



**Stantec**

**Stantec Consulting Ltd**  
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Membertou NS B1S 0H1  
Tel: (902) 564-1855  
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October 06, 2011  
File: 121410955.245

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 CO6A – Coke Ovens Capping  
Independent Quality Assurance (IQAC) July 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 July 1 and July 31, 2011:

- Project Item PM-02: One monthly QA report (July 2011) completed in the month of October 2011.
- Project Item PM-05: Attended CO6A Kickoff meeting in the month of July 2011
- Project Item QCP-02: Submittal reviews (Review of Tender Specs and CO6A 100% EPP in the month of July 2011 and Contractor's July 2011 QC report including daily/test reports in the month of October 2011).
- Project Item QCP-03: Completed review of Contractor's Quality Control Plan (CQCP) in the month of June 2011.

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  
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**Stantec**

June 30, 2011  
File: 121410955.245.400

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

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

Dear: Ms. Ingraham

**Reference: Review of Contractor's Quality Control Plan (CQCP)  
Element CO6A Coke Ovens Capping  
Sydney Tar Ponds Project, Sydney, NS**

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, DENKO Mi'kmaq Enterprises LTD, Quality Control Plan (CQCP) for Project Element CO6A.

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

- Section 3.3 of the CQCP "Materials Testing and Operating Procedures" is not consistent in presenting the same level of details as the specified project requirements and acceptance criteria for construction material types.
- The CQCP does not include an organizational/structure chart that outlines QC personnel, supervisors and subcontractors.
- The CQCP does not include the testing laboratories and subcontractors qualifications as well as the subcontractor qualification process.
- The CQCP does not specify which QC tests are not going to be conducted by the contractor's quality control consultant (exp Services Inc). The CQCP must include all other and alternative subcontractors/ testing agencies names for the STPA's approval. Also, the CQCP does not specify the name of the contractor's Environmental Monitor (the EM) or provide a resume in Appendix B. The CQCP must include the EM name for STPA's approval.
- The CQCP does not include all of the contractor's quality personnel resumes (i.e.: environmental personnel).
- Supplementary section 00 60 00 of the contract documents and sections 2.2 and 3.3.7 of the CQCP address RipRap without stating the applicable quality control requirements and testing frequencies of this material.
- The Field Report for Concrete Strength Specimens and Concrete Field Report forms enclosed in appendix B "Relevant Forms" should be revised or replaced to include only applicable parameters for grout testing.
- No Environmental QC forms are listed or enclosed in appendix C "Relevant Forms" for QC environmental inspections and tests. Daily Contractor Environmental Monitor Environmental Inspection Logs should be Included too.
- Appendix C "Relevant Forms" does not include the Construction Quality Control (QC) Environmental Inspection Summary Table and the Quality Control (QC) and Quality Assurance (QA) Testing Summary Table forms.
- The IQAC suggests the inclusion of a standard operating procedure and a form in the CQCP for the IQAC 24 hour notification.

June 30, 2011

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

Page 2 of 2

**Reference: Review of Contractor's Quality Control Plan (CQCP)  
Element CO6A Coke Ovens Capping  
Sydney Tar Ponds Project, Sydney, NS**

