

The Bid Documents shall be amended and will become part of the Contract Documents as follows:

Item 1:

SECTION 00100 INSRUCTIONS TO BIDDERS

Clause 1.9.5.e

Replace with the following:

Test results from a certified lab of proposed mix design (unconfined compressive strength, hydraulic conductivity). SPLP leachate analysis to be conducted by a lab certified by the Canadian Association for Environmental Analytical Laboratory (CAEAL) or equivalent;

Item 2:

Appendix D to the Bid Form, Local Economics Benefits Strategy

Page 2 of 13, 2. Labour Content, Paragraph 2

Replace with the following:

ECONOMIC BENEFITS - DEFINITIONS

The following definitions have been amended to reflect the need for labour to be resident either in Nova Scotia throughout the term of his/her work on the project to qualify as 100% Nova Scotia content or, in the case of a Cape Bretoner be resident in Cape Breton throughout the term of his/her work on the contract in question to qualify as 100% Cape Breton content.

Canadian A person Aboriginal or otherwise, born in Canada and who has not relinquished his/her Canadian citizenship; or, a person who has been granted Canadian citizenship; or, a person who has been granted permanent resident (landed immigrant) status in Canada and is, in fact, a resident of Canada;

Nova Scotian A Canadian (as defined above) who in order to be categorized as Nova Scotia labour content for the purpose of claiming benefits must have lived full-time in and been a resident of the province six consecutive months prior to starting work on the project, or has maintained a permanent residence for a minimum of six consecutive months prior to starting work on the project and be resident in Nova Scotia throughout the term of his/her work on the project before such categorization can effectively be applied so that the individual will qualify as 100% Nova Scotia content. An individual who is not a Nova Scotian by this definition, but who works in Nova Scotia during the project, will qualify as 25% Nova Scotia content for his/her initial six months of work on the project after which the person in question may qualify for 100% Nova Scotia content for the remaining period of their work on the project provided they are resident in the province;

Cape Breton A Canadian (as defined above) who in order to be categorized as Cape Breton labour content for the purpose of claiming benefits must have lived full-time in and, therefore, been a resident of Cape Breton for six consecutive months prior to starting work on the project, or a person who has maintained a permanent residence for a minimum of six consecutive months prior to starting work on the project and be resident in Cape Breton throughout the term of his/her work on the project before such categorization can effectively be applied so that the individual will qualify as 100% Cape Breton content. An individual who is not a Cape Bretoner by this definition, but who works in Cape Breton during the project, will qualify as 25% Cape Breton content for his/her initial six months of work on the project after which the person in question may qualify for 100% Cape Breton content for the remaining period of their work on the project provided they are resident on the Island; and

Foreign Other than above.

Item 3:

Appendix D to the Bid Form, Local Economics Benefits Strategy

ATTACHMENT A – EXAMPLE OF TENDER EVALUATION

See below revised Attachment A – Example of Tender Evaluation. Calculation of points on price (max 85) was incorrect in the earlier version.

	Contractor A	Contractor B	Contractor C
Price	\$ 2,500,000	\$ 2,100,000	\$ 2,000,000
Rank	3	2	1
% of low bid	125%	105%	100%
*Points on Price (Max 85)	68.00	80.95	85.00
Economic Benefits			
Designation (5)	5	5	0
Labour (4)	4	4	2
Good & Services (4)	2	3	2
Community Support (2)	1	2	2
Points on Economic Benefits	12	14	6
Total Points Awarded	80.00	94.95	91.00
Rank	3	1	2

* Example of point calculation for price for contractor B
 # points contractor B=85 x low bid/contractor B price

Item 4:

