

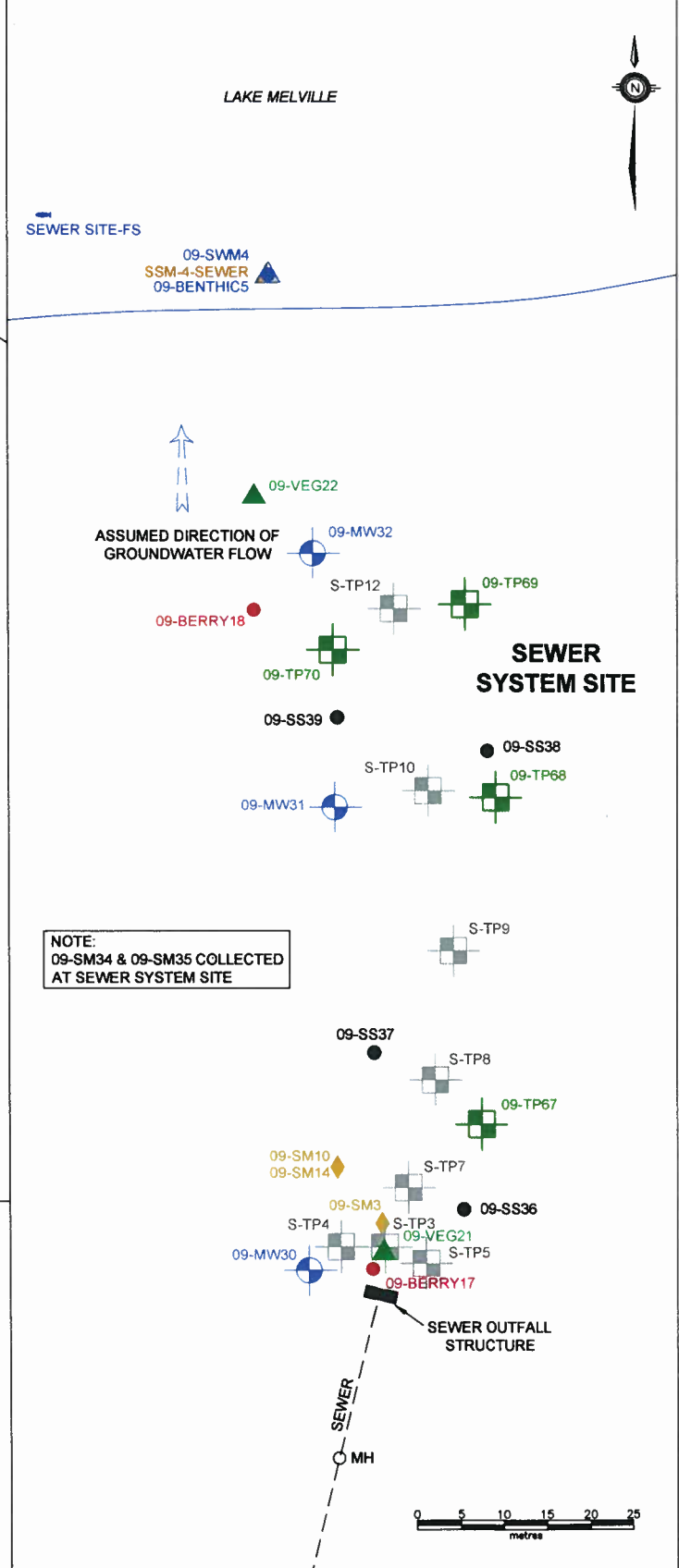
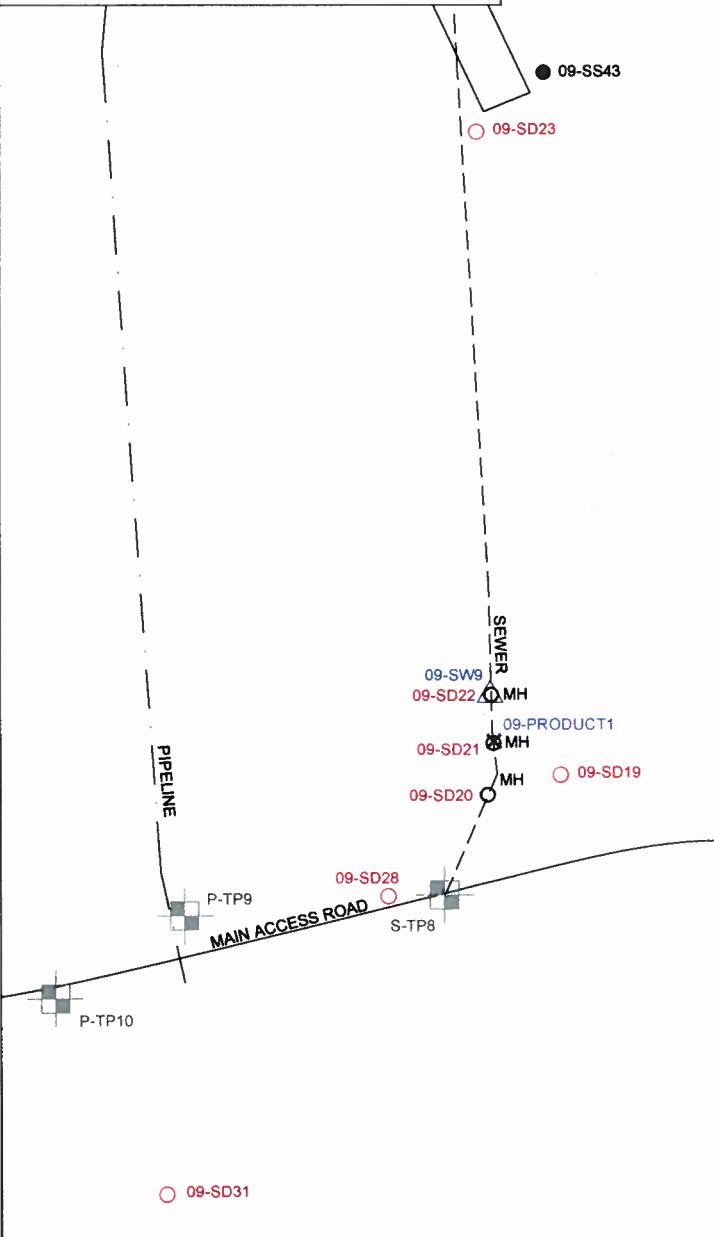
Appendix 14a

