



Stantec Consulting Ltd
207-201 Churchill Drive
Membertou NS B1S 0H1
Tel: (902) 564-1855
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Stantec

January 24, 2012
File: 121410955.225

Sydney Tar Ponds Agency
1 Inglis Street
PO Box 1028, Stn. A
Sydney, NS B1P 6J7

Attention: Ms. Diane Ingraham, PhD., PMP, Quality Contracts Manager

Dear Ms. Ingraham:

**Reference: STPA Project Element TP6A – Flow Diversion
Independent Quality Assurance (IQAC) November 2011 Monthly Summary Report**

At the request of Sydney Tar Ponds Agency (STPA), Stantec Consulting Ltd (Stantec) has completed the following quality assurance inspection/testing services and meetings in accordance with project requirements at the above mentioned site between November 1 and November 30, 2011:

- Project Item PM-01: Six daily field reports.
- Project Item PM-02: One monthly QA report (November 2011) completed in the month of January 2012.
- Project Item PM-04: Two site meetings were attended in the month of November 2011.
- Project Item PM-05: Other meetings and frequent opinions were provided in the month of November 2011.
- Project Item PM-19: Review of and data entry into TP6A September 2011 QC/QA testing summary tables.
- Project Item QCP-02: Submittal reviews (Contractor's November 2011 QC report including daily/test reports).
- Project Items TS-70: Completed 28 day compressive strength testing of concrete set 26. Test results met the project specifications and are summarized in the QC/QA summary table section. Also, performed air content, slump and temperature tests and seven day compressive strength testing on two concrete placements (sets 27 and 28) for the slab and walls of the dissipation structure. Test results are summarized in the QC/QA-summary table section.
- Project Item ENV-T-01: One noise monitoring event. Noise levels were within the specified limits. See Monthly Noise QA Testing Summary table in this report for further information.
- Project Item ENV-T-02: Ten (10) surface water (turbidity) sampling events. All measurements recorded were within the acceptable range. See the IQAC Site Testing Summary Form in this report for further information.

January 24, 2012

Ms. Diane Ingraham, PhD., PMP, Quality Contracts Manager

Page 2 of 2

**Reference: STPA Project Element TP6A – Flow Diversion
Independent Quality Assurance (IQAC) November 2011 Monthly Summary Report**

We trust this information meets your present requirements. If you have any questions, please do not hesitate to contact us.

Sincerely,

STANTEC CONSULTING LTD



Rabi Morelly, M.Sc., P.Eng.
Geotechnical and Materials Quality Lead
rabi.morelly@stantec.com



Willie McNeil, B.Tech. (Env.), CET
Project Manager
willie.mcneil@stantec.com



Stantec Consulting Ltd

207-201 Churchill Drive, Membertou, NS B1S 0H1
(TEL) 902-564-1855 (FAX) 902-564-8756

CCIL CERTIFIED LABORATORY
FOR TESTING CONCRETE

CONCRETE TEST REPORT

Stantec

PROJECT 1410955.225
CLIENT Sydney Tar Ponds Agency
C.C.

TO
Sydney Tar Ponds Agency
1 Inglis Street, PO Box 1028
Sydney, NS
B1P 6J7

ATTN: Ms. Diane Ingraham

PROJECT Sydney Tar Ponds
Element TP6A

Sydney Tar Ponds
Sydney

SET NO. 26

NO. OF 3

DATE 2011.Oct.26

DATE 2011.Oct.25

SPCM NO.	SPECIMEN TYPE	CURE CONDN	DATE TESTED	AGE AT TEST (DAYS)	AVERAGE DIAMETER (mm) OR SIDE (mm x mm)	AVERAGE LENGTH OR SPAN (mm)	MAXIMUM LOAD (kN)	COMPRESSIVE OR FLEXURAL STRENGTH (MPa) Average		FAILURE TYPE
A	Cylinder	Lab	Nov.01	7	100.0	200.0	254	32.3		☐
B	Cylinder	Lab	Nov.22	28	100.0	200.0	324	41.3		☐
C	Cylinder	Lab	Nov.22	28	100.0	200.0	320	40.7	41.0	☐

SPECIFIED STRENGTH 30 MPa @ 28 DAYS

CEMENT TYPE GU

MAXIMUM SIZE AGGREGATE 20 mm

BATCH TIME 10:27

ADMIXTURES

SUPPLIER Municipal Ready Mix

TRUCK NO. 11 **TICKET NO.** 75945

LOAD VOL. 6 m³ **CUM. VOL.** 6 m³

WATER ADDED 1 **AUTH. BY** N/A

Page 1 of 1 2011.Dec.19

CONCRETE 17.0 °C
AIR TEMPERATURE 10.0 °C
SLUMP 75 mm **SPEC.** 75 ±
AIR 6.2 % **SPEC.** 6.5 ± 1.5

CAST TIME 11:25
CAST BY SYD DC
CURING CONDITIONS Curing box

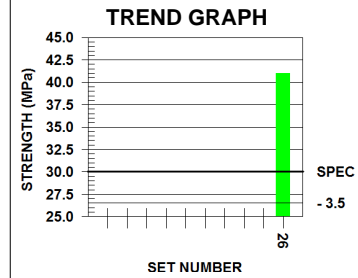
INITIAL CURING TEMP:MAXIMUM 17.0 °C **MINIMUM** 16.0 °C

LOCATION
Mud slab for dissipation structure.

COMMENTS
On Site Inspection By Derek Corbett.
Spec Slump: 75 mm maximum

Stantec Consulting Ltd

PER. 



MOULD TYPE PLASTIC



Stantec Consulting Ltd

207-201 Churchill Drive, Membertou, NS B1S 0H1
(TEL) 902-564-1855 (FAX) 902-564-8756

CCIL CERTIFIED LABORATORY FOR TESTING CONCRETE

CONCRETE TEST REPORT

Stantec

PROJECT 1410955.225
CLIENT Sydney Tar Ponds Agency
C.C.