- The majority of enclosed QC forms in appendix C "Relevant Forms" of the CQCP should be adjusted to accommodate the signatures of applicable QC testing and review personnel, with names clearly printed, and dated once they are completed and reviewed.
- The CQCP states that the Contractor's Environmental Protection Plan (CEPP) developed by the contractor is currently under review by the DE and once it is accepted it will be implemented by DENKO. As such, IQAC cannot comment on the CEPP as it has not been provided for review.
- Page 13 Section 3.4 states that DENKO requests that QC and QA samples be completed in similar locations using the same sampling methods for comparison purposes. However, the IQAC will sample, in conjunction with the QC, fifty percent (50%) of the time and will sample independently for the other fifty percent (50%), if possible.
- Page 16 Section 4.0 lists "Letter of Good Standing with Nova Scotia Construction Association" as one of the documents that will be maintained by QC. This should read "Letter of Good Standing with Nova Scotia Construction Association."
- Appendix A Quality Assurance and Quality Control Testing and Inspection Requirements CO6A Table lists ENV-T-01 in the Environmental Testing section of the table. However, the remainder of the row is blank. This section does not include a description of what the test is, the activity, criteria/standard or frequency. Upon review of the "Contract Documents" it was revealed that the QA/QC Testing & Inspection Table (Appendix B) of the Quality Control Plan (Appendix D) in the Contract Documents is also missing this information. Based on the review of the Nova Scotia Environment Approval (Section 6) and CO6 100% Environmental Protection Plan (Section 4.2), noise monitoring is required to be conducted at the nearest receptors during construction hours and at the construction fence line.
- Appendix A Quality Assurance and Quality Control Testing and Inspection Requirements CO6A Table lists a frequency for QA as once per week for Environmental Inspections (ENV-I-01 through to ENV-I-06). At the request of STPA, the IQAC will not be conducting any Environmental Inspections.
- The requirement for surface water monitoring is listed in Section 4.3 of the CO6 100% Environmental Protection Plan. However, this requirement has not been carried forward in the Quality Assurance and Quality Control Testing and Inspection Requirements CO6A Table in either the CQCP or the Quality Control Plan provided in the Contract Documents.

Our above comments are for your further review and necessary action.

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 LIMITED**



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**Stantec**

October 3, 2011  
 File: 121410955.245

Sydney Tar Ponds Agency  
 1 Inglis Street  
 PO Box 1028, Str. 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 CO6A, Sydney Tar Ponds Project, Sydney, NS  
 Review of Contractor’s July 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, (DENKO Mi’Kmaq Enterprises Ltd.) and their quality control consultant (exp. Global Inc.), Monthly Quality Control (QC) Report for the month of July 2011 for project element CO6A.

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:

Level 2	<p><u>Construction Quality Control (QC) Environmental Inspection Table</u></p> <p>The “Daily Observation Report” report indicates that the contractor worked 10hours on July 4, 2011. However only 1 Environmental Inspection Log (EIL) was completed that day. Environmental Inspections are to be conducted every 4 hours.</p>
Level 2	<p><u>Environmental Inspection Logs</u></p> <p>The revised Environmental Inspection Log (EIL) form No. 97918-QAF-070-R3 was not used until July 14, 2011. Therefore information such as details on noise monitoring and surface water sampling is missing on the EILs From July 1 - 13. Senior reviewer signature is missing. Also, the revised EILs used after July 14<sup>th</sup> requires formatting. They are currently reading Page 1 of 2, Page 2 of 2 and Page 3 of 2. Duplicate copies of the July 18, 19, 20 and 31 EILs are provided.</p>

October 3, 2011

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

Page 2 of 2

**Reference: Environmental Quality Assurance of Quality Control Program  
Element CO6A Sydney Tar Ponds Project, Sydney, NS  
Review of Contractor's July 2011 Quality Control (QC) Report**

Level 2	<u>Environmental Inspection Logs</u> The EILs state, " <i>Criteria for Acceptable and Not Acceptable for each checklist item is given on Pages 3 to 6</i> ". Pages 3 to 6 are not provided nor is the guidelines for noise or surface water provided on the EIL. As such, it cannot be determined from the EIL if the measurements Pass or Fail the guidelines.
Level 3	<u>Independent Quality Assurance Monitoring</u> Stantec (IQAC) was not provided proper notification that the QC had commenced noise and surface water monitoring. As such, the IQAC does not have any data to provide in this monthly report on noise and surface water sampling.
Level 2	<u>Quality Control (QC) and Quality Assurance (QA) Environmental Testing Summary Table</u> Surface water samples from July 26, 2011 (15:00) EIL are not provided in the Table.

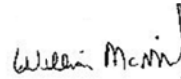
We trust this information meets your present needs. If you have any questions, or if we can be of further assistance, please do not hesitate to contact us at your convenience.

Sincerely,

**STANTEC CONSULTING LTD**



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October 6, 2011  
File: 121410955.245

Sydney Tar Ponds Agency  
1 Inglis Street  
PO Box 1028, Str. 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 CO6A, Sydney Tar Ponds Project, Sydney, NS  
Review of Contractor's July 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 (DENKO Mi'kmaq Enterprises LTD, and their quality control consultant (exp Services Inc. (exp)) Monthly Quality Control (QC) Report for the month of July 2011 for project Element CO6A.