Site Drawings

– Sewer System Site

LEGEND

- BERRY SAMPLE (STANTEC 2009)
- SURFACE SOIL SAMPLE (STANTEC 2009)
- SURFACE DEBRIS LOCATION (STANTEC 2009)
- ◆ SMALL MAMMALS (STANTEC 2009)
- FISH LOCATION (STANTEC 2009)
- △ SURFACE WATER SAMPLE (STANTEC 2009)
- ✕ FREE PRODUCT SAMPLE (STANTEC 2009)
- ▲ VEGETATION SAMPLE (STANTEC 2009)
- ⊕ TEST PIT (STANTEC 2009)
- ⊙ MONITOR WELL (STANTEC 2009)
- ⊠ TEST PIT (AGRA 1999)
- BENTHIC INVERTEBRATE SAMPLE (STANTEC 2009)
- ▲ SEDIMENT SAMPLE (STANTEC 2009)

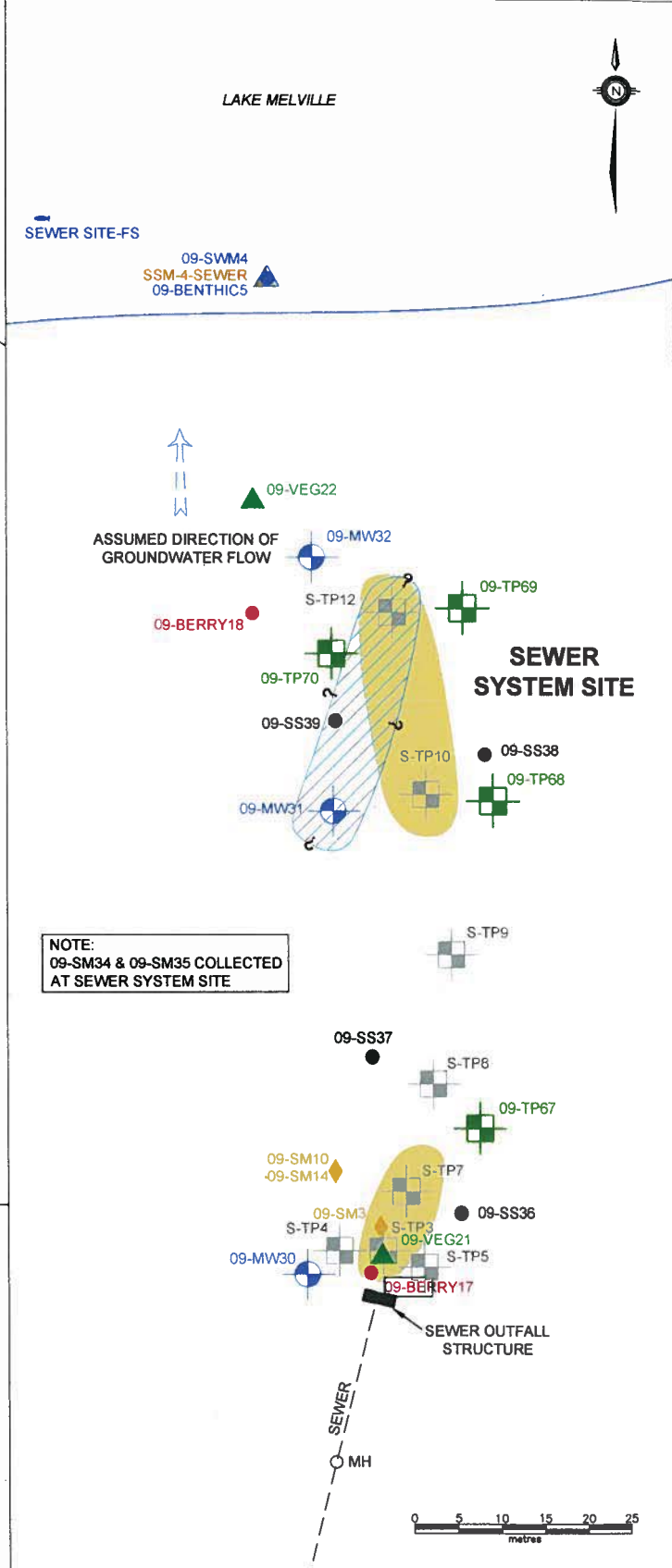
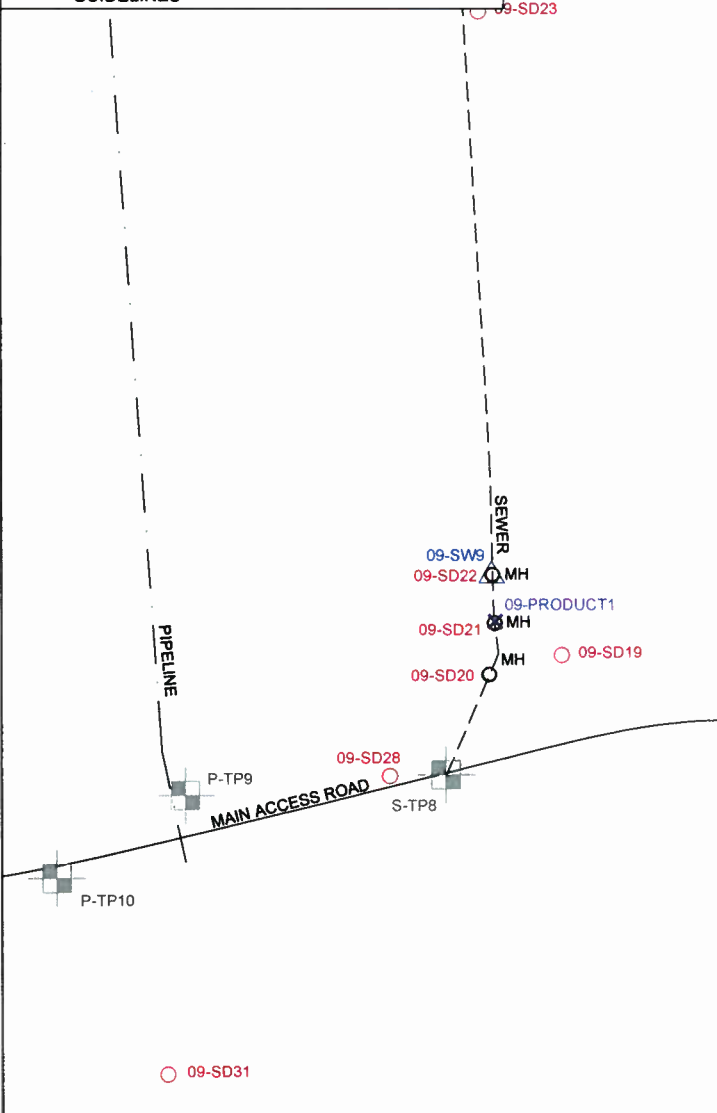


NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.



<p>CLIENT: NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CONSERVATION</p> <p>PROJECT TITLE: PHASE III ESA, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL</p> <p>DRAWING TITLE: SITE PLAN - SEWER SYSTEM</p>	<p>SCALE: 1:800</p> <p>DATE: JUNE 17, 2010</p> <p>DRAWN BY: N.M.</p> <p>CHECKED BY: A.R.</p> <p>EDITED BY: R.L.</p> <p>REV. No. 0</p> <p>DRAWING No: 121410105-EE-14A</p> <p>CAD FILE: 1044857-EE-07.DWG</p>	<p>Stantec</p>
---	--	-----------------------

LEGEND

- BERRY SAMPLE (STANTEC 2009)
- SURFACE SOIL SAMPLE (STANTEC 2009)
- SURFACE DEBRIS LOCATION (STANTEC 2009)
- ◆ SMALL MAMMALS (STANTEC 2009)
- FISH LOCATION (STANTEC 2009)
- △ SURFACE WATER SAMPLE (STANTEC 2009)
- × FREE PRODUCT SAMPLE (STANTEC 2009)
- ▲ VEGETATION SAMPLE (STANTEC 2009)
- TEST PIT (STANTEC 2009)
- MONITOR WELL (STANTEC 2009)
- TEST PIT (AGRA 1999)
- BENTHIC INVERTEBRATE SAMPLE (STANTEC 2009)
- ▲ SEDIMENT SAMPLE (STANTEC 2009)
- APPROXIMATE EXTENT OF TPH IMPACTS IN SOIL EXCEEDING GENERIC GUIDELINES
- ▨ APPROXIMATE EXTENT OF TPH IMPACTS IN GROUNDWATER EXCEEDING GENERIC GUIDELINES



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	SCALE: 1:800	DATE: JUNE 18, 2010	
	DRAWN BY: N.M.	CHECKED BY: A.R.	
PROJECT TITLE: PHASE III ESA, HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENTS, REMEDIAL ACTION PLAN FOR THE FORMER U.S. MILITARY FACILITY OF NORTHWEST POINT, NL	EDITED BY: R.L.	REV. No. 0	
	DRAWING No: 121410105-EE-14B		
DRAWING TITLE: APPROXIMATE EXTENT OF TPH IMPACTS EXCEEDING GENERIC GUIDELINES - SEWER SYSTEM	CAD FILE: 1044857-EE-10.DWG		