TO
Sydney Tar Ponds Agency
1 Inglis Street, PO Box 1028
Sydney, NS
B1P 6J7

ATTN: Ms. Diane Ingraham

PROJECT Sydney Tar Ponds
Element TP6A

Sydney Tar Ponds
Sydney

SET NO. 27

NO. OF 3

DATE 2011.Nov.05

DATE 2011.Nov.04

SPCM NO.	SPECIMEN TYPE	CURE CONDN	DATE TESTED	AGE AT TEST (DAYS)	AVERAGE DIAMETER (mm) OR SIDE (mm x mm)	AVERAGE LENGTH OR SPAN (mm)	MAXIMUM LOAD (kN)	COMPRESSIVE OR FLEXURAL STRENGTH (MPa) Average		FAILURE TYPE
A	Cylinder	Lab	Nov.11	7	100.0	200.0	262	33.4		
B	Cylinder	Lab	Dec.02	28	100.0	200.0	319	40.6		
C	Cylinder	Lab	Dec.02	28	100.0	200.0	332	42.3	41.4	

SPECIFIED STRENGTH 30 MPa @ 28 DAYS
CEMENT TYPE GU
MAXIMUM SIZE AGGREGATE 20 mm
BATCH TIME 07:09

ADMIXTURES
 Micro Air
 Pozz 210

SUPPLIER Municipal Ready Mix

TRUCK NO. 12 **TICKET NO.** 76113

LOAD VOL. 6 m³ **CUM. VOL.** 6 m³

WATER ADDED 1 **AUTH. BY** N/A

Page 1 of 1 2011.Dec.05

CONCRETE 14.0 °C
AIR TEMPERATURE 9.0 °C
SLUMP 75 mm **SPEC.** 75 ± 25
AIR 6.6 % **SPEC.** 6.5 ± 1.5

CAST TIME 07:55
CAST BY SYD DC
CURING CONDITIONS Curing box

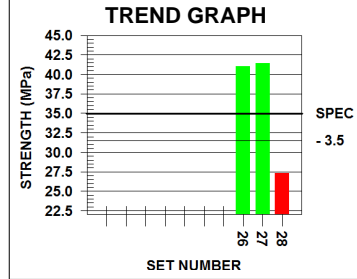
INITIAL CURING TEMP:MAXIMUM 18.0 °C **MINIMUM** 17.0 °C

LOCATION
Slab

COMMENTS
On Site Inspection By Derek Corbett.

Stantec Consulting Ltd

PER.



MOULD TYPE PLASTIC



Stantec Consulting Ltd

207-201 Churchill Drive, Membertou, NS B1S 0H1
(TEL) 902-564-1855 (FAX) 902-564-8756

CCIL CERTIFIED LABORATORY FOR TESTING CONCRETE

CONCRETE TEST REPORT

Stantec

PROJECT 1410955.225

CLIENT Sydney Tar Ponds Agency

C.C. Stantec Consulting Ltd - Mr. Jamie Tunnicliff

TO

Sydney Tar Ponds Agency
1 Inglis Street, PO Box 1028
Sydney, NS
B1P 6J7

ATTN: Ms. Diane Ingraham

PROJECT Sydney Tar Ponds
Element TP6A

Sydney Tar Ponds
Sydney

SET NO. 28

NO. OF 4

DATE 2011.Nov.08

DATE 2011.Nov.07

SPCM NO.	SPECIMEN TYPE	CURE CONDN	DATE TESTED	AGE AT TEST (DAYS)	AVERAGE DIAMETER (mm) OR SIDE (mm x mm)	AVERAGE LENGTH OR SPAN (mm)	MAXIMUM LOAD (kN)	COMPRESSIVE OR FLEXURAL STRENGTH (MPa) Average	FAILURE TYPE
A	Cylinder	Lab	Nov.14	7	100.0	200.0	173	22.0	
B	Cylinder	Lab	Dec.05	28	100.0	200.0	213	27.1	
C	Cylinder	Lab	Dec.05	28	100.0	200.0	216	27.5	
D	Cylinder	Lab	Jan.02	56	100.0	200.0	246	31.3	

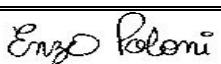

SPECIFIED STRENGTH 30 MPa @ 28 DAYS CEMENT TYPE GU MAXIMUM SIZE AGGREGATE 20 mm BATCH TIME 12:08 ADMIXTURES Pozz 210 Micro Air SUPPLIER Municipal Ready Mix TRUCK NO. 159 TICKET NO. 76151 LOAD VOL. 2 m ³ CUM. VOL. 2 m ³ WATER ADDED 1 AUTH. BY N/A Page 1 of 1 2012.Jan.05	CONCRETE 18.0 °C AIR TEMPERATURE 10.0 °C SLUMP 75 mm SPEC. 75 ± AIR 7.8 % SPEC. 6.5 ± 1.5 CAST TIME 13:10 CAST BY SYD DC CURING CONDITIONS Curing box INITIAL CURING TEMP: MAXIMUM 15.0 °C MINIMUM 15.0 °C LOCATION Pony walls COMMENTS On Site Inspection By Derek Corbett. Spec Slump: 75 mm maximum.	TREND GRAPH MOULD TYPE PLASTIC
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Stantec Consulting Ltd



PER.

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on written request.

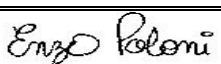

**STPA PROJECT ELEMENT TP6A: FLOW DIVERSION
IQAC SITE TESTING SUMMARY**

Date:	November 3, 2011	IQAC On-Site Rep:	Enzo Poloni
Relevant Project Specification(s)	Environmental Quality Assurance	Relevant Project Specification(s) No.	QA-EPP Project No. 121410955.225
IQAC Item No(s) / Descriptions	ENV-T-02	Time On-Site:	11:15
Weather:	Clear, 7°C		
Area Tested/Inspected:	TP6A – Narrows and Battery Point		
Inspection / Testing Summary			
<p>Stantec onsite at 11:15am. Met with with Joel MacLeod and 3 laborers. Sampling (by boat) completed immediately at the Narrows with no intrusive activities observed at Battery Point. Activities noted as welding and framing at Battery Point and pump deficiencies. Samples analyzed at Stantec lab.</p>			
Sample #	GPS Co-ordinates (NAD 83 – Northing/Easting)	General Site Description	Sample Results (NTU)
1	460 0545 511 3136	West Side Narrows	2.08
2	460 2055 511 2960	East Side Narrows	1.23
<p>As stated in the Environmental Protection Plan – <i>“The upper level criteria defined as a reportable event for turbidity will be 110% of background, when background (upstream sample location) is greater than or equal to 80 Nephelometric Turbidity Units (NTU). When background is less than 80NTU, a reportable event will be greater than an increase of 8NTU above background”</i></p> <p>It has been reported to QA, that a background level of 7.39NTU is acceptable to use on element TP6A. As such, a reportable event would be a concentration downstream greater than 15.39 NTU.</p> <p><i>Turbidity values recorded above are within acceptable levels.</i></p>			
IQAC Review and Acceptance			
IQAC On-Site Rep (Sign/Print/Date):	 /Enzo Poloni, B.Tech. (Env)	IQAC Management Review (Sign/Print/Date):	 /Tanya MacDonald, B.Tech.(Env), ASCT
	November 3, 2011		November 3, 2011



