



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 744-2010

**FOR PROFESSIONAL CONSULTING SERVICES FOR THE REHABILITATION OF
DIGESTER #11 AND SLUDGE HOLDING TANKS #5 AND #7 AT THE NEWPCC**

Proposals shall be submitted to:

**The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1**

TABLE OF CONTENTS

PART A - PROPOSAL SUBMISSION

Form A: Proposal	1
------------------	---

PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Site Investigation	1
B4. Enquiries	1
B5. Relevant documents	2
B6. Confidentiality	2
B7. Addenda	2
B8. Proposal Submission	2
B9. Proposal (Section A)	3
B10. Fees (Section B)	4
B11. Experience of Proponent and Key Personnel (Section C)	5
B12. Technical Proposal (Section D)	5
B13. Project Management Proposal (Section E)	5
B14. Project Schedule (Section F)	6
B15. Qualifications	6
B16. Opening of Proposals and Release of Information	7
B17. Irrevocable Offer	7
B18. Withdrawal of Offers	7
B19. Interviews	8
B20. Negotiations	8
B21. Evaluation of Proposals	8
B22. Award of Contract	9

PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

PART D - SUPPLEMENTAL CONDITIONS

General

D1. General Conditions	1
D2. Project Manager	1
D3. Background	1
D4. Scope of Services	2

Submissions Prior to Start of Services

D5. Authority to Carry on Business	7
D6. Insurance	7

Schedule of Services

D7. Commencement	9
------------------	---

Appendix A – Relevant Documents

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 FOR PROFESSIONAL CONSULTING SERVICES FOR THE REHABILITATION OF DIGESTER #11 AND SLUDGE HOLDING TANKS #5 AND #7 AT THE NEWPCC

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, February 17, 2011.

B2.2 Proposals determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Project Manager or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 The Proponent may make an appointment to view the Site by contacting the Project Manager identified in D2.

B3.2 The Proponent shall not be entitled to rely on any information or interpretation received at the Site Investigation unless that information or interpretation is the Proponent's direct observation, or is provided by the Project Manager in writing.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Project Manager identified in D2.

B4.2 If the Proponent finds errors, discrepancies or omissions in the Request for Proposal (RFP), or is unsure of the meaning or intent of any provision therein, the Proponent shall promptly notify the Project Manager of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B4.3 If the Proponent is unsure of the meaning or intent of any provision therein, the Proponent should request clarification as to the meaning or intent prior to the Submission Deadline.

B4.4 Responses to enquiries which, in the sole judgment of the Project Manager, require a correction to or a clarification of the RFP will be provided by the Project Manager to all Proponents by issuing an addendum.

B4.5 Responses to enquiries which, in the sole judgment of the Project Manager, do not require a correction to or a clarification of the RFP will be provided by the Project Manager only to the Proponent who made the enquiry.

B4.6 The Proponent shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Project Manager in writing.

B4.7 Proponents questions will be placed in two different categories:

- (a) General Proponent Questions;
- (b) Confidential Questions.

B4.7.1 Proponents must submit their questions in writing in accordance B5.1. Questions not marked "Confidential" will be considered "General".

B4.7.2 The Project Manager may determine that a "Confidential" question requires clarification to all Proponents. In that case, the Project Manager will notify the Proponent who submitted the question and request that they revise the "Confidential" label to read "General". If the

question remains "Confidential", the Project Manager reserves the right to not provide an answer.

B4.7.3 Questions in B4.4 and B4.7(a) will be answered by Addenda. Questions in B4.7b) will be answered, in writing, to the Proponent that issued the Question.

B4.8 Proponents shall submit questions to the Project Manager at least five (5) Business Days prior to the Submission Deadline.

B4.9 The Project Manager will issue each Addendum in accordance with B7.2.

B5. RELEVANT DOCUMENTS

B5.1 Please refer to Appendix A for all relevant documents

B6. CONFIDENTIALITY

B6.1 Information provided to a Proponent by the City or acquired by a Proponent by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Project Manager. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Proponent before receipt hereof; or
- (b) becomes publicly known other than through the Proponent; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B6.2 The Proponent shall not make any statement of fact or opinion regarding any aspect of the Request for Proposals to the media or any member of the public without the prior written authorization of the Project Manager.