Appendix 14b

Site Photos

– Sewer System Site

Site Photographs – Sewer System



Photo 1 View of sewer outlet looking north



Photo 2 View of sewer outlet looking south

Site Photographs – Sewer System



Photo 3 View of the second manhole being sampled. Note: 6 inches of product (09-Product1)

Appendix 14c

Sample Coordinates

– Sewer System Site

Sample Coordinates - Sewer System Site
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-TP67	694343	5931775
09-TP68	694329	5931811
09-TP69	694327	5931833
09-TP70	694321	5931829
MONITOR WELLS		
09-MW30	694324	5931758
09-MW31	694326	5931811
09-MW32	694323	5931840
SURFACE SOIL		
09-SS36	694325	5931767
09-SS37	694322	5931783
09-SS38	694324	5931814
09-SS39	694312	5931821
SEWER WATER		
09-SW9	694294.6049	5931235.287
SURFACE WATER / SEDIMENT / BENTHIC		
09-SWM4, SSM-4-SEWER, 09-BENTHIC5	694232	5931867
VEGETATION		
09-VEG21	694332	5931760
09-VEG22	694316	5931846
BERRIES		
09-BERRY17	694331	5931758
09-BERRY18	694316	5931833
SMALL MAMMALS		
09-SM3	694332	5931763
09-SM10	694327	5931770
09-SM14	694327	5931770
RABBITS		
09-SM34	Not recorded	
09-SM35	Not recorded	
FISH		
SEWER SITE-FS	694673	5932045
MISCELLANEOUS		
09-PRODUCT1	694297	5931229

Appendix 14d

Test Pit Records and Monitor Well Records


– Sewer System Site



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 8-8-09 WATER LEVEL 0.5m 8-8-09

TEST PIT No. 09-TP67
 PROJECT No. 121410105
 DATUM _____


DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm)					
					TYPE	NUMBER	HYDROCARBON ODOUR	OTHER TESTS		TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	
0		Loose to compact, brown, SAND (SP)		▽	BS	1	0		0.9	-	-	-	-	-	
					BS	2	0		0.0	-	-	-	-	-	
1		End of Test Pit Rapid groundwater seepage observed at 0.5 m depth. Bedrock not encountered.													
2															
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 8-8-09 WATER LEVEL 1m 8-8-09

TEST PIT No. 09-TP68
 PROJECT No. 121410105
 DATUM _____

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm)				
					TYPE	NUMBER	HYDROCARBON ODOUR	OTHER TESTS		TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0		Loose to compact, brown, SAND (SP)		▽	BS	1	0		0.1	-	-	-	-	-
1					BS	2	0		0.0	nd	nd	nd	nd	nd
2		End of Test Pit Rapid groundwater seepage observed at 1.0 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 8-8-09 WATER LEVEL 1.6m 8-8-09

TEST PIT No. 09-TP69
 PROJECT No. 121410105
 DATUM _____

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm)				
					TYPE	NUMBER	HYDROCARBON ODOUR	OTHER TESTS		TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0		Compact, brown, SAND (SP)			BS	1	0		0.1	-	-	-	-	-
1														
					BS	2	0		0.0	-	-	-	-	-
2		Compact, grey, SILT (ML); some clay												
		End of Test Pit												
		Slow groundwater seepage observed at 1.6 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 8-8-09 WATER LEVEL 1.4m 8-8-09

TEST PIT No. 09-TP70
 PROJECT No. 121410105
 DATUM _____

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				PID READINGS (ppm)	CHEMICAL ANALYSIS (ppm)				
					TYPE	NUMBER	HYDROCARBON ODOUR	OTHER TESTS		TPH	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
0		Loose, Organic Soil (OL); peat and rootlets			BS	1	0		0.0	-	-	-	-	-
		Compact, brown, SAND (SP)												
1		Dense, grey, SILT (ML); some clay		▽	BS	2	0		0.0	nd	nd	nd	nd	nd
2		End of Test Pit												
		Slow groundwater seepage observed at 1.4 m depth.												
		Bedrock not encountered.												
3														
4														
5														



MONITOR WELL RECORD

BOREHOLE No. 09-MW30

PAGE 1 of 1

PROJECT No. 121410105

DRILLING METHOD Auger

SIZE 100mm HS

DATUM _____

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): BORING 8-8-09

WATER LEVEL 1.22m 8-8-09

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				HYDROCARBON ODOUR	APPARENT MOISTURE CONTENT	PID (ppm)	TPH (ppm)	WELL CONSTRUCTION DETAILS
					TYPE	NUMBER	RECOVERY	N-VALUE OR RQD %					
0							mm						0.61 m STICK UP CAST IRON WELL HEAD
		Brown, SAND (SP)			SS	1	355	4	0		1.8	-	BENTONITE
		Brown, SAND (SP); some cobbles											
		Brown, SILT (ML)			SS	2	560	13	0		1.2	-	
		Brown, SAND (SP); some cobbles											
		Grey, SILT (ML)			SS	3	405	22	1		2.7	nd	
		Brown, SAND (SP); some cobbles											
2													50 mm DIAMETER No. 10 SLOT PVC SCREEN IN No. 2 SILICA SAND PACK
3		End of Borehole											END CAP
4													
5													
6													
7													
8													
9													
10													



MONITOR WELL RECORD

BOREHOLE No. 09-MW31
 PAGE 1 of 1
 PROJECT No. 121410105
 DRILLING METHOD Auger
 SIZE 100mm HS
 DATUM _____

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): BORING 8-8-09 WATER LEVEL 1.22m 8-8-09