Section 00100, Instruction to Bidders

Insert Clause 1.27 Value Engineering Alternative below

1.27 VALUE ENGINEERING ALTERNATE (VEA)

1.0 General

A **Value Engineering Alternate** (VEA) is an alternate design or modification(s) to a tendered design where a construction cost saving in excess of \$50,000 can be achieved, without compromising the integrity and quality of the project. The Contractor has the option of submitting only one VEA for Preliminary Design Review, either with the bid or up to ten working days after the tender is awarded. ***The VEA will not be considered when awarding the tender.*** The VEA may be accepted or rejected by the Agency at its sole discretion. The proposing of any design does not place the Agency under any obligation to accept the design. Net construction savings will be shared equally between the Contractor and the Agency. Minimum overall savings will be identified, confirmed and fixed prior to the Agency giving approval to a VEA. Changes which require different proposals involving work outside the scope of the tendered contract will not be considered as an acceptable VEA. The VEA Review will be divided into three stages. Where a VEA is proposed, the Contractor has the option of submitting an informal Concept Submission, in which only a general description of the work is required. Should the Concept Submission be acceptable the Contractor will then submit a Preliminary Design, which requires a review by the Agency to ensure it meets the requirements as specified. If the Preliminary Design review is satisfactory, the Contractor shall complete a Detailed Design as specified (if required by the Agency). The Contractor shall be responsible for costs associated with reviewing and evaluating the VEA as follows:

- Concept Submission Review (optional) - There will be no cost associated with this step in the procedure.
- Preliminary Design Review - At the time that the preliminary design is submitted, the Contractor shall provide a certified cheque in the amount of \$2,000.00.
- Detailed Design Review - At the detailed design review stage, the Contractor shall provide a certified cheque in the amount of \$8,000.00. The costs of the VEA, listed above, will be returned to the Contractor after final acceptance of his VEA. Should the VEA be disapproved, at any stage, all monies submitted will be retained by the Agency. The VEA proposal does not relieve the Contractor of any other contractual obligations.

2.0 Preliminary Design Review

To enable the Agency to assess a VEA, the following minimum information shall be provided at the preliminary design review stage:

- Identification of the Contractor's Design Engineers including past project experience and resumes of designated individuals. The Design Engineer of Record must be registered in the Province of Nova Scotia and meet any acceptance criteria the Agency may require depending on the nature of the VEA submitted.
- Identification of the Contractor's relevant experience including similar projects.
- Information specific to the VEA, in compliance with overall design criteria, in written and general arrangement drawing form, as follows:
 - Finished elevations as applicable.
 - Foundation types, if applicable.
 - General description of construction procedure and specifications.
 - General description of materials to be used and finish treatments (if applicable).
 - Design information to a level that displays a workable solution meeting project requirements.
 - Realistic work schedule, including detail design and review stages, compliance with environmental restrictions and other regulatory agencies, and the effect on the project schedule completion dates.
 - A detailed cost breakdown similar to the Agency's tendered design including unchanged and modified items/prices from the tendered design and new items/prices pertaining to the VEA.
 - Life cycle cost analysis for anticipated fifty year life span.

The VEA submission shall include a VEA cover page and VEA contents page as shown later in this document. Submissions shall be complete, as described above, at the preliminary design review stage enabling the Agency to conduct a full assessment for VEA equivalencies, including, but not limited to:

- functionality
- serviceability
- durability
- maintainability
- cost
- aesthetics

If a submission is not complete it may be grounds for immediate rejection.

The Agency and Contractor shall agree on the overall net savings as a result of the VEA and jointly sign a 'VEA Agreement', as shown later in this document, prior to approval being given. Upon receiving the VEA or the award of the tender, whichever occurs last,

the Agency will require five (5) working days to complete the preliminary design review and inform the Contractor in writing whether the preliminary design has been approved or rejected. If approved the Contractor will submit a detailed design in a time frame commensurate with the level of complexity of the VEA. If rejected, the tendered design will be constructed as specified.