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 does not offer any comments.

This report covers the quality control aspects for the materials and geotechnical 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.

Sincerely,

**STANTEC CONSULTING LTD**

Rabi Morelly, M.Sc., P.Eng  
Geotechnical & Materials Quality Lead  
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Willie McNeil, B.Tech. (Env.), CET  
Project Manager  
willie.mcneil@stantec.com

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

Weekly  
 Monthly

From: 04-Jul-11 To: 30-Jul-11

<b>Contractor:</b> DENKO Mi/Kmaq Enterprises	<b>Client:</b> STPA	<b>Form Number:</b> 97918-QAF-059
<b>Element:</b> CO6A	<b>Oversight:</b> Dillon Consulting	<b>Project:</b> Remediation of the Tar Ponds and Coke Ovens Sites
	<b>IQAC:</b> 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
<b>Week 1</b>																			
No Testing Conducted this Week																			
<b>Week 2</b>																			
No Testing Conducted this Week																			
<b>Week 3</b>																			
No Testing Conducted this Week																			
<b>Week 4</b>																			
No Testing Conducted this Week																			

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

- Weekly  
 Monthly

From: 2011-07-04 To: 2011-07-30

<b>Contractor:</b>	DENKO Mi/Kmaq Enterprises	<b>Client:</b>	STPA	<b>Form Number:</b>	97918-QAF-073
<b>Element:</b>	CO6A	<b>Oversight:</b>	Dillon Consulting	<b>Project:</b>	Remediation of the Tar Ponds and Coke Ovens Sites
		<b>IQAC:</b>	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
<b>Week 1</b>																			
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-04	CO6A-10 m off W Fence Line- 2011-07-04 CO6A- 100m off SPAR in Middle of Site- 2011-07-04	CBRM noise by-law and NSE criteria	2011-07-04	73.4 L <sub>eq</sub> (dBA) 62.4 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-05	CO6A-100m South of SPAR-2011-07-05 CO6A-50m South of SPAR- 2011-07-05 CO6A-100m South of SPAR NE-2011-07-05 CO6A-100m South of SPAR NW-2011-07-05	CBRM noise by-law and NSE criteria	2011-07-05	62.0 L <sub>eq</sub> (dBA) 64.8 L <sub>eq</sub> (dBA) 66.4 L <sub>eq</sub> (dBA) 69.1 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-06	CO6A-50m South of SPAR- 2011-07-06 CO6A-50m from SPAR W- 2011-07-06 CO6A-50m South of SPAR Center- 2011-07-06 CO6A-25m South of SPAR- 2011-07-06	CBRM noise by-law and NSE criteria	2011-07-06	64.9 L <sub>eq</sub> (dBA) 66.6 L <sub>eq</sub> (dBA) 70.2 L <sub>eq</sub> (dBA) 71.8 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-07	CO6A-100 South SPAR EZB- 2011-07-07 CO6A-25m South of SPAR- 2011-07-07 CO6A-100m South of SPAR E-2011-07-07 CO6A-50m South of SPAR E- 2011-07-07	CBRM noise by-law and NSE criteria	2011-07-07	66.0 L <sub>eq</sub> (dBA) 68.3 L <sub>eq</sub> (dBA) 65.2 L <sub>eq</sub> (dBA) N/A	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-08	CO6A-100 South SPAR SZ- 2011-07-08 CO6A-Western Fence Line - 2011-07-08 CO6A-100m West of CO6B-2011-07-08	CBRM noise by-law and NSE criteria	2011-07-08	66.3 Leq (dBA) 54.3 Leq (dBA) 66.7 Leq (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