**STPA PROJECT ELEMENT TP6A: FLOW DIVERSION
IQAC SITE TESTING SUMMARY**

Date:	November 15, 2011	IQAC On-Site Rep:	Enzo Poloni
Relevant Project Specification(s)	Environmental Quality Assurance	Relevant Project Specification(s) No.	QA-EPP Project No. 121410955.225
IQAC Item No(s) / Descriptions	ENV-T-02	Time On-Site:	11:30
Weather:	Rain Showers, 12°C		
Area Tested/Inspected:	TP6A – Narrows and Battery Point		
Inspection / Testing Summary			
Stantec made an appointment with the contractor Joel MacLeod for 11:30 sampling. Onsite at 11:25 meeting Jonathan Richard (exp), replacing Curt Knowles, and 2 laborers. Sampled immediately by boat starting with West-Narrows. Activities include silt curtain installation (Battery Point) and pump deficiencies during sampling. Samples analyzed at Stantec lab.			
Sample #	GPS Co-ordinates (NAD 83 – Northing/Easting)	General Site Description	Sample Results (NTU)
1	460 0130 511 3288	West Side Narrows	2.34
2	460 0573 511 3155	East Side Narrows	1.94
<p>As stated in the Environmental Protection Plan – <i>“The upper level criteria defined as a reportable event for turbidity will be 110% of background, when background (upstream sample location) is greater than or equal to 80 Nephelometric Turbidity Units (NTU). When background is less than 80NTU, a reportable event will be greater than an increase of 8NTU above background”</i></p> <p>It has been reported to QA, that a background level of 7.39NTU is acceptable to use on element TP6A. As such, a reportable event would be a concentration downstream greater than 15.39 NTU.</p> <p><i>Turbidity values recorded above are within acceptable levels.</i></p>			
IQAC Review and Acceptance			
IQAC On-Site Rep (Sign/Print/Date):	 /Enzo Poloni, B.Tech. (Env)	IQAC Management Review (Sign/Print/Date):	 /Tanya MacDonald, B.Tech.(Env), ASCT
	November 15, 2011		November 15, 2011



**STPA PROJECT ELEMENT TP6A: FLOW DIVERSION
IQAC SITE TESTING SUMMARY**

Date:	November 10, 2011	IQAC On-Site Rep:	Enzo Poloni
Relevant Project Specification(s)	Environmental Quality Assurance	Relevant Project Specification(s) No.	QA-EPP Project No. 121410955.225
IQAC Item No(s) / Descriptions	ENV-T-02	Time On-Site:	07:30
Weather:	Mainly Cloudy, 5°C		
Area Tested/Inspected:	TP6A – Narrows and Battery Point		
Inspection / Testing Summary			
<p>Stantec arrived on site at 07:30 after getting in contact with Curt Knowles. Met with Joel MacLeod and 3 laborers. Sampling began immediately at the narrows only. Activities as noted were pump deficiencies in preparation for weather forecasted for the next day.</p> <p>Samples analyzed at Stantec lab.</p>			
Sample #	GPS Co-ordinates (NAD 83 – Northing/Easting)	General Site Description	Sample Results (NTU)
1	460 0549 511 3119	West Side Narrows	1.29
2	460 0554 511 3154	East Side Narrows	1.27
<p>As stated in the Environmental Protection Plan – <i>“The upper level criteria defined as a reportable event for turbidity will be 110% of background, when background (upstream sample location) is greater than or equal to 80 Nephelometric Turbidity Units (NTU). When background is less than 80NTU, a reportable event will be greater than an increase of 8NTU above background”</i></p> <p>It has been reported to QA, that a background level of 7.39NTU is acceptable to use on element TP6A. As such, a reportable event would be a concentration downstream greater than 15.39 NTU.</p> <p><i>Turbidity values recorded above are within acceptable levels.</i></p>			
IQAC Review and Acceptance			
IQAC On-Site Rep (Sign/Print/Date):	 /Enzo Poloni, B.Tech. (Env)	IQAC Management Review (Sign/Print/Date):	 /Tanya MacDonald, B.Tech.(Env), ASCT
	November 10, 2011		November 10, 2011

**STPA PROJECT ELEMENT TP6A: FLOW DIVERSION
IQAC SITE TESTING SUMMARY**

Date:	November 22, 2011	IQAC On-Site Rep:	Enzo Poloni
Relevant Project Specification(s)	Environmental Quality Assurance	Relevant Project Specification(s) No.	QA-EPP Project No. 121410955.225
IQAC Item No(s) / Descriptions	ENV-T-02	Time On-Site:	07:25
Weather:	Snow, -4°C		
Area Tested/Inspected:	TP6A – Narrows and Battery Point		
Inspection / Testing Summary			
<p>Stantec onsite at 07:25 for sampling at the Narrows by boat. Met onsite with Curt Knowles and 2 laborers. Stantec noticed a new motor for the row boat due to recent H&S issue. Sampling completed from West to East with sample testing completed at lab. Activities noted as pump deficiencies, curtain maintenance and final dolphin install at Battery Point. Samples analyzed at Stantec lab.</p>			
Sample #	GPS Co-ordinates (NAD 83 – Northing/Easting)	General Site Description	Sample Results (NTU)
1	460 0531 511 3124	West Side Narrows	2.38
2	460 0560 511 3149	East Side Narrows	1.65
<p>As stated in the Environmental Protection Plan – <i>“The upper level criteria defined as a reportable event for turbidity will be 110% of background, when background (upstream sample location) is greater than or equal to 80 Nephelometric Turbidity Units (NTU). When background is less than 80NTU, a reportable event will be greater than an increase of 8NTU above background”</i></p> <p>It has been reported to QA, that a background level of 7.39NTU is acceptable to use on element TP6A. As such, a reportable event would be a concentration downstream greater than 15.39 NTU.</p> <p><i>Turbidity values recorded above are within acceptable levels.</i></p>			
IQAC Review and Acceptance			
IQAC On-Site Rep (Sign/Print/Date):	 /Enzo Poloni, B.Tech. (Env)	IQAC Management Review (Sign/Print/Date):	 /Tanya MacDonald, B.Tech.(Env), ASCT
	November 22, 2011		November 22, 2011

**STPA PROJECT ELEMENT TP6A: FLOW DIVERSION
IQAC SITE TESTING SUMMARY**

Date:	November 29, 2011	IQAC On-Site Rep:	Enzo Poloni
Relevant Project Specification(s)	Environmental Quality Assurance	Relevant Project Specification(s) No.	QA-EPP Project No. 121410955.225
IQAC Item No(s) / Descriptions	ENV-T-02	Time On-Site:	1125
Weather:	Mainly Sunny, 5°C		
Area Tested/Inspected:	TP6A – Narrows and Battery Point		
Inspection / Testing Summary			
<p>Stantec made contact with sampling crew previously to notify of sampling. Met onsite at 1125 and sampling began immediately by boat. Contractor reported that activities onsite consisted of pile driving and pump deficiencies with no requirement to sample Battery Point.</p> <p>Samples analyzed at Stantec lab.</p>			
Sample #	GPS Co-ordinates (NAD 83 – Northing/Easting)	General Site Description	Sample Results (NTU)
1	460 0557 511 3137	West Side Narrows	3.26
2	460 0559 511 3167	East Side Narrows	2.87
<p>As stated in the Environmental Protection Plan – <i>“The upper level criteria defined as a reportable event for turbidity will be 110% of background, when background (upstream sample location) is greater than or equal to 80 Nephelometric Turbidity Units (NTU). When background is less than 80NTU, a reportable event will be greater than an increase of 8NTU above background”</i></p> <p>It has been reported to QA, that a background level of 7.39NTU is acceptable to use on element TP6A. As such, a reportable event would be a concentration downstream greater than 15.39 NTU.</p> <p><i>Turbidity values recorded above are within acceptable levels.</i></p>			
IQAC Review and Acceptance			
IQAC On-Site Rep (Sign/Print/Date):	 /Enzo Poloni, B.Tech. (Env)	IQAC Management Review (Sign/Print/Date):	 /Tanya MacDonald, B.Tech.(Env), ASCT
	November 29, 2011		November 29, 2011

