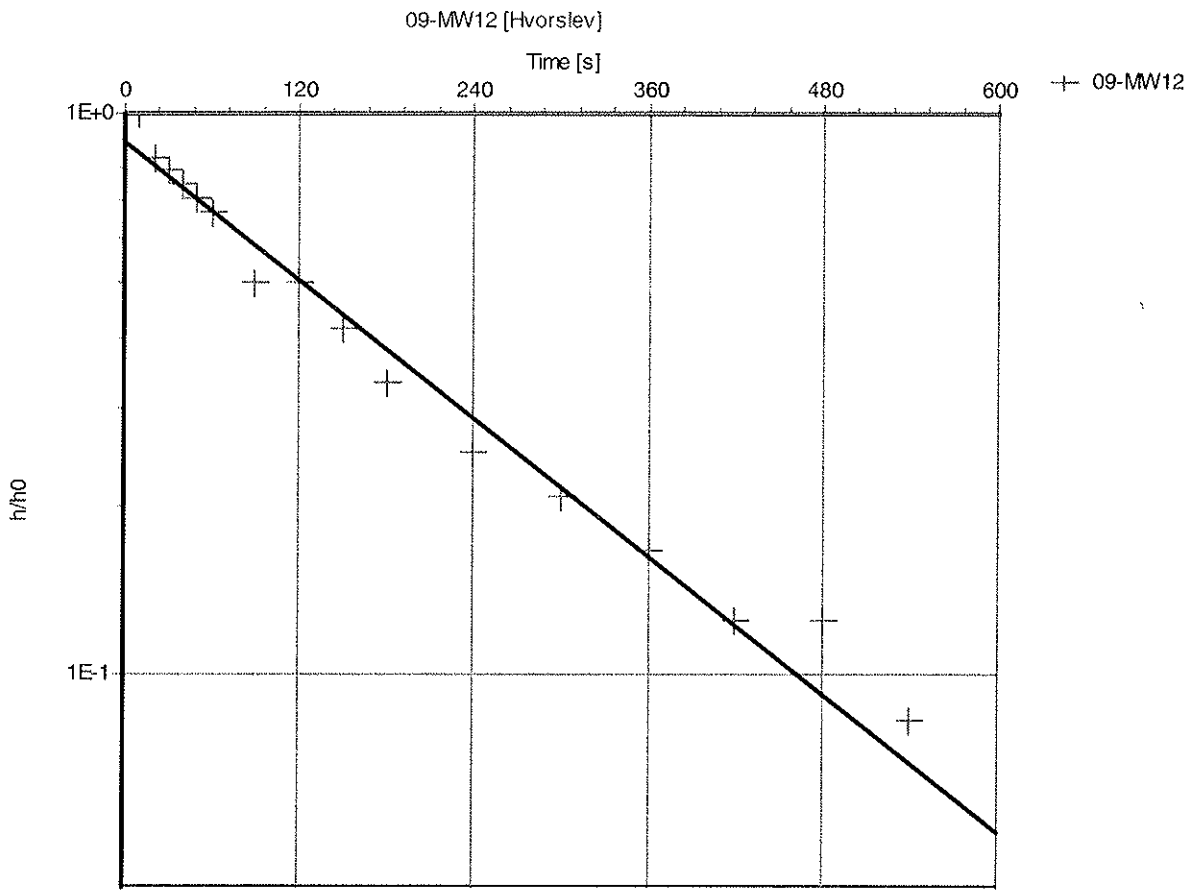
Stantec Consulting Ltd.
607 Torbay Road
St. John's, NL, A1A 4Y6
Stantec Tel: (709) 576-1458

Slug Test Analysis Report

Project: Northwest Point

Number: 121410105

Client: NLDEC



Slug Test: **09-MW12**

Analysis Method: **Hvorslev**

Analysis Results:

Conductivity: 2.00E-6 [m/s]

Test parameters:

Test Well:	09-MW12	Aquifer Thickness:	2.98 [m]
Casing radius:	0.025 [m]		
Screen length:	3.05 [m]		
Boring radius:	0.05 [m]		

Comments:

Evaluated by: AR

Evaluation Date: 6/9/2010