<b>Week 2</b>																			
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-11	CO6A-ESC 7-2011-07-11 CO6A-ESC 6-2011-07-11 CO6A-ESC 1-2011-07-11	As per EPP	2011-07-11	0.61 NTU 53.8 NTU 23.5 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-11	CO6A-300m East Vic Road 6B- 2011-07-11 CO6A-300m East Vic Road - 2011-07-11 CO6A250m East Vic Road -2011-07-11	CBRM noise by-law and NSE criteria	2011-07-11	63.0 L <sub>eq</sub> (dBA) 63.4 L <sub>eq</sub> (dBA) 64.2 L <sub>eq</sub> (dBA)	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-12	CO6A-50m South SPAR E- 2011-07-12 CO6A- 50m South SPAR SZ- 2011-07-12	CBRM noise by-law and NSE criteria	2011-07-12	68.8 L <sub>eq</sub> (dBA) 68.9 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-13	CO6A-ESC 7-1530-2011-07-13 CO6A-ESC 6-1530-2011-07-13 CO6A-ESC 1-1530-2011-07-13	As per EPP	2011-07-13	0.5 NTU 3.4 NTU 2.2 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-13	CO6A-50m South SPAR- 2011-07-13 CO6A-25m South SPAR - 2011-07-13 CO6A-15m South Lunch Trailer -2011-07-13	CBRM noise by-law and NSE criteria	2011-07-13	70.0 L <sub>eq</sub> (dBA) 71.4 L <sub>eq</sub> (dBA) 67.2 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-14	CO6A-ESC 7-0730-2011-07-14 CO6A-ESC 6-0730-2011-07-14 CO6A-ESC 1-0730-2011-07-14 CO6A-ESC 7-1130-2011-07-14 CO6A-ESC 6-1130-2011-07-14 CO6A-ESC 1-1130-2011-07-14 CO6A-ESC 2-1530-2011-07-14 CO6A-ESC 6-1530-2011-07-14 CO6A-ESC 7-1530-2011-07-14	As per EPP	2011-07-14	0.24 NTU 3.10 NTU 0.72 NTU 0.26 NTU 3.24 NTU 1.71 NTU 1.02 NTU 4.07 NTU 0.29 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-14	CO6A-250m E of Victoria Rd, 100m W of site perimeter- 2011-07-14 CO6A-20m S of Spar Rd, 10m E of lunch trailer - 2011-07-14 CO6A-50m S of Spar Rd in the Support Zone -2011-07-14	CBRM noise by-law and NSE criteria	2011-07-14	70.5 L <sub>eq</sub> (dBA) 70.1 L <sub>eq</sub> (dBA) 69.5 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-15	CO6A-ESC 1-0700-2011-07-15 CO6A-ESC 6-0700-2011-07-15 CO6A-ESC 7-0700-2011-07-15 CO6A-ESC 1-1100-2011-07-15 CO6A-ESC 6-1100-2011-07-15 CO6A-ESC 7-1100-2011-07-15 CO6A-ESC 2-1530-2011-07-15 CO6A-ESC 6-1530-2011-07-15 CO6A-ESC 7-1530-2011-07-15	As per EPP	2011-07-15	3.58 NTU 4.76 NTU 0.99 NTU 1.96 NTU 3.90 NTU 1.42 NTU 2.92 NTU 3.70 NTU 1.25 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-15	CO6A-Northern fenceline at the lunch trailer- 2011-07-15 CO6A-100m W of CO6B excavations, 250m east of Victoria Rd - 2011-07-15 CO6A-300m E of Victoria Rd along the western site boundary -2011-07-15 CO6A-100m N of excavations on CO6B western site boundary -2011-07-15	CBRM noise by-law and NSE criteria	2011-07-15	67.2 L <sub>eq</sub> (dBA) 70.9 L <sub>eq</sub> (dBA) 68.5 L <sub>eq</sub> (dBA) 64.6 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.	
<b>Week 3</b>																			