Monthly Noise QA Testing Summary Table

Contractor:	MBJV	Client:	STPA	Form Number:	TP6A Noise November 2011
Element:	TP6A	Oversight:	AECOM/CBCL	Project:	Remediation of the Tar Ponds and Coke Ovens Sites
Month:	November 2011	IQAC:	Stantec		

SPECIFIED REQUIREMENTS					RESULTS							NOTES
Spec Section	Spec Description	Test Type	Standard	QA Frequency	Date Collected	Criteria	QA Sample ID	Sample Location GPS Coordinates NAD 83	QA Test Result	QA Pass/Fail	QA Frequency Met? Y/N	QA
EPP	ENV-T-01	Noise	CBRM Noise By-Law & NSE Criteria	once per month	7-Nov-11	<65 dBA	TP6A-11-07-2011-0800-1006	460 1245 511 2825	61.5dBA	Pass	Y	Sample location is at McNally Site Trailer near TP2. Traffic coming onto site. Hazzo trucks in queue.
EPP	ENV-T-01	Noise	CBRM Noise By-Law & NSE Criteria	once per month	7-Nov-11	<65 dBA	TP6A-11-07-2011-1012-1216	460 0240 511 3303	54.9dBA	Pass	Y	Sample location is at Upper East Access Road near Battery Point Support Zone. Contractor traffic to/from Battery Point.
EPP	ENV-T-01	Noise	CBRM Noise By-Law & NSE Criteria	once per month	7-Nov-11	<65 dBA	TP6A-11-07-2011-1232-1434	460 1671 511 2474	50.9dBA	Pass	Y	Sample location is at Coke Oven Brook (COB) (near Inglis Street Outlet). Nordlys activities near COB pumps. Inglis Street Traffic.

Activities onsite at the time of the sampling events include contractor traffic to Battery Point and activities near Coke Ovens Brook pumps.



Stantec

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207-201 Churchill Drive
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Tel: (902) 564-1855
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January 22, 2012
File: 121410955.225

Sydney Tar Ponds Agency
1 Inglis Street
PO Box 1028, Stn. A
Sydney, NS B1P 6J7

Attention: Ms. Diane Ingraham, Ph.D., PMP, Quality Contract Manager

Dear Ms. Ingraham:

**Reference: Materials and Geotechnical Quality Assurance of Quality Control Program
Element TP6A, Sydney Tar Ponds Project, Sydney, NS
Review of Contractor's November 2011 Quality Control (QC) Report**

At the request of the Sydney Tar Ponds Agency (STPA), Stantec Consulting Ltd (Stantec), acting as the project Independent Quality Assurance Consultant (IQAC), has completed a Quality Assurance Review of the Contractor's (MB2/Beaver Joint Venture (MBJV) and their quality control consultant (exp Services Inc. (exp)) Monthly Quality Control (QC) Report for the month of November 2011 for project Element TP6A.

Comments are prepared using a three tier system as requested by the STPA:

Level 1 - Critical comments which need to be addressed promptly. The IQAC requests responses on any critical comments within one week.

Level 2 - Comments for which a response is required. All comments for which a response is required should be responded to in the form of a written response or by providing the necessary information as requested.

Level 3 - Comments that would improve the quality of the work but for which the agency need not respond to.

Based on our review of the QC information provided from the referenced period, the IQAC offers the following comments for your considerations:

SOILS/CONCRETE/MATERIALS TESTING

Level 2	This monthly QC report and the included concrete reports and QC/QC summary table indicate that the specified slump range is 75 ± 25 mm. However, the revised specification Drawings of Battery Point dated October 19, 2011 specify a slump of 75 mm Max.
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This report covers the quality control aspects for both the geotechnical and concrete/materials portions of the project.

January 22, 2012

Ms. Diane Ingraham, Ph.D., PMP, Quality Contract Manager

Page 2 of 2

**Reference: Materials and Geotechnical Quality Assurance of Quality Control Program
Element TP6A, Sydney Tar Ponds Project, Sydney, NS
Review of Contractor's November 2011 Quality Control (QC) Report**

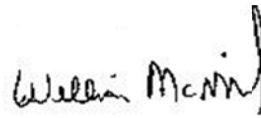
We trust this information meets your present needs. If you have any questions, or if we can be of further assistance, please do not hesitate to contact us at your convenience.

Sincerely,

STANTEC CONSULTING LTD



Rabi Morelly, M.Sc., P.Eng
Geotechnical & Materials Quality Lead
rabi.morelly@stantec.com



Willie McNeil, B.Tech. (Env.), CET
Project Manager
willie.mcneil@stantec.com



Stantec Consulting Ltd
 207-201 Churchill Drive
 Membertou, NS B1S 0H1
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Stantec

January 25, 2012
 File: 121410955.225

Sydney Tar Ponds Agency
 1 Inglis Street
 PO Box 1028, Stn. A
 Sydney, NS B1P 6J7

Attention: Ms. Diane Ingraham, Ph.D., PMP, Quality Contract Manager

Dear: Ms. Ingraham

**Reference: Environmental Quality Assurance of Quality Control Program
 Element TP6A, Sydney Tar Ponds Project, Sydney, NS
 Review of Contractor's November 2011 Quality Control (QC) Report**

At the request of the Sydney Tar Ponds Agency (STPA), Stantec Consulting Limited (Stantec) acting as the project Independent Quality Assurance Consultant (IQAC) has completed a Quality Assurance Review of the Contractor's, MB2/Beaver Marine Joint Venture (MBJV) and their quality control consultant (Exp Services Inc. (exp)), Monthly Quality Control (QC) Report for the month of November 2011 for project element TP6A.

Comments are prepared using a three tier system as requested by the STPA:

- Level 1 - Critical comments which need to be addressed promptly. The IQAC requests responses on any critical comments within one week
- Level 2 - Comments for which a response is required. All comments for which a response is required should be responded to in the form of a written response or by providing the necessary information as requested.
- Level 3 - Comments that would improve the quality of the work but for which the agency need not respond to.

Based on our review of the QC information provided from the referenced period, the IQAC offers the following comment for your consideration:

ENVIRONMENTAL INSPECTIONS/TESTING

<u>Quality Control (QC) and Quality Assurance (QA) Environmental Testing Summary Table</u>	
Level 3	November 21 11:30 Turbidity results for the Narrow (west side) is presented as 3.8 NTU on the table and 2.8 NTU on the EIL.