3.0 Detailed Design Review

The Contractor shall be responsible for completing the final detailed design. The design shall be prepared and stamped by a Professional Engineer, accepted under the Preliminary Design review and registered in the Province of Nova Scotia, and shall be complete in all respects, including all drawings and other information required to complete the project. Upon receiving the final complete set of design drawings, the Agency will require up to (20) working days for reviewing the design and drawings, depending on the complexity of the proposal. The Agency assumes no responsibility for the correctness or adequacy of the design as a result of this review. The detailed design requirements are as follows:

- The design shall comply with the requirements of the current specifications (ex. ASTM)
- Navigable Waters Protection Act (NWPA) approval for the tendered design will be the responsibility of the Agency. Any additional NWPA approvals for the VEA will be the responsibility of the Contractor.
- All Department of Environment and Labour (DEL) and Department of Fisheries (DFO) approvals and permits for the tendered design will be the responsibility of the Agency. Any additional DEL and DOF or other regulatory approvals and permits for the alternate will be the responsibility of the Contractor.
- All proposed materials to be used shall be equivalent or better to those of the tendered design.
- Only new materials shall be permanently used in the VEA.
- The Agency's standards shall be used except as modified and/or supplemented by the Specifications pertaining specifically to the VEA.

4.0 Other Requirements

The Contractor shall be responsible for making any adjustments or alterations at his own cost, for whatever cause, to his submission or design to make the option congruent with the specified requirements. Any portion of construction cannot commence until the design has been approved for that portion of the work. The Agency shall be responsible for contract administration services during construction. The Contractor shall make

provision for the involvement of his Design Engineer as Engineer of Record as necessary. If the VEA involves inspection work which is unfamiliar or beyond the capabilities of the Agency's staff and a specialist is required, all costs for the additional inspection will be the responsibility of the Contractor. The cost of the work, as determined by the approved VEA, will be paid on the normal progress payment basis. The Contractor's 50/50 share of the cost savings, as a result of the VEA and as agreed to prior to the VEA approval, will be paid as a lump sum separate item on the final progress payment. The Agency expressly reserves the right to adopt a VEA for general use in future projects administered by the Agency when it determines the VEA is suitable for application to other projects without obligation or compensation of any kind to the Contractor.

VALUE ENGINEERING ALTERNATE (VEA)

Tender No:

Project No:

Project Description:

Nature of VEA:

Value Engineering Alternate Contents

Location

(page and/or plan no. or N/A)

- 1. Design Team**
- 2. Contractor's relevant experience**
- 3. Finished elevations**
- 4. Construction procedure**
- 5. Materials used and finish treatments**
- 6. Design calculations**
- 7. Work schedule**
- 8. Detailed cost breakdown**
- 9 .Life cycle cost analysis**

Submitted by:

Value Engineering Alternate Agreement

I(we) on behalf of the Contractor:

submitting a VEA for the project described as:

Project No:

Project Description:

and I(we) on behalf of the Sydney Tar Ponds Agency agree that, should the VEA be approved for construction, the construction cost savings of \$ _____ will be divided on a 50/50 basis between the Contractor and the Sydney Tar Ponds Agency of to be paid to the Contractor as a lump sum on the final progress payment.

Contractor:

Sydney Tar Ponds Agency:

Witness:

Date:

Item 5:

Section 00100, Instruction to Bidders

Clause 1.9.11

Replace with the following:

Estimated bulking and methods for handling generated bulking.

Item 6:

Section 00100, Instruction to Bidders

Clause 1.16.3.2.3 – Certified Cheque or Bank Draft

Replace with the following:

.3 Where Certified Cheque or Bank Draft is used as bid security, include the cost in the subcontractors bid.

Item 7:

Section 00100, Instruction to Bidders

Clause 1.16.3.3.1 – Irrevocable Standby Letter of Credit

Replace with the following:

.1 Provide an Irrevocable Standby Letter of Credit for a sum not less than 10% of the subcontractors bid.

Item 8:

Section 00100, Instruction to Bidders

Clause 1.16.3.3.3 – Irrevocable Standby Letter of Credit

Replace with the following:

.3 Where Irrevocable Letter of Credit is used as bid security, include the cost in the subcontractors bid.