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

- Weekly  
 Monthly

From: 2011-07-04 To: 2011-07-30

<b>Contractor:</b>	DENKO Mi'Kmaq Enterprises	<b>Client:</b>	STPA	<b>Form Number:</b>	97918-QAF-073
<b>Element:</b>	CO6A	<b>Oversight:</b>	Dillon Consulting	<b>Project:</b>	Remediation of the Tar Ponds and Coke Ovens Sites
		<b>IQAC:</b>	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		
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-18	CO6A-ESC 1-0730-2011-07-18 CO6A-ESC 6-0730-2011-07-18 CO6A-ESC 7-0730-2011-07-18 CO6A-ESC 1-1100-2011-07-18 CO6A-ESC 6-1100-2011-07-18 CO6A-ESC 7-1100-2011-07-18 CO6A-ESC 2-1530-2011-07-18 CO6A-ESC 6-1530-2011-07-18 CO6A-ESC 7-1530-2011-07-18	As per EPP	2011-07-18	1.64 NTU 3.62 NTU 0.49 NTU 4.68 NTU 3.53 NTU 0.47 NTU 3.27 NTU 3.84 NTU 0.55 NTU	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-18	CO6A-Fenceline near Water Treatment Plant, 50m N of Excavation- 2011-07-18 CO6A-Fenceline near Water Treatment Plant, 100m N of Excavation - 2011-07-18 CO6A-Center site road. 250m W of Teak St. gate - 2011-07-18	CBRM noise by-law and NSE criteria	2011-07-18	65.9 L <sub>eq</sub> (dBA) 61.8 L <sub>eq</sub> (dBA) 69.9 L <sub>eq</sub> (dBA)	Fail	Y							Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.		
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-19	CO6A-ESC 5-0830-2011-07-19 CO6A-ESC 3-0830-2011-07-19 CO6A-ESC 2-0830-2011-07-19 CO6A-ESC 1-0830-2011-07-19 CO6A-ESC 6-0830-2011-07-19 CO6A-ESC 7-0830-2011-07-19 CO6A-ESC 1-1130-2011-07-19 CO6A-ESC 6-1130-2011-07-19 CO6A-ESC 7-1130-2011-07-19 CO6A-ESC 5-1130-2011-07-19 CO6A-ESC 3-1130-2011-07-19 CO6A-ESC 2-1130-2011-07-19 CO6A-ESC 2-1530-2011-07-19 CO6A-ESC 3-1530-2011-07-19 CO6A-ESC 5-1530-2011-07-19	As per EPP	2011-07-19	2.02 NTU 5.93 NTU 1.09 NTU 0.77 NTU 3.61 NTU 0.37 NTU 1.41 NTU 0.37 NTU 3.50 NTU 3.47 NTU 4.33 NTU 1.88 NTU 1.77 NTU 23.8 NTU 3.00 NTU	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results. Midstream turbidity level (ESC 3) was elevated (at 1530) due to location of the void water discharge, however, downstream turbidity level (ESC 2) was within acceptable criteria.		
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-19	CO6A-Dirty Rd 200 m S of Spar Rd, 200 m N of CO6B site activity- 2011-07-19 CO6A-250 m N of CO6B excavation, 250 m S Spar Rd - 2011-07-19 CO6A-On S perimeter fenceline at intersection with CO Brook -2011-07-19	CBRM noise by-law and NSE criteria	2011-07-19	61.1 L <sub>eq</sub> (dBA) 65.0 L <sub>eq</sub> (dBA) 60.9 L <sub>eq</sub> (dBA)	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-20	CO6A-ESC 2-0730-2011-07-20 CO6A-ESC 