This report covers the quality control aspects for the environmental inspection/testing portions of the project. We trust this information meets your present needs. If you have any questions, or if we can be of further assistance, please do not hesitate to contact us at your convenience.

January 25, 2012

Ms. Diane Ingraham, Ph.D., PMP, Quality Contract Manager

Page 2 of 2

**Reference: Environmental Quality Assurance of Quality Control Program
Element TP6A, Sydney Tar Ponds Project, Sydney, NS
Review of Contractor's November 2011 Quality Control (QC) Report**

Sincerely,

STANTEC CONSULTING LTD



Tanya MacDonald
Environmental Manager
Tel: (902) 564-1855
Fax: (902) 564-8756
tanya.macdonald@stantec.com



Willie McNeil, B.Tech.(Env)., CET Manager,
Project Manager
Tel: (902) 564-1855
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willie.mcneil@stantec.com

Quality Control (QC) and Quality Assurance (QA) Environmental Testing Summary Table

Weekly
 Monthly

From: 2011-10-30 To: 2011-11-26

Contractor:	MBJV	Client:	STPA	Form Number: 97918-QAF-073
Element:	TP6A	Oversight:	AECOM/CBCL	Project: Remediation of the Tar Ponds and Coke Ovens Sites
		IQAC:	Stantec	

Note: This summary table shall be submitted with the Contractor's Monthly QC Report only after all revisions are made to the data here contained based on any DE Environmental comments of the information submitted weekly.

SPECIFIED REQUIREMENTS						RESULTS										NOTES				
Spec Section	Spec Description	Test Type	Standard	QC Frequency	QA Frequency	Date Collected	QC Sample ID	Criteria	Date QC Result Received	QC Test Result	QC Pass/Fail	QC Frequency Met? Y/N	QA Sample ID	Date QA Result Received	QA Test Result	QA Pass/Fail	QA Frequency Met? Y/N	QC	QA	
Week 1																				
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-10-30	TP6A-97919-Narrows E-0730-2011-10-30 TP6A-97919-Narrows W-0730-2011-10-30	As per EPP	2011-10-30	4.1 NTU 3.2 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-10-30	TP6A-97919-Narrows E-1130-2011-10-30 TP6A-97919-Narrows W-1130-2011-10-30	As per EPP	2011-10-30	3.9 NTU 3.7 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-10-31	TP6A-97919-Narrows E-0730-2011-10-31 TP6A-97919-Narrows W-0730-2011-10-31 TP6A-97919-COB-0745-2011-10-31 TP6A-97919-WB-0745-2011-10-31	As per EPP	2011-10-31	30.2 NTU 39.5 NTU 16.0 NTU 10.9 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-10-31	TP6A-97919-Narrows E-1130-2011-10-31 TP6A-97919-Narrows W-1130-2011-10-31 TP6A-97919-Battery Point N-1130-2011-10-31 TP6A-97919-Battery Point S-1130-2011-10-31 TP6A-97919-COB-1145-2011-10-31 TP6A-97919-WB-1145-2011-10-31	As per EPP	2011-10-31	23.4 NTU 23.0 NTU 31.9 NTU 32.6 NTU 14.5 NTU 6.5 NTU	Fail (See QC Note)	N							Samples were collected in accordance with the EPP. Samples taken from the shore due to unsafe conditions. There is a considerable lag time in the ponds once turbidity in the brooks drops, especially with storm surge and high winds. Please refer to the daily EIL for specific testing results.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-01	TP6A-97919-Narrows E-0730-2011-11-01 TP6A-97919-Narrows W-0730-2011-11-01	As per EPP	2011-11-01	8.6 NTU 8.1 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-01	TP6A-97919-Narrows E-1130-2011-11-01 TP6A-97919-Narrows W-1130-2011-11-01	As per EPP	2011-11-01	5.9 NTU 5.9 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-02	TP6A-97919-Narrows E-0730-2011-11-02 TP6A-97919-Narrows W-0730-2011-11-02	As per EPP	2011-11-02	6.0 NTU 5.6 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-01	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Once Weekly		2011-11-02	TP6A-97919-Site Trailer-2011-11-02 TP6A-97919-COB-2011-11-02 TP6A-97919-Narrows-2011-11-02	CBRM noise by-law and NSE criteria	2011-11-02	58.8 L _{eq} (dBA) 56.6 L _{eq} (dBA) 51.0 L _{eq} (dBA)	Pass Pass Pass	Y						Samples collected as per EPP. A minimum of 2hr sample duration in three locations along the perimeter. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-02	TP6A-97919-Narrows E-1130-2011-11-02 TP6A-97919-Narrows W-1130-2011-11-02	As per EPP	2011-11-02	4.5 NTU 4.4 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-03	TP6A-97919-Narrows E-0730-2011-11-03 TP6A-97919-Narrows W-0730-2011-11-03	As per EPP	2011-11-03	4.3 NTU 3.7 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours	Once Weekly	2011-11-03	TP6A-97919-Narrows E-1130-2011-11-03 TP6A-97919-Narrows W-1130-2011-11-03	As per EPP	2011-11-03	3.8 NTU 3.3 NTU	Pass	Y	TP6A-11-03-2011-EastNarrows TP6A-11-03-2011-WestNarrows	3-Nov-11	2.08 NTU 1.23 NTU	Pass Pass	Yes	Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	Samples were collected in accordance with the EPP. Please refer to the weekly IQAC Site Testing Summary for further details.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-04	TP6A-97919-Narrows E-0730-2011-11-04 TP6A-97919-Narrows W-0730-2011-11-04	As per EPP	2011-11-04	2.2 NTU 4.1 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-04	TP6A-97919-Narrows E-1130-2011-11-04 TP6A-97919-Narrows W-1130-2011-11-04	As per EPP	2011-11-04	3.8 NTU 3.0 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-05	TP6A-97919-Narrows E-0730-2011-11-05 TP6A-97919-Narrows W-0730-2011-11-05	As per EPP	2011-11-05	3.7 NTU 4.2 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-05	TP6A-97919-Narrows E-1130-2011-11-05 TP6A-97919-Narrows W-1130-2011-11-05	As per EPP	2011-11-05	6.4 NTU 6.3 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
Week 2																				
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-06	TP6A-97919-Narrows E-0730-2011-11-06 TP6A-97919-Narrows W-0730-2011-11-06	As per EPP	2011-11-06	6.7 NTU 5.6 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-06	TP6A-97919-Narrows E-1130-2011-11-06 TP6A-97919-Narrows W-1130-2011-11-06	As per EPP	2011-11-06	5.4 NTU 3.4 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-07	TP6A-97919-Narrows E-0730-2011-11-07 TP6A-97919-Narrows W-0730-2011-11-07	As per EPP	2011-11-07	3.4 NTU 2.9 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-01	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Once Weekly	Once Monthly	2011-11-07	TP6A-97919-Site Trailer-2011-11-07 TP6A-97919-Battery Point -2011-11-07 TP6A-97919-COB-2011-11-07	CBRM noise by-law and NSE criteria	2011-11-07	61.1 L _{eq} (dBA) 54.6 L _{eq} (dBA) 49.8 L _{eq} (dBA)	Pass Pass Pass	Y	TP6A-11-07-2011-0800-1006 TP6A-11-07-2011-1012-1216 TP6A-11-07-2011-1232-1434	7-Nov-11	61.5 L _{eq} (dBA) 54.9 L _{eq} (dBA) 50.9 L _{eq} (dBA)	Pass Pass Pass	Yes	Samples collected as per EPP. A minimum of 2hr sample duration in three locations along the perimeter. Please refer to the daily EIL for specific testing results.	Samples collected as per EPP. Refer to Monthly Noise QA Testing Summary Table in this report for more information.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-07	TP6A-97919-Narrows E-1130-2011-11-07 TP6A-97919-Narrows W-1130-2011-11-07	As per EPP	2011-11-07	3.3 NTU 3.5 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-08	TP6A-97919-Narrows E-0730-2011-11-08 TP6A-97919-Narrows W-0730-2011-11-08	As per EPP	2011-11-08	3.3 NTU 3.0 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-08	TP6A-97919-Narrows E-1130-2011-11-08 TP6A-97919-Narrows W-1130-2011-11-08	As per EPP	2011-11-08	4.4 NTU 4.4 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-09	TP6A-97919-Narrows E-0730-2011-11-09 TP6A-97919-Narrows W-0730-2011-11-09	As per EPP	2011-11-09	3.0 NTU 2.9 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-09	TP6A-97919-Narrows E-1130-2011-11-09 TP6A-97919-Narrows W-1130-2011-11-09	As per EPP	2011-11-09	2.2 NTU 2.7 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours	Once Weekly	2011-11-10	TP6A-97919-Narrows E-0730-2011-11-10 TP6A-97919-Narrows W-0730-2011-11-10	As per EPP	2011-11-10	3.7 NTU 3.2 NTU	Pass	Y	TP6A-11-10-2011-EastNarrows TP6A-11-10-2011-WestNarrows	10-Nov-11	1.29 NTU 1.27 NTU	Pass Pass	Yes	Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	Samples were collected in accordance with the EPP. Please refer to the weekly IQAC Site Testing Summary for further details.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-10	TP6A-97919-Narrows E-1130-2011-11-10 TP6A-97919-Narrows W-1130-2011-11-10	As per EPP	2011-11-10	3.4 NTU 3.5 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-11	TP6A-97919-Narrows E-0730-2011-11-11 TP6A-97919-Narrows W-0730-2011-11-11	As per EPP	2011-11-11	4.5 NTU 4.8 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-11	TP6A-97919-Narrows E-1130-2011-11-11 TP6A-97919-Narrows W-1130-2011-11-11	As per EPP	2011-11-11	12.6 NTU 7.3 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		