B7. ADDENDA

B7.1 The Project Manager may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.

B7.2 The Project Manager will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

B7.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

B7.3 The Bidder is responsible for ensuring that it has received all Addenda and is advised to check the Materials Management Division website for Addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B8. PROPOSAL SUBMISSION

B8.1 The Proposal shall consist of the following components:

- (a) Form A: Proposal (Section A) in accordance with B9;
- (b) Fees (Section B) in accordance with B10;

B8.2 The Proposal should also consist of the following components:

- (a) Experience of Proponent and Key Personal (Section C) in accordance with B11;
- (b) Technical Proposal (Section D) in accordance with B12;
- (c) Project Management Proposal (Section E) in accordance with B13; and

(d) Project Schedule (Section F) in accordance with B14.

- B8.3 Further to B8.1, all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B8.4 Further to B8.2 all components of the Proposal should be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B8.5 Proponents should submit one (1) unbound original (marked "original") and six (6) copies for sections identified in B8.1 and B8.2.
- B8.6 Proposal format, including type of binding, number of pages, size of pages and, font, etc., will not be regulated, except that the Proposal should be presented in the Sections identified above. Proponents are encouraged to use their creativity to submit a Proposal which provides the requested information for evaluation and other information which illustrates the strength of their team.
- B8.7 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B21.1(a).
- B8.8 The Proposal shall be submitted enclosed and sealed in an envelope/package clearly marked with the RFP number and the Proponent's name and address.
- B8.9 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B8.10 Proposals shall be submitted to:
The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1
- B8.11 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

B9. PROPOSAL (SECTION A)

- B9.1 The Proponent shall complete Form A: Proposal, making all required entries.
- B9.2 Paragraph 2 of Form A: Proposal shall be completed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his own name, his name shall be inserted;
 - (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Proponent is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Proposal is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 In Paragraph 3 of Form A: Proposal, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of the Proposal.

- B9.4 Paragraph 11 of Form A: Proposal shall be signed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his own name, it shall be signed by the Proponent;
 - (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Proponent is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Proponent is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B9.4.1 The name and official capacity of all individuals signing Form A: Proposal should be printed below such signatures.

B9.5 If a Proposal is submitted jointly by two or more persons, the word "Proponent" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Proponents in the Proposal and the Contract, when awarded, shall be both joint and several.

B10. FEES (SECTION B)

- B10.1 The Proposal shall include a fee schedule calculated on a **Time Basis** for all disciplines, identified and necessary, for the following Scope of Service phases of the Project:
- (a) Concept Design
 - (b) Preliminary Design
 - (c) Final Design
 - (d) Contract Administration;
 - (e) Post Construction Services as detailed in section D4.2(e)
- B10.2 Adjustments to the Fees will only be considered based on increases to the Scope of Services.
- B10.2.1 Details of the Scope of Services are provided under D4.
- B10.2.2 The City will not consider an adjustment to the Fees based on changes in the Project budget or the Final Total Construction Cost.
- B10.3 Notwithstanding C1.1(b), Fees shall include costs for out of town travel, related meals and accommodations for the duration of the Project and shall not be considered an Allowable Disbursement.
- B10.4 The Fee Proposal shall also include an allowance for Allowable Disbursements as defined in C1.1(c), but shall exclude the costs of any materials testings, soils and hazardous materials investigations during construction.
- B10.5 Notwithstanding C10.1, Fees submitted shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B10.6 Payments to Non-Resident Consultants are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B11. EXPERIENCE OF PROPONENT AND KEY PERSONNEL (SECTION C)

- B11.1 Proposals should include general firm profile information, including years in business, average volume of work, number of employees and other pertinent information for the Proponent and all Sub-Consultants.

- B11.2 Proposals should include details demonstrating the Proponents and Sub-Consultants experience relating to the scope of work identified for this project.
- B11.3 Submit the experience and qualifications of the Key Personnel assigned to the Project. Include educational background and degrees, professional recognition, job title, years of experience in current position, years of experience in design and construction, and years of experience with existing employer.

B12. TECHNICAL PROPOSAL (SECTION D)

- B12.1 The Technical Proposal should address the deliverables and associated task requirements required by the Scope of work. It should clearly identify and explain work activities and identify all assumptions and interpretations.
- B12.2 The Technical Proposal should describe:
- (a) the Proponents understanding of the Project;
 - (b) the Proponents approach and methodology to complete the work;
 - (c) any innovation to be used to perform the services;
 - (d) any activities and services to be provided by the City;
 - (e) the deliverables of the Project.