3-0730-2011-07-20 CO6A-ESC 5-0730-2011-07-20 CO6A-ESC 2-1100-2011-07-20 CO6A-ESC 3-1100-2011-07-20 CO6A-ESC 5-1100-2011-07-20 CO6A-ESC 2-1530-2011-07-20 CO6A-ESC 3-1530-2011-07-20 CO6A-ESC 5-1530-2011-07-20	As per EPP	2011-07-20	1.40 NTU 6.80 NTU 1.94 NTU 1.29 NTU 4.30 NTU 2.75 NTU 1.46 NTU 5.37 NTU 3.07 NTU	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-20	CO6A-CO6A dirty road, 150m S of Spar Rd, 300m W of site lunch trailer- 2011-07-20 CO6A-CO6A dirty road, 150m S of Spar Rd, directly S of site lunch trailer - 2011-07-20 CO6A-CO6A dirty road, 150m S of Spar Rd, 200m E of site lunch trailer -2011-07-20	CBRM noise by-law and NSE criteria	2011-07-20	56.0 L <sub>eq</sub> (dBA) 61.1 L <sub>eq</sub> (dBA) 61.9 L <sub>eq</sub> (dBA)	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-21	CO6A-ESC 2-0730-2011-07-21 CO6A-ESC 5-0730-2011-07-21 CO6A-ESC 2-1100-2011-07-21 CO6A-ESC 5-1100-2011-07-21 CO6A-ESC 2-1500-2011-07-21 CO6A-ESC 5-1500-2011-07-21	As per EPP	2011-07-21	1.27 NTU 1.96 NTU 2.41 NTU 3.25 NTU 1.25 NTU 3.03 NTU	Pass	Y								Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-21	CO6A-250m W CO6B site, 150m S of water treatment plant, on fence parallel to Victoria Rd.- 2011-07-21 CO6A-100m South of site gate 4 - 2011-07-21 CO6A-Site gate 4- 2011-07-21	CBRM noise by-law and NSE criteria	2011-07-21	67.0 L <sub>eq</sub> (dBA) 61.0 L <sub>eq</sub> (dBA) 57.5 L <sub>eq</sub> (dBA)	Fail	Y							Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.		
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-22	CO6A-ESC 5-0730-2011-07-22 CO6A-ESC 2-0730-2011-07-22 CO6A-ESC 5-1100-2011-07-22 CO6A-ESC 2-1100-2011-07-22 CO6A-ESC 5-1530-2011-07-22 CO6A-ESC 2-1530-2011-07-22	As per EPP	2011-07-22	2.65 NTU 2.41 NTU 3.30 NTU 1.68 NTU 0.22 NTU 0.99 NTU	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-22	CO6A-15m S Spar, 20m E lunch trailer- 2011-07-22 CO6A-100m E lunch trailer, 15m S Spar- 2011-07-22 CO6A-50m E lunch trailer, 15m S Spar -2011-07-22	CBRM noise by-law and NSE criteria	2011-07-22	67.6 L <sub>eq</sub> (dBA) 68.1 L <sub>eq</sub> (dBA) 67.6 L <sub>eq</sub> (dBA)	Fail	Y							Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind and excess traffic along SPAR road.		
<b>Week 4</b>																					
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-25	CO6A-ESC 5-0730-2011-07-25 CO6A-ESC 2-0730-2011-07-25 CO6A-ESC 5-1100-2011-07-25 CO6A-ESC 2-1100-2011-07-25 CO6A-ESC 5-1500-2011-07-25 CO6A-ESC 2-1500-2011-07-25	As per EPP	2011-07-25	2.10 NTU 1.17 NTU 2.53 NTU 1.54 NTU 3.33 NTU 1.20 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: 2011-07-04 To: 2011-07-30