Quality Control (QC) and Quality Assurance (QA) Environmental Testing Summary Table

- Weekly
 Monthly

From: 2011-10-30 To: 2011-11-26

Contractor:	MBJV	Client:	STPA	Form Number: 97918-QAF-073
Element:	TP6A	Oversight:	AECOM/CBCL	Project: Remediation of the Tar Ponds and Coke Ovens Sites
		IQAC:	Stantec	

Note: This summary table shall be submitted with the Contractor's Monthly QC Report only after all revisions are made to the data here contained based on any DE Environmental comments of the information submitted weekly.

SPECIFIED REQUIREMENTS						RESULTS											NOTES		
Spec Section	Spec Description	Test Type	Standard	QC Frequency	QA Frequency	Date Collected	QC Sample ID	Criteria	Date QC Result Received	QC Test Result	QC Pass/Fail	QC Frequency Met? Y/N	QA Sample ID	Date QA Result Received	QA Test Result	QA Pass/Fail	QA Frequency Met? Y/N	QC	QA
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-12	TP6A-97919-Narrows E-0730-2011-11-12 TP6A-97919-Narrows W-0730-2011-11-12 TP6A-97919-COB-0745-2011-11-12 TP6A-97919-WB-0745-2011-11-12	As per EPP	2011-11-12	23.6 NTU 21.6 NTU 16.3 NTU 8.3 NTU	Fail (See QC Note)	N						<p>Samples were collected in accordance with the EPP. Sample taken from the shore due to unsafe conditions. Turbidity is high due to storm surge and high winds. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-12	TP6A-97919-Narrows E-1130-2011-11-12 TP6A-97919-Narrows W-1130-2011-11-12 TP6A-97919-COB-1145-2011-11-12 TP6A-97919-WB-1145-2011-11-12	As per EPP	2011-11-12	20.7 NTU 18.0 NTU 14.9 NTU 6.8 NTU	Fail (See QC Note)	N						<p>Samples were collected in accordance with the EPP. Sample taken from the shore due to unsafe conditions. Turbidity is high due to storm surge and high winds. Please refer to the daily EIL for specific testing results.</p>	
Week 3																			
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-13	TP6A-97919-Narrows E-0730-2011-11-13 TP6A-97919-Narrows W-0730-2011-11-13	As per EPP	2011-11-13	5.4 NTU 8.8 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-13	TP6A-97919-Narrows E-1130-2011-11-13 TP6A-97919-Narrows W-1130-2011-11-13	As per EPP	2011-11-13	6.0 NTU 5.4 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-14	TP6A-97919-Narrows E-0730-2011-11-14 TP6A-97919-Narrows W-0730-2011-11-14	As per EPP	2011-11-14	4.4 NTU 4.0 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-14	TP6A-97919-Narrows E-1130-2011-11-14 TP6A-97919-Narrows W-1130-2011-11-14	As per EPP	2011-11-14	4.4 NTU 4.8 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-15	TP6A-97919-Narrows E-0730-2011-11-15 TP6A-97919-Narrows W-0730-2011-11-15	As per EPP	2011-11-15	3.8 NTU 3.3 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours	Once Weekly	2011-11-15	TP6A-97919-Narrows E-1130-2011-11-15 TP6A-97919-Narrows W-1130-2011-11-15	As per EPP	2011-11-15	3.3 NTU 4.9 NTU	Pass	Y	TP6A-11-15-2011-EastNarrows TP6A-11-15-2011-WestNarrows	15-Nov-11	2.34 NTU 1.94 NTU	Pass Pass	Yes	<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	<p>Samples were collected in accordance with the EPP. Please refer to the weekly IQAC Site Testing Summary for further details.</p>
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-16	TP6A-97919-Narrows E-0730-2011-11-16 TP6A-97919-Narrows W-0730-2011-11-16	As per EPP	2011-11-16	4.4 NTU 5.6 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-16	TP6A-97919-Narrows E-1130-2011-11-16 TP6A-97919-Narrows W-1130-2011-11-16	As per EPP	2011-11-16	3.7 NTU 3.3 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-17	TP6A-97919-Narrows E-0730-2011-11-17 TP6A-97919-Narrows W-0730-2011-11-17 TP6A-97919-COB-0745-2011-11-17 TP6A-97919-WB-0745-2011-11-17	As per EPP	2011-11-17	20.3 NTU 13.3 NTU 45.9 NTU 25.6 NTU	Fail (See QC Note)	N						<p>Samples were collected in accordance with the EPP. Turbidity levels in the brooks are higher than the Narrows, therefore, no turbidity exceedance. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-17	TP6A-97919-Narrows E-1130-2011-11-17 TP6A-97919-Narrows W-1130-2011-11-17 TP6A-97919-COB-1145-2011-11-17 TP6A-97919-WB-1145-2011-11-17	As per EPP	2011-11-17	36.6 NTU 25.9 NTU 19.3 NTU 13.8 NTU	Fail (See QC Note)	N						<p>Samples were collected in accordance with the EPP. Samples taken from the shore due to unsafe conditions. Turbidity is still high but dropping. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-18	TP6A-97919-Narrows E-0730-2011-11-18 TP6A-97919-Narrows W-0730-2011-11-18	As per EPP	2011-11-18	13.0 NTU 13.5 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-01	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Once Weekly		2011-11-18	TP6A-97919-Site Trailer-2011-11-18 TP6A-97919-Battery Point-2011-11-18 TP6A-97919-COB-2011-11-18	CBRM noise by-law and NSE criteria	2011-11-18	56.6 L _{eq} (dBA) 59.3 L _{eq} (dBA) 70.8 L _{eq} (dBA)	Pass Pass Fail (See QC Note)	N						<p>Samples collected as per EPP. A minimum of 2hr sample duration in three locations along the perimeter. Winds gusting to 49 km/hr. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-18	TP6A-97919-Narrows E-1130-2011-11-18 TP6A-97919-Narrows W-1130-2011-11-18	As per EPP	2011-11-18	7.4 NTU 8.2 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-19	TP6A-97919-Narrows E-0730-2011-11-19 TP6A-97919-Narrows W-0730-2011-11-19	As per EPP	2011-11-19	6.1 NTU 5.6 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-19	TP6A-97919-Narrows E-1130-2011-11-19 TP6A-97919-Narrows W-1130-2011-11-19	As per EPP	2011-11-19	8.3 NTU 6.5 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
Week 4																			
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-20	TP6A-97919-Narrows E-0730-2011-11-20 TP6A-97919-Narrows W-0730-2011-11-20	As per EPP	2011-11-20	3.8 NTU 3.2 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-20	TP6A-97919-Narrows E-1130-2011-11-20 TP6A-97919-Narrows W-1130-2011-11-20	As per EPP	2011-11-20	3.4 NTU 3.6 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-21	TP6A-97919-Narrows E-0730-2011-11-21 TP6A-97919-Narrows W-0730-2011-11-21	As per EPP	2011-11-21	3.5 NTU 3.4 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-21	TP6A-97919-Narrows E-1130-2011-11-21 TP6A-97919-Narrows W-1130-2011-11-21	As per EPP	2011-11-21	3.6 NTU 3.8 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours	Once Weekly	2011-11-22	TP6A-97919-Narrows E-0730-2011-11-22 TP6A-97919-Narrows W-0730-2011-11-22	As per EPP	2011-11-22	3.5 NTU 3.9 NTU	Pass	Y	TP6A-11-22-2011-EastNarrows TP6A-11-22-2011-WestNarrows	22-Nov-11	2.38 NTU 1.65 NTU	Pass Pass	Yes	<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	<p>Samples were collected in accordance with the EPP. Please refer to the weekly IQAC Site Testing Summary for further details.</p>
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-22	TP6A-97919-Narrows E-1130-2011-11-22 TP6A-97919-Narrows W-1130-2011-11-22	As per EPP	2011-11-22	3.2 NTU 3.4 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-23	TP6A-97919-Narrows E-0730-2011-11-23 TP6A-97919-Narrows W-0730-2011-11-23	As per EPP	2011-11-23	3.1 NTU 4.1 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-01	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Once Weekly		2011-11-23	TP6A-97919-Site Trailer-2011-11-23 TP6A-97919-COB-2011-11-23 TP6A-97919-Battery Point-2011-11-23	CBRM noise by-law and NSE criteria	2011-11-23	61.6 L _{eq} (dBA) 53.1 L _{eq} (dBA) 66.4 L _{eq} (dBA)	Pass Pass Failure	Y						<p>Samples collected as per EPP. A minimum of 2hr sample duration in three locations along the perimeter. Large amount of heavy machinery traffic as well as the use of the vibro. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-23	TP6A-97919-Narrows E-1130-2011-11-23 TP6A-97919-Narrows W-1130-2011-11-23	As per EPP	2011-11-23	4.4 NTU 4.6 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-24	TP6A-97919-Narrows E-0730-2011-11-24 TP6A-97919-Narrows W-0730-2011-11-24	As per EPP	2011-11-24	4.4 NTU 5.3 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-24	TP6A-97919-Narrows E-1130-2011-11-24 TP6A-97919-Narrows W-1130-2011-11-24	As per EPP	2011-11-24	4.9 NTU 5.1 NTU	Pass	Y						<p>Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.</p>	

Quality Control (QC) and Quality Assurance (QA) Environmental Testing Summary Table

- Weekly
 Monthly

From: 2011-10-30 To: 2011-11-26

Contractor:	MBJV	Client:	STPA	Form Number:	97918-QAF-073
Element:	TP6A	Oversight:	AECOM/CBCL	Project:	Remediation of the Tar Ponds and Coke Ovens Sites
		IQAC:	Stantec		

Note: This summary table shall be submitted with the Contractor's Monthly QC Report only after all revisions are made to the data here contained based on any DE Environmental comments of the information submitted weekly.