Item 9:

SECTION 02160 SOLIDIFICATION/STABILIZATION

Clause 1.3.1.4

Replace with the following:

ASTM D5856-95 Standard Test Method for Measurement of Hydraulic Conductivity of Porous Material Using a Rigid-Wall, Compaction-Mold Permeameter

Item 10:

SECTION 02160 SOLIDIFICATION/STABILIZATION

Clause 1.8.2 a)

Replace with the following:

Hydraulic Conductivity less than 1×10^{-6} cm/s within 28 days using test methods specified under Clause 1.3.1 of this Section.

Item 11:

SECTION 02160 SOLIDIFICATION/STABILIZATION

Clause 1.8.5.4

Replace with the following:

Hydraulic conductivity shall not be greater than 1×10^{-6} cm/s for any ISS Cell. Where multiple samples are collected and analyzed to determine an average hydraulic conductivity of a single ISS Cell, the average value shall be determined by calculating the Geometric Mean of samples obtained from that specific ISS Cell. The overall geometric mean hydraulic conductivity for the Total ISS Treated Cooling Pond sludge volume (as determined by initial pre-treated survey) shall be 1×10^{-6} cm/s or less and be calculated by determining the geometric mean for hydraulic conductivity results of all individual ISS Cells.

Item 12:

SECTION 02160 SOLIDIFICATION/STABILIZATION

Clause 1.8.5.5

Replace with the following:

If the average mean strength or geometric mean of hydraulic conductivity value fails to achieve Performance Requirements established in 1.8.2 above for a specific ISS Cell, archive samples obtained by the Contractor (for that specific ISS Cell) can be tested after additional curing. The maximum additional curing time will be 56 days after the sample was collected. Where the results of the first round of testing indicate Performance Requirements (1.8.2 above) are not achieved, the test results will be disregarded and the second round test results used both for the calculation/verification of the individual ISS Cell, and the overall performance of the total ISS Treated Cooling Pond sludge. If the second round of sample testing also fails to meet the Performance Requirements, the ISS Cell will be rejected, and the ISS Cell broken up, and retreated with the ISS reagents and tested by the Contractor to meet Performance Requirements at no cost to STPA.

Item 13:

SECTION 02160 SOLIDIFICATION/STABILIZATION

Clause 1.8.5.6

Replace with the following:

The Engineer shall select a total of sixteen samples, four from each quadrant of the Cooling Pond (e.g. north, south, east, and west, as measured from plan view) for leachate testing using Synthetic Precipitation Leachate Procedure. Contractor to test the samples identified by the Engineer. Contractor to provide results to Engineer within 48 hours after receipt of test results.

Item 14:

SECTION 02160 SOLIDIFICATION/STABILIZATION

Clause 1.9.4

Replace title with "Positioning the Mixing Head"

Item 15:

APPENDIX B CBRM Sewer Discharge Requirements

Add **Attachment 3**, Sections 1, 2 and 3 of the Halifax Regional Municipality By Law W-101 in reference to CBRM sewer discharge requirements.

Item 16:

APPENDIX I Bench Scale Treatability Testing, Cooling Pond

Section 3.1, Paragraph 3

Replace with the following:

The performance objectives for solidifying sludge in this program are as follows:

- Compressive Strength : 50 PSI (0.34 Mpa) or greater
- Hydraulic Conductivity: Less than 1×10^{-6} cm/sec

Item 17:

APPENDIX I Bench Scale Treatability Testing, Cooling Pond

Section 4.1, Paragraph 2

Replace with the following:

As shown in Table 4-1, all mix designs, with the exception of Mix No. 10 (12% Portland cement only at 14 days), Mix No. 13 (7% Portland cement, 15% fly ash at 14 days) and Mix No. 14 (7% Portland cement, 50% slag, 10% fly ash at 14 days) met the minimum unconfined compressive strength of 0.34 MPa. However, it is useful to note that subsequent testing using 12% Portland cement alone (Mix 19) demonstrated good results (0.93 MPa at 28 days).