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				HYDROCARBON ODOUR	APPARENT MOISTURE CONTENT	PID (ppm)	TPH (ppm)	WELL CONSTRUCTION DETAILS
					TYPE	NUMBER	RECOVERY	N-VALUE OR RQD %					
0		Dark brown, SAND (SP); some cobbles and organics				mm							0.61 m STICK UP CAST IRON WELL HEAD
		Dark brown, silty SAND (SM)		SS	1	-	2	0		2.5	-		BENTONITE
1		Dark brown, SAND (SP); some cobbles and organics		SS	2	205	6	0	S	1.8	-		50 mm DIAMETER No. 10 SLOT PVC SCREEN IN No. 2 SILICA SAND PACK
		Dark grey, SILT (ML)		SS	3	405	11	0		83.3	-		
2		Dark brown, SAND (SP); some cobbles		SS	4	355	16	0	S	99.4	-		END CAP
3		End of Borehole											
4													
5													
6													
7													
8													
9													
10													



MONITOR WELL RECORD

BOREHOLE No. 09-MW32
 PAGE 1 of 1
 PROJECT No. 121410105
 DRILLING METHOD Auger
 SIZE 100mm HS
 DATUM _____

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): BORING 8-8-09 WATER LEVEL 1.22m 8-8-09

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES				HYDROCARBON ODOUR	APPARENT MOISTURE CONTENT	PID (ppm)	TPH (ppm)	WELL CONSTRUCTION DETAILS
					TYPE	NUMBER	RECOVERY	N-VALUE OR RQD %					
0							mm						0.61 m STICK UP CAST IRON WELL HEAD
		Brown to black, SAND (SP)			SS	1	305	5	0			-	BENTONITE
		Black, SAND (SP); some organics			SS	2	305	8	0	S	1.6	nd	
1		Brown, SAND (SP); some cobbles			SS	3	485	4	0		1.2	-	50 mm DIAMETER No. 10 SLOT PVC SCREEN IN No. 2 SILICA SAND PACK
		Grey, CLAY (CL)											
		Brown, SAND (SP)											END CAP
2													
3		End of Borehole											
4													
5													
6													
7													
8													
9													
10													

Appendix 14e

Laboratory Analytical Results Summary Tables

– Sewer System Site

Table 14.1 Results of Laboratory Analysis of TPH/BTEX in Soil - Sewer System Site
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 RBSLs¹		0.16	14	58	17	-	-	-	-	-	140/690	-
1999 Sampling (AGRA)												
S-TP2	1.5	<0.002	<0.002	<0.002	<0.004	<0.02	<0.2	-	-	-	<0.22	-
S-TP3	0.5	<0.002	0.034	<0.002	0.093	7.25	15800	-	-	-	15,807	D
S-TP4	0.5	<0.002	<0.002	<0.002	<0.004	<0.02	<0.2	-	-	-	<0.22	-
S-TP5	0.3	<0.002	<0.002	<0.002	<0.004	<0.02	<0.2	-	-	-	<0.22	-
S-TP6	2.5	<0.002	<0.002	<0.002	<0.004	<0.02	<0.2	-	-	-	<0.22	-
S-TP7	0.2	<0.002	0.018	0.102	0.161	10.7	988	-	-	-	999	D
S-TP8	0.2	<0.002	<0.002	<0.002	<0.004	<0.02	<0.2	-	-	-	<0.22	-
S-TP9	0.2	<0.002	<0.002	<0.002	<0.004	0.29	51	-	-	-	51	D
S-TP10	0.6	<0.002	<0.002	0.28	<0.004	28.7	22,000	-	-	-	22,029	D
S-TP12	0.5	<0.04	<0.04	<0.04	0.34	12.7	22,000	-	-	-	22,013	D
MDL	-	0.002	0.002	0.002	0.002	0.02	0.2	-	-	-	0.2	-
2009 Sampling (Stantec)												
09-TP68-BS2	0.8 - 1.3	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	<15	<20	-
09-TP70-BS2	1.2 - 1.6	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	<15	<20	-
09-MW30-SS3	1.2 - 1.8	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	<15	<20	-
09-MW32-SS2	0.6 - 1.2	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	<15	<20	-
09-SS39	0.0 - 0.15	<0.03	<0.03	<0.03	<0.05	-	-	<3	<15	18	<20	NRP
09-SS39 Lab-Dup	0.0 - 0.15	<0.03	<0.03	<0.03	<0.05	-	-	<3	-	-	-	-
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/lube 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; NRP = No resemblance to petroleum products

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

**Table 14.2 Results of Laboratory Analysis of Metals in Soil - Sewer System Site
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105**