<b>Contractor:</b>	DENKO Mi/Kmaq Enterprises	<b>Client:</b>	STPA	<b>Form Number:</b>	97918-QAF-073
<b>Element:</b>	CO6A	<b>Oversight:</b>	Dillon Consulting	<b>Project:</b>	Remediation of the Tar Ponds and Coke Ovens Sites
		<b>IQAC:</b>	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	
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-25	CO6A-100m E lunch trailer 15m S Spar- 2011-07-25 CO6A-50m E lunch trailer,15m S Spar-1100- 2011-07-25 CO6A-50m E lunch trailer,15m S Spar -1500-2011-07-25	CBRM noise by-law and NSE criteria	2011-07-25	72.7 L <sub>eq</sub> (dBA) 70.6 L <sub>eq</sub> (dBA) 67.3 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind, trains and excess traffic along SPAR road.		
EPP Section 4.1	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-26	CO6A-ESC 5-0700-2011-07-26 CO6A-ESC 2-0700-2011-07-26 CO6A-ESC 5-1100-2011-07-26 CO6A-ESC 2-1100-2011-07-26	As per EPP	2011-07-26	1.66 NTU 1.20 NTU 2.55 NTU 1.20 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.0	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-26	CO6A-50m W lunch trailer,20m S Spar- 2011-07-26 CO6A-100m W lunch trailer,20m SSpar-2011-07-26 CO6A-20m S Spar at Lunch trailer- 2011-07-26	CBRM noise by-law and NSE criteria	2011-07-26	65.7 L <sub>eq</sub> (dBA) 64.5 L <sub>eq</sub> (dBA) 64.1 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind, trains and excess traffic along SPAR road.		
EPP Section 4.1	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-27	CO6A-ESC 5-0730-2011-07-27 CO6A-ESC 2-0730-2011-07-27 CO6A-ESC 5-1100-2011-07-27 CO6A-ESC 2-1100-2011-07-27 CO6A-ESC 5-1530-2011-07-27 CO6A-ESC 2-1530-2011-07-27 CO6A-ESC 7-1530-2011-07-27 CO6A-ESC 6-1530-2011-07-27 CO6A-ESC 1-1530-2011-07-27	As per EPP	2011-07-27	1.07 NTU 1.15 NTU 2.20 NTU 1.17 NTU 1.71 NTU 11.60 NTU 0.07 NTU 37.0 NTU 9.86 NTU	Pass	Y						Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.		
EPP Section 4.2	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-27	CO6A-50m W lunch trailer,20m S Spar- 2011-07-27 CO6A-20m S Spar front lunch trailer- 2011-07-27 CO6A-50m E site lunchtrailer15mSSpar 15mSSpar - 2011-07-27	CBRM noise by-law and NSE criteria	2011-07-27	65.8 L <sub>eq</sub> (dBA) 66.5 L <sub>eq</sub> (dBA) 69.4 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind, trains and excess traffic along SPAR road.		
EPP Section 4.3	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-28	CO6A-ESC 5-0720-2011-07-28 CO6A-ESC 2-0720-2011-07-28 CO6A-ESC 5-1110-2011-07-28 CO6A-ESC 2-1110-2011-07-28 CO6A-ESC 5-1510-2011-07-28 CO6A-ESC 2-1510-2011-07-28	As per EPP	2011-07-28	1.92 NTU 2.03 NTU 2.64 NTU 1.87 NTU 3.21 NTU 2.09 NTU	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.4	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-28	CO6A-50m W site trailer,25m S Spar- 2011-07-28 CO6A-20m S Spar in front of site trailer- 2011-07-28 CO6A-50m E site trailer,15m S Spar -2011-07-28	CBRM noise by-law and NSE criteria	2011-07-28	66.2 L <sub>eq</sub> (dBA) 68.1 L <sub>eq</sub> (dBA) 67.9 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind, trains and excess traffic along SPAR road.		
EPP Section 4.5	Surface Water Turbidity Sampling	Turbidity Sampling with portable turbidity meter	As per EPP	Every 4 Hours		2011-07-29	CO6A-ESC 5-0730-2011-07-29 CO6A-ESC 2-0730-2011-07-29 CO6A-ESC 5-1100-2011-07-29 CO6A-ESC 2-1100-2011-07-29 CO6A-ESC 5-1500-2011-07-29 CO6A-ESC 2-1500-2011-07-29	As per EPP	2011-07-29	1.54 NTU 1.36 NTU 2.07 NTU 1.17 NTU 2.91 NTU 1.26 NTU	Pass	Y							Samples were collected in accordance with the EPP. Please refer to the daily EIL for specific testing results.	
EPP Section 4.6	Noise Sampling	Noise Monitoring with a dosimeter or equivalent	CBRM noise by-law and NSE criteria	Daily		2011-07-29	CO6A-50m W sitetrailer,20m S Spar- 2011-07-29 CO6A-50m E site trailer,20m S Spar-1100- 2011-07-29 CO6A-100m E site trailer,15m SSpar -1500-2011-07-	CBRM noise by-law and NSE criteria	2011-07-29	66.0 L <sub>eq</sub> (dBA) 67.1 L <sub>eq</sub> (dBA) 73.1 L <sub>eq</sub> (dBA)	Fail	Y						Samples were collected in accordance with the EPP. Please refer to the daily observation report for specific testing results. Noise exceedances were due to wind, trains and excess traffic along SPAR road.		



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**Stantec**

October 6, 2011  
File: 121410955.245

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 CO6A Coke Ovens Capping  
Independent Quality Assurance (IQAC) July 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) July 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  
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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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