B13. PROJECT MANAGEMENT PROPOSAL (SECTION E)

- B13.1 Describe your firm's project management approach and team organization during the performance of Services, so that the evaluation committee has a clear understanding of the methods the Proponent will use in the delivery of this Project.
- B13.2 Methodology should be presented in accordance with the following Scope of Service as presented in D4 Scope of Services.
- B13.3 Describe the collaborative process to be used by the key design professionals of the team in the various design phases of the Project.
- B13.4 Details of the required Project Scope and Scope of Services are provided in D4.
- B13.5 Proposals should address:
- (a) the team's understanding of the broad functional and technical requirements;
 - (b) job functions of identified individuals
 - (c) time estimates by work activity; and
 - (d) an organization chart outlining the roles of each of the key participants in the Project; and
 - (e) any other issue that conveys your team's understanding of the Project requirements.

B14. PROJECT SCHEDULE (SECTION F)

- B14.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar Project management software, complete with resource assignments (key designers), durations (weekly timescale) and milestone dates or events. The schedule should address each phase of the Consultant Scope of Services.
- B14.2 The Proponent's schedule should include critical dates for review and approval processes by the City and other organizations anticipated during the design and tendering phases of the Project. Reasonable times should be allowed for completion of these processes. The schedule should include the following minimum times for the City to review and comment on deliverables.
- (a) Conceptual Design Report 4 weeks
 - (b) Preliminary Design Report and Preliminary Design Drawings 4 weeks

- (c) Final Design Drawings and Tender Package 4 weeks

B15. QUALIFICATIONS

B15.1 The Proponent shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Proponent does not carry on business in Manitoba, in the jurisdiction where the Proponent does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Services in strict accordance with the terms and provisions of the Contract;
- (d) have or establish and staff an office in Winnipeg for the duration of the Project.

B15.2 The Proponent and any proposed Subconsultant (for the portion of the Services proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>

B15.3 The Proponent and/or any proposed Subconsultant (for the portion of the Services proposed to be subcontracted to them) shall:

- (a) have successfully carried out services for the programming; design, management of construction and contract administration for architectural and/or engineering projects of similar complexity, scope and value; and to those required for this Project; and
- (b) be fully capable of performing the Services required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba); and
- (d) have the knowledge and resources to administer the requirements of The Workplace Safety and Health Act (Manitoba) during the construction works associated with this Contract;
- (e) undertake to meet all licensing and regulatory requirements of the appropriate governing authorities and associations in the Province of Manitoba.

B15.4 The Proponent shall submit, within three (3) Business Days of a request by the Project Manager, further proof satisfactory to the Project Manager of the qualifications of the Proponent and of any proposed Subconsultant.

B15.5 The Proponent shall provide, on the request of the Project Manager, full access to any of the Proponent's equipment and facilities to confirm, to the Project Manager's satisfaction, that the Proponent's equipment and facilities are adequate to perform the Services.

B16. OPENING OF PROPOSALS AND RELEASE OF INFORMATION

B16.1 Proposals will not be opened publicly.

B16.2 After award of Contract, the name(s) of the successful Proponent and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>

B16.3 To the extent permitted, the City shall treat all Proposal Submissions as confidential. However, the Proponent is advised that any information contained in any Proposal may be released if

required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

B16.4 Following the award of Contract, a Proponent will be provided with information related to the evaluation of its submission upon written request to the Project Manager.

B17. IRREVOCABLE OFFER

B17.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.

B17.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Proponents and these Proponents shall be bound by their offers on such Services until a Contract for the Services has been duly executed as herein provided, but any offer shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 10 of Form A: Proposal.

B18. WITHDRAWAL OF OFFERS

B18.1 A Proponent may withdraw his Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B18.1.1 The time and date of receipt of any notice withdrawing a Proposal shall be the time and date of receipt as determined by the Manager of Materials.

B18.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.