Item 18:

APPENDIX I Bench Scale Treatability Testing, Cooling Pond

Section 4.2

Remove paragraph 5 (included below):

Sample Cylinder 5 also contained slag and fly ash admixtures. TCLP analysis was completed on the slag and fly ash independently, which confirmed elevated concentrations of heavy metals in the fly ash leachate, including copper and vanadium above Attachment C of the NSEL Landfill leachate guidelines. The use of fly ash was discontinued as a potential reagent after it was confirmed it had elevated leachate generation potential.

Item 19:

APPENDIX I Bench Scale Treatability Testing, Cooling Pond

Section 5.0, Paragraph 1

Remove:

- Mix designs incorporating fly ash is not recommend due to the contribution of the fly ash to potential metals leaching;

Replace:

- The minimum unconfined compressive strength range of 0.17 to 0.34 MPa was achieved by all mix designs, with the exception of Mix 10 after a 14 day curing period, which contained only 12%wt Portland Cement.

With:

- The minimum unconfined compressive strength of 0.34 MPa was achieved by all mix designs, with the exception of Mix 10, Mix 13 and Mix 14 after 14 day curing periods.

Item 20:

APPENDIX I Bench Scale Treatability Testing, Cooling Pond

Appendix I.1, Tables I.1.1 to I.1.3

Replace with the following:

Tables I.1.1 to I.1.3 (Attachment 1).

Item 21:

Appendix H, Supplemental Site Investigation

Appendix H.5, Tables H.5.1 to H.5.20

Replace with the following:

Tables H.5.1 to H.5.20 (Attachment 2).

Item 22:

Clarification:

Appendix I, Bench Scale Treatability Testing, Cooling Pond

1. Table II.1 Petroleum Hydrocarbon Chemistry. *Table II.1 provides a concentration of petroleum hydrocarbons. Take note this is a sludge analysis, not a leachate result.*
2. Table II.3 Metals Leachate Chemistry. *Take note that the metal leachate results provided in Table II.3 are based both on the TCLP and SPLP methods. Section 4.2 Chemical Testing program in the Treat Study, Appendix I, indicates which methods were used.*

Item 23:

Clarification:

Appendix I, Bench Scale Treatability Testing, Cooling Pond.

1. References have been made to a range of 28 day compressive strengths between 0.17 to 0.34 MPa. Contractors are reminded that the performance requirements of the Tender Documents are for any single sample to have unconsolidated compressive no less than 0.28 MPa (40 psi) with an overall average of 0.34 MPa (50 psi).

Item 24:

Clarification:

Appendix H, Supplemental Site Investigation

There are several instances and discussion of South Pond. A Pilot study was originally envisioned for the South Pond as part of this contract, but was subsequently removed from this project. This South Pond information is now not relevant to the tender.

Item 25:

Section 02315, Excavating, Trenching and Backfilling

Clause 2.1

Renumber .4 Dry Mulch with .3 Dry Mulch

Renumber .3 Hydraulic Mulch with .4 Hydraulic Mulch

Renumber .3 Common Fill with .5 Common Fill

Item 26:

Section 02315, Excavating, Trenching and Backfilling

Clause 2.1.5 Common Fill, Paragraph 1

Replace:

Common Fill: well-graded inorganic soil with a maximum particle size of 100 mm, no more than 30% fines passing 80 micron sieve, and free of organic debris, roots, metal, or other waste.

With:

Common Fill: well-graded inorganic soil with a maximum particle size of 100 mm, a hydraulic conductivity (following placement and compaction) of equal to or less than 1×10^{-6} cm/s, capable of being compacted to the specified density and supporting light to medium vehicle loads, and free of organic debris, roots, metal, or other waste. Common Fill to be sourced from a pit approved by Nova Scotia Department of Environment and Labour.

Item 27:

Section 02315, Excavating, Trenching and Backfilling

Clause 3.6.

Renumber “.3 Place backfill material in uniform layers...” with .5

Item 28:

Drawings

Replace Drawing 1000897-03-02 with:

Drawing No. 1000897-03-02 Revision 1, dated 28 April, 2006 (included in back pocket).

ATTACHEMMENT 1

ATTACHEMMENT 2

ATTACHEMMENT 3

END OF ADDENDUM 1