Parameters	Units	Criteria ¹	2009 Sampling (Stantec)						
			09-MW30-SS3	RDL	09-SS36	09-SS37	09-SS38	09-SS39	RDL
Sample Depth (m)			1.2 - 1.8	-	0.0 - 0.15	0.0 - 0.15	0.0 - 0.15	0.0 - 0.15	-
Aluminum	mg/kg	-	2,900	10	1,800	2,000	4,500	2,400	10
Antimony	mg/kg	20	<2	2	<2	<2	<2	<2	2
Arsenic	mg/kg	12	<2	2	<2	<2	<2	<2	2
Barium	mg/kg	500	20	5	15	14	90	15	5
Beryllium	mg/kg	4	<2	2	<2	<2	<2	<2	2
Bismuth	mg/kg	-	<2	2	<2	<2	<2	<2	2
Boron	mg/kg	-	<5	5	<5	<5	<5	<5	5
Cadmium	mg/kg	10	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	0.3
Chromium	mg/kg	64	5	2	3	4	9	3	2
Cobalt	mg/kg	50	2	1	1	1	6	1	1
Copper	mg/kg	63	4	2	<2	2	29	3	2
Iron	mg/kg	-	4,100	50	2,600	3,000	15,000	2,800	50
Lead	mg/kg	140	0.9	0.5	0.8	1.3	15	1.0	0.5
Lithium	mg/kg	-	3	2	3	<2	2	2	2
Manganese	mg/kg	-	58	2	35	38	410	37	2
Mercury	mg/kg	6.6	<0.1	0.1	<0.1	<0.1	0.1	<0.1	0.1
Molybdenum	mg/kg	10	<2	2	<2	<2	<2	<2	2
Nickel	mg/kg	50	4	2	3	2	8	2	2
Rubidium	mg/kg	-	3	2	3	3	4	2	2
Selenium	mg/kg	1	<2	2	<1	<1	<1	<1	1
Silver	mg/kg	20	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.5
Strontium	mg/kg	-	<5	5	<5	<5	74	10	5
Thallium	mg/kg	1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Tin	mg/kg	-	<2	2	<2	<2	3	<2	2
Uranium	mg/kg	23	0.1	0.1	0.1	0.1	0.7	0.1	0.1
Vanadium	mg/kg	130	10	2	6	8	16	7	2
Zinc	mg/kg	200	13	5	8	10	99	9	5

Notes:

1 = CCME Canadian Soil Quality Guidelines for Protection of Environmental and Human Health at a Residential/Parkland site (2007)

RDL = Reportable Detection Limit for routine analysis

< # = Not detected above RDL noted

"-" = No applicable guideline

**Table 14.3 Results of Laboratory Analysis of PCBs in Soil - Sewer System Site
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)		
MW30-SS3	1.2 - 1.8	<0.05
09-SS39	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 14.4 Results of Laboratory Identification of Free Product Samples - Sewer System Site
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Product Identification
09-PRODUCT1	One product in the fuel oil range resembling weathered diesel.

Table 14.5 Results of Laboratory Analysis of TPH/BTEX in Sewer Water - Sewer System Site
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105

Sample Location	Benzene	Toluene	Ethylbenzene	Xylenes	TPH Purgeable (<C ₁₀)	TPH Extractable (C ₁₀ -C ₃₂)	C ₆ -C ₁₀ (Gas Range)	C ₁₁ -C ₂₀ (Fuel Range)	C ₂₁ -C ₃₂ (Lube Range)	Modified TPH - Tier I ³	Resemblance
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	-
Maximum Content^{1,2}	-	-	-	-	-	-	-	-	-	15 ⁴	-
Background Levels											
09-SWM6	<0.001	<0.001	<0.001	<0.002	<0.01	<0.05	-	-	<0.1	<0.1	-
RDL	0.001	0.001	0.001	0.002	0.01	0.05	-	-	0.1	0.1	-
1999 Sampling (AGRA)											
SEWER 2	<50	<50	<55	<112.5	9,857	6,623	-	-	-	16,480	-
MDL	0.0002	0.0002	0.00022	0.00045	0.005	0.05	-	-	-	0.05	-
2009 Sampling (Stantec)											
09-SW9	<0.001	<0.001	<0.001	<0.002	-	-	0.11	12	0.3	13	WFO
RDL	0.001	0.001	0.001	0.002	-	-	0.01	0.05	0.1	0.1	-

Notes:

- 1 - Environmental Control Water and Sewage Regulations for sewage discharging into a body of water. Newfoundland and Labraor Regulation 65/03 - Schedule A (2003)
- 2 - Maximum content is the amount in excess of the background level as determined upstream of the discharge (i.e., in 09-SWM6)
- 3 - Modified TPH - Tier I does not include BTEX
- 4 - Guideline for Oils (Ether extract)
- "-" = Value is not available or does not apply
- RDL = Reportable Detection Limit for routine analysis
- < # = Not detected above RDL noted
- Shaded = Value exceeds applicable criteria

**Table 14.6 Results of Lab Analysis of Dissolved Metals in Sewer Water - Sewer System Site
Phase III ESA, HHERA and RAP
Former U.S Military Facility, Northwest Point, NL
Stantec Consulting Ltd. Project No. 121410105**