B18.1.3 If a Proponent gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Proposal until after the Submission Deadline has elapsed;
- (b) open the Proposal to identify the contact person named in Paragraph 3 of Form A: Proposal and the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal; and
- (c) if the notice has been given by any one of the persons specified in B18.1.3(b), declare the Proposal withdrawn.

B18.2 A Proponent who withdraws his Proposal after the Submission Deadline but before his offer has been released or has lapsed as provided for in B17.2 shall be liable for such damages as are imposed upon the Proponent by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B19. INTERVIEWS

B19.1 The Project Manager may, in his sole discretion, interview Proponents during the evaluation process.

B20. NEGOTIATIONS

B20.1 The City reserves the right to negotiate details of the Contract with any Proponent. Proponents are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.

B20.2 The City may negotiate with the Proponents submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Proponents without being obligated to offer the same opportunity to any other Proponents. Negotiations may

be concurrent and will involve each Proponent individually. The City shall incur no liability to any Proponent as a result of such negotiations.

- B20.3 If, in the course of negotiations pursuant to B20.2 or otherwise, the Proponent amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Proponent from the Proposal as originally submitted.

B21. EVALUATION OF PROPOSALS

B21.1 Award of the Contract shall be based on the following evaluation criteria:

- | | |
|---|-------------|
| (a) Compliance by the Proponent with the requirements of the request for proposal or acceptable deviation there from: | (pass/fail) |
| (b) Qualifications of the Proponent and the Sub consultants, if any, pursuant to B15: | (pass/fail) |
| (c) Fees; (Section B) | 30% |
| (d) Experience of Proponent and Key Personal; (Section C) | 30% |
| (e) Technical Proposal(Section D) | 10% |
| (f) Project Management Proposal | 10% |
| (g) Project Schedule. (Section F) | 20% |

B21.2 Further to B21.1(a), the Award Authority may reject a Proposal as being non-responsive if the Proposal Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B21.3 Further to B21.1(b), the Award Authority shall reject any Proposal submitted by a Proponent who does not demonstrate, in his Proposal or in other information required to be submitted, that he is responsible and qualified.

B21.4 Further to B21.1(c), Fees will be evaluated based on Fees submitted in accordance with B10.

B21.5 Further to B21.1(d), Experience of Proponent and Key Personal will be evaluated considering the experience of the organization on engineering projects for projects of similar size and complexity.

B21.6 Further to B21.1(e), The Technical Proposal will be evaluated considering your firm's understanding of the project deliverables and associated task requirements for the scope of work.

B21.7 Further to B21.1(f), Project Management Proposal will be evaluated considering your firm's understanding of the City's Project, project management approach and project team organization during the performance of services.

B21.8 Further to B21.1(g), Project Schedule will be evaluated considering the Proponents ability to comply with the requirements of the Project.

B21.9 Notwithstanding B21.1(d) to B21.1(g), where Proponents fail to provide complete responses to B8.2(a) to B8.2(d), the score of zero or fail will be assigned to the incomplete part of the response.

B22. AWARD OF CONTRACT

B22.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.

- B22.2 The City will have no obligation to award a Contract to a Proponent, even though one or all of the Proponents are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- B22.2.1 Without limiting the generality of B22.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Services;
 - (b) the prices are materially in excess of the prices received for similar services in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Services, or a significant portion thereof, with its own forces;
 - (d) only one Proposal is received; or
 - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B22.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Proponent submitting the most advantageous offer.
- B22.4 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(o).**
- B22.5 Following the award of contract, a Proponent will be provided with information related to the evaluation of his Proposal upon written request to the Project Manager.
- B22.5.1 The City may, at its discretion, award the Contract in phases.
- B22.6 If, after the award of Contract, the Project is cancelled, the City reserves the right to terminate the Contract. The Consultant will be paid for all Services rendered up to time of termination.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Consultant Services* (Revision 2010-10-01) are applicable to the Services of the Contract.
- C0.1.1 The *General Conditions for Consultant Services* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm.
- C0.2 A reference in the Request for Proposal to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Consultant Services*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for Consultant Services*, these Supplemental Conditions are applicable to the Services of the Contract.

D2. PROJECT MANAGER

D2.1 The Project Manager is:

Jason Shumka E.I.T.