SPECIFIED REQUIREMENTS						RESULTS										NOTES			
Spec Section	Spec Description	Test Type	Standard	QC Frequency	QA Frequency	Date Collected	QC Sample ID	Criteria	Date QC Result Received	QC Test Result	QC Pass/Fail	QC Frequency Met? Y/N	QA Sample ID	Date QA Result Received	QA Test Result	QA Pass/Fail	QA Frequency Met? Y/N	QC	QA
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-25	TP6A-97919-Narrows E-0730-2011-11-25 TP6A-97919-Narrows W-0730-2011-11-25	As per EPP	2011-11-25	2.9 NTU 3.3 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-25	TP6A-97919-Narrows E-1130-2011-11-25 TP6A-97919-Narrows W-1130-2011-11-25	As per EPP	2011-11-25	4.7 NTU 4.5 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-26	TP6A-97919-Narrows E-0730-2011-11-26 TP6A-97919-Narrows W-0730-2011-11-26	As per EPP	2011-11-26	7.7 NTU 8.0 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
ENV-T-02	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-11-26	TP6A-97919-Narrows E-1130-2011-11-26 TP6A-97919-Narrows W-1130-2011-11-26	As per EPP	2011-11-26	6.6 NTU 7.3 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	

Quality Control (QC) and Quality Assurance (QA) Testing Summary Table

Weekly
 Monthly

From: 30-Oct-11 To: 26-Nov-11

Contractor:	MBJV	Client:	STPA	Form Number:	97918-QAF-059
Element:	TP-6A	Oversight:	AECOM/CBCL	Project:	Remediation of the Tar Ponds and Coke Ovens Sites
		IQAC:	Stantec		

SPECIFIED REQUIREMENTS						RESULTS											NOTES		
Spec Section	Spec Description	Test Type	Standard	QC Frequency	QA Frequency	Date Collected	QC Sample ID	Criteria	Date QC Result Received	QC Test Result	QC Pass/Fail	QC Frequency Met? Y/N	QA Sample ID	Date QA Result Received	QA Test Result	QA Pass/Fail	QA Frequency Met? Y/N	QC	QA
Week 1																			
03 30 00	Cast-in-Place Concrete	Compressive Strength	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	25-Oct-11	2011-X1	35 MPa	22-Nov-11	37.8 MPa	Pass	Y	Set 26 25-Oct-11	22-Nov-11	41.0 MPa	Pass	Y	Samples collected in accordance with CSA.	The compressive strength at 28 days met the 30.0 MPa specified strength.
03 30 00	Cast-in-Place Concrete	Temperature Monitoring	CSA-A23.2	Per Pour		See QC Note	2011-X1	See QC Note	See QC Note	See QC Note	See QC Note	See QC Note						Temperature monitoring was not required, as confirmed on-site by the DE.	
03 30 00	Cast-in-Place Concrete	Compressive Strength	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	4-Nov-11	2011-X2	35 MPa	Pending	Pending	Pending	Pending	Set 27 04-Nov-11	2-Dec-11	41.4 MPa	Pass	Y	Samples collected in accordance with CSA.	The compressive strength at 28 days met the 30.0 MPa specified strength.
03 30 00	Cast-in-Place Concrete	Slump	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	4-Nov-11	2011-X2	75 ± 25 mm	4-Nov-11	75 mm	Pass	Y	Set 27 04-Nov-11	4-Nov-11	75 mm	Pass	Y	Samples collected in accordance with CSA.	Specified Slump is 75 mm Max.
03 30 00	Cast-in-Place Concrete	Air Content	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	4-Nov-11	2011-X2	5-8 %	4-Nov-11	6.2%	Pass	Y	Set 27 04-Nov-11	4-Nov-11	6.6%	Pass	Y	Samples collected in accordance with CSA.	Specified Air Content is 5.0-8.0 %.
03 30 00	Cast-in-Place Concrete	Temperature	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	4-Nov-11	2011-X2	Field Determination	4-Nov-11	18.0 °C	For Info Only	Y	Set 27 04-Nov-11	4-Nov-11	14.0° C	Pass	Y	Samples collected in accordance with CSA.	Temperature refers to the temperature of fresh concrete prior to placement.
03 30 00	Cast-in-Place Concrete	Temperature Monitoring	CSA-A23.2	Per Pour		See QC Note	2011-X2	See QC Note	See QC Note	See QC Note	See QC Note	See QC Note						Temperature monitoring was not required, as confirmed on-site by the DE.	
Week 2																			
03 30 00	Cast-in-Place Concrete	Compressive Strength	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	7-Nov-11	2011-X3	35 MPa	Pending	Pending	Pending	Pending	Set 28 07-Nov-11	5-Dec-11	27.3 MPa	Fail	Y	Samples collected in accordance with CSA.	The compressive strength at 28 days did not meet the 30.0 MPa specified strength.
03 30 00	Cast-in-Place Concrete	Slump	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	7-Nov-11	2011-X3	75 ± 25 mm	9-Nov-11	75 mm	Pass	Y	Set 28 07-Nov-11	7-Nov-11	75 mm	Pass	Y	Samples collected in accordance with CSA.	Specified Slump is 75 mm Max.
03 30 00	Cast-in-Place Concrete	Air Content	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	7-Nov-11	2011-X3	5-8 %	9-Nov-11	7.6%	Pass	Y	Set 28 07-Nov-11	7-Nov-11	7.8%	Pass	Y	Samples collected in accordance with CSA.	Specified Air Content is 5.0-8.0 %.
03 30 00	Cast-in-Place Concrete	Temperature	CSA-A23.2	Per Pour	1 test or 20% of QC, whichever is greater	7-Nov-11	2011-X3	Field Determination	9-Nov-11	19.0 °C	For Info Only	Y	Set 28 07-Nov-11	7-Nov-11	18.0° C	Pass	Y	Samples collected in accordance with CSA.	Temperature refers to the temperature of fresh concrete prior to placement.
03 30 00	Cast-in-Place Concrete	Temperature Monitoring	CSA-A23.2	Per Pour		See QC Note	2011-X3	See QC Note	See QC Note	See QC Note	See QC Note	See QC Note						Temperature monitoring was not required, as confirmed on-site by the DE.	
Week 3																			
No testing conducted during this period.																			
Week 4																			
No testing conducted during this period.																			



Stantec Consulting Ltd
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Stantec

January 22, 2012
File: 121410955.225

Sydney Tar Ponds Agency
1 Inglis Street
PO Box 1028, Stn. A
Sydney, NS B1P 6J7

Attention: Ms. Diane Ingraham, PhD., CAPM, Quality Contracts Manager

Dear Ms. Ingraham:

**Reference: Extras Section - STPA Project Element TP6A
Independent Quality Assurance (IQAC) November 2011 Monthly Summary Report**

At the request of Sydney Tar Ponds Agency (STPA), Stantec Consulting Ltd (Stantec) has no reportable extra items to include in the EXTRAS section of the (IQAC) November 2011 Monthly Summary Report.

We trust this information meets your present requirements. If you have any questions, please do not hesitate to contact us.

Sincerely,

STANTEC CONSULTING LTD

Willie McNeil, B.Tech. (Env.), CET
Project Manager
Tel: (902) 564-1855
Fax: (902) 564-8756
willie.mcneil@stantec.com



Stantec

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Sydney Tar Ponds Agency
1 Inglis Street
PO Box 1028, Stn. A
Sydney, NS B1P 6J7

Attention: Ms. Diane Ingraham, PhD., PMP, Quality Contracts Manager

Dear Ms. Ingraham:

Reference: Monthly Invoices

As per the request of the Sydney Tar Ponds Agency, monthly invoices will be submitted in a separate submittal.

Sincerely,

STANTEC CONSULTING LTD

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Project Manager
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