Parameters	Units	Maximum Content ^{1,2}	Background Levels	2009 Sampling (Stantec)
			09-SWM6	09-SW9
Aluminum	ug/L	-	312	103
Antimony	ug/L	-	<2.0	<2.0
Arsenic	ug/L	500	<2.0	<2.0
Barium	ug/L	-	<5.0	23.6
Beryllium	ug/L	-	<2.0	<2.0
Bismuth	ug/L	-	<2.0	<2.0
Boron	ug/L	-	<5.0	20.2
Cadmium	ug/L	50	0.017	0.024
Chromium	ug/L	1,000	23.6	1.3
Cobalt	ug/L	-	<0.40	1.29
Copper	ug/L	300	<2.0	2.6
Iron	ug/L	10,000	523	830
Lead	ug/L	200	<0.50	<0.50
Manganese	ug/L	-	10.0	171
Mercury	ug/L	5	<0.013	0.038
Molybdenum	ug/L	-	<2.0	<2.0
Nickel	ug/L	500	<2.0	<2.0
Selenium	ug/L	10	<1.0	<1.0
Silver	ug/L	50	<0.10	<0.10
Strontium	ug/L	-	6.9	152
Thallium	ug/L	-	<0.10	<0.10
Tin	ug/L	-	<2.0	<2.0
Titanium	ug/L	-	8.9	2.1
Uranium	ug/L	-	<0.10	<0.10
Vanadium	ug/L	-	<2.0	<2.0
Zinc	ug/L	500	16.9	17.2

Notes:

1 - Environmental Control Water and Sewage Regulations for sewage discharging into a body of water. Newfoundland and Labrador Regulation 65/03 - Schedule A (2003)

2 - Maximum content is the amount in excess of the background level as determined upstream of the discharge (i.e., in 09-SWM6)

"-" = Value is not available or does not apply

RDL = Reportable Detection Limit for routine analysis

< # = Not detected above RDL noted

Stantec Consulting Ltd.

607 Torbay Road

St. John's, NL, A1A 4Y6

Stantec Tel: (709) 576-1458

Slug Test Data Report

Project: Northwest Point

Number: 121410105

Client: NLDEC

Page 1

Test Well: 09-MW31

Slug Test: 09-MW31

Test Well: 09-MW31

Depth to Static WL: 1.33 [m]

Casing radius: 0.025 [m]

Location:

Boring radius: 0.05 [m]

Recorded by: Stantec

Screen length: 2.44 [m]

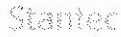
Date: 8/27/2009

Aquifer Thickness: 2.33 [m]

	Time [s]	Depth to WL [m]	Drawdown [m]
1	5	1.63	0.30
2	10	1.60	0.27
3	20	1.59	0.26
4	30	1.58	0.25
5	40	1.57	0.23
6	50	1.56	0.22
7	60	1.54	0.21
8	90	1.49	0.16
9	120	1.44	0.11
10	150	1.42	0.08
11	180	1.41	0.07
12	210	1.40	0.07
13	240	1.40	0.07
14	270	1.40	0.06
15	300	1.40	0.06
16	600	1.38	0.05
17	900	1.37	0.04
18	1200	1.36	0.03
19	1500	1.35	0.02

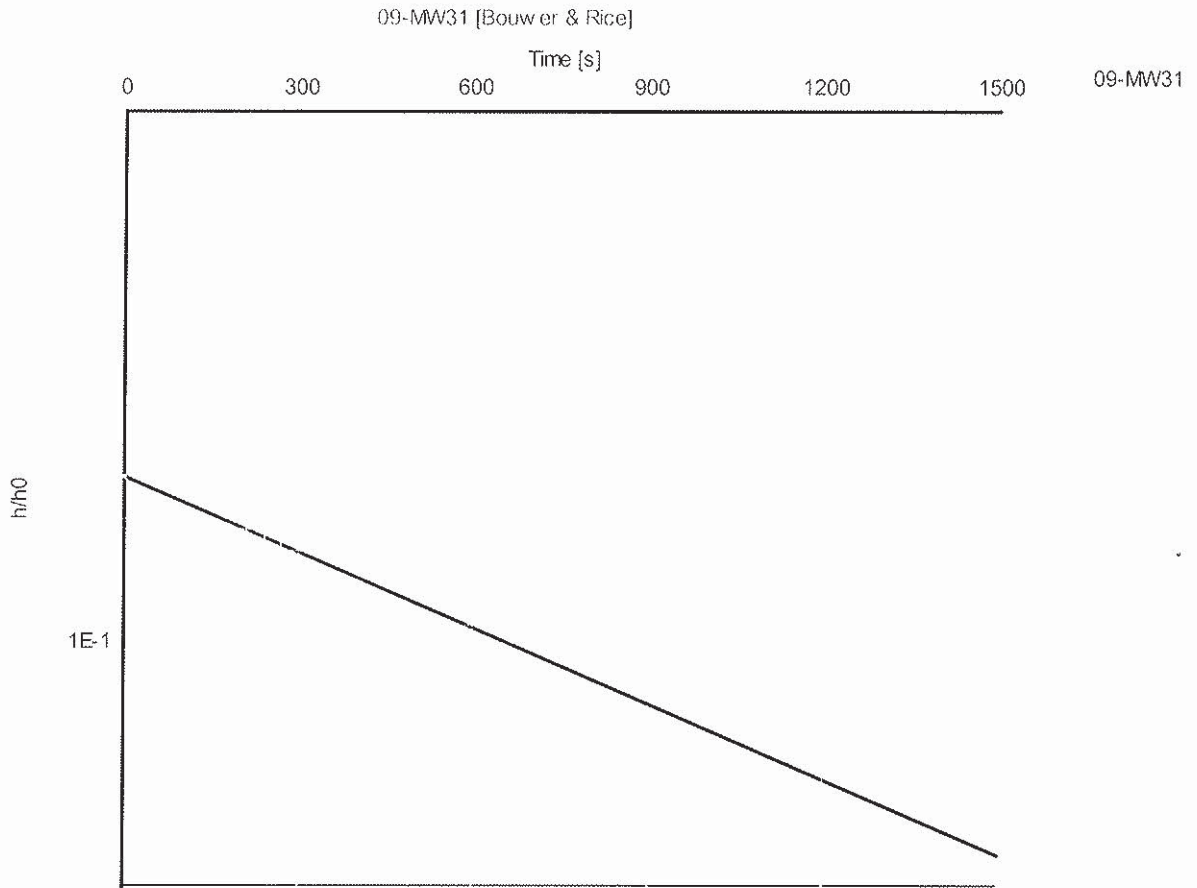
Stantec Consulting Ltd.

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-MW31

Analysis Method: Bouwer & Rice

Analysis Results:

Conductivity: 3.35E-7 [m/s]

<u>Test parameters:</u>	Test Well:	09-MW31	Aquifer Thickness:	2.33 [m]
	Casing radius:	0.025 [m]	Gravel Pack Porosity (%):	25
	Screen length:	2.44 [m]		
	Boring radius:	0.05 [m]		
	r(eff):	0.033 [m]		

Comments:

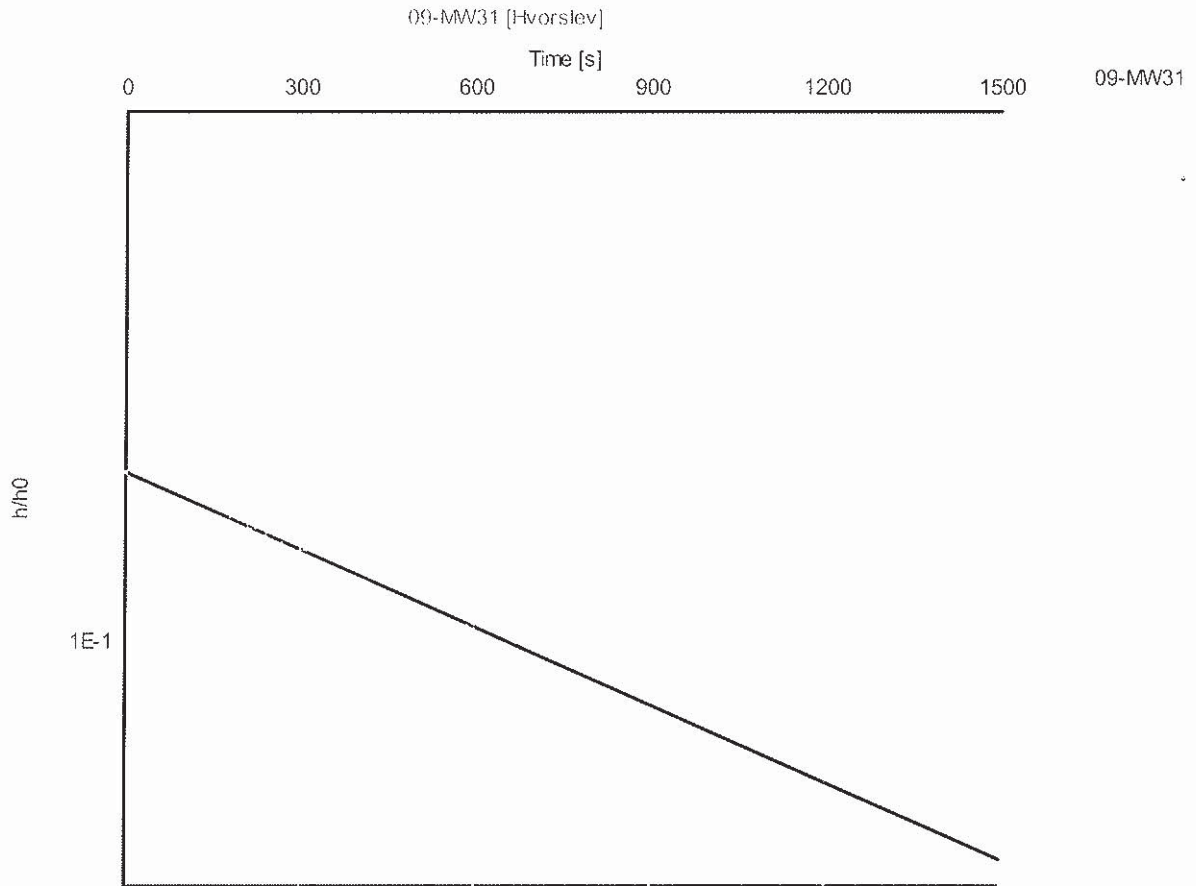
Evaluated by: AR
Evaluation Date: 6/9/2010

Stantec Consulting Ltd.

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

Slug Test Analysis Report

Project: Northwest Point
Number: 121410105
Client: NLDEC



Slug Test: 09-MW31

Analysis Method: Hvorslev

Analysis Results:

Conductivity: 4.50E-7 [m/s]

Test parameters: Test Well: 09-MW31

Aquifer Thickness: 2.33 [m]

Casing radius: 0.025 [m]

Screen length: 2.44 [m]

Boring radius: 0.05 [m]

Comments:

Evaluated by: AR

Evaluation Date: 6/9/2010