Email: jshumka@winnipeg.ca

Telephone No. (204) 986-4076

Facsimile No. (204) 986-0032

D2.2 All correspondence or contact by Proponents with the City in respect of this RFP must be directly and only with the City's Project Manager or his designate. Failure to restrict correspondence and contact to the Project Manager may result in the rejection of the Proponents Proposal Submission.

D2.3 At the pre-commencement meeting, the Project Manager will identify additional personnel representing the Project Manager and their respective roles and responsibilities for the Services.

D3. BACKGROUND

D3.1 The North End Pollution Control Center (NEWPCC) located at 2230 Main Street is the largest of the three wastewater treatment plants servicing the City of Winnipeg. The NEWPCC provides primary, secondary treatment, centrate treatment, UV by disinfection, and is the only plant operated by the city that has sludge processing capabilities. The NEWPCC receives hauled liquid waste in the form of septage for treatment and processing. Currently the NEWPCC is undergoing an expansion that involves the installation of a new hauled liquid waste receiving facility to manage and handle these wastes.

D3.2 The current configuration of the sludge digestion section of the NEWPCC entails; six (6) digesters, four (4) of which are labelled digesters 9 to 12 respectively, that were constructed from 1963 to 1965. Each of these 4 digester tanks has a volume of 7200m³. In 1986 two additional digester tanks were constructed digesters 13 and 14, each of which has sludge storage capacities of 8000m³. During sludge processing the contents of the digesters are regulated to maintain a constant temperature of 38°C +/- via a heat exchanger system. Mixing of the digester contents is accomplished by means of gas draft tube mixers, 10-12 of these tubes are located in each digester tank. Gas compressors work in conjunction with the tube mixers by drawing gas from within the digester, compressing it and recirculating it back into the draft tube mixers.

D3.3 Four (4) of the original digesters at the NEWPCC, built in 1956, are now used as digested sludge holding tanks, and are an essential unit operation of the sludge dewatering facility. Digested sludge is pumped into four (4) holding tanks, labelled 5 to 8 and are located east of the digesters. Each holding tank has a volume of 3850m³. All of the holding tanks are interconnected by a common sludge transfer header. This header allows the tanks to be operated as a single unit or separated into north and south pairings. Digested sludge is then transferred through a transfer pipe from the holding tanks to a dewatering system.

Over time the interior concrete surfaces of the sludge holding tanks have been subjected to a harsh environment from the digested sludge, including corrosive gases and high thermal stresses in the winter. Visual inspection by NEWPCC personnel identified that there has been corrosion damage to the interior concrete surfaces. To further evaluate the interior condition of the tanks a Concrete and Corrosion Assessment was commissioned by the City of Winnipeg and carried out by Vector Corrosion Technologies Ltd. on sludge holding tank #5 in early 2010. The resulting report indicated that there were areas of softened or eroded concrete surfaces due primarily to sulphuric acid attack with recommendation that a protective coating or lining system be applied. The report also recommended the installation of localized discrete anodes to prevent future corrosion of reinforcement.

- D3.4 On November 29, 2009 excessive foaming became evident within all digesters at the NEWPCC, the worst of which occurred in digester 11. The foam had the consistency of a "thick pancake batter" that could not be dispersed/thinned by water sprays as is normally the case. This unusual dense foam caused the clogging/blocking of both the overflow boxes and pressure relief vents found on the roof of digester 11. Because all digester tank outlets were blocked the gas produced from the digestion process increased until sufficient pressure levels caused lifting of the of the roof membrane. Subsequent inspection revealed that the concrete roof contained cracks and there is concern regarding its structural integrity. Since the occurrence of this incident digester 11 has been taken out of service and the inside of the tank drained and cleaned.
- D3.5 The City of Winnipeg is soliciting professional Engineering services to assess damages, make recommendations, oversee repairs and upgrades to both digester 11 as well as holding tanks 5 and 7. These works are aimed at improving the overall solids processing operations of the NEWPCC as well as mitigating any foaming problems that may occur in the future.

D4. SCOPE OF SERVICES

- D4.1 Provide consulting engineering and contract administration services necessary to facilitate the rehabilitation/upgrade of Digester 11, holding tanks 5 & 7 and ancillary works.
- D4.2 The scope of services shall include but not necessarily limited to:
- (a) Project Management
 - (i) Plan, organize, secure and manage resources to bring about the successful completion of specific project goals and objectives.
 - (ii) Create a Project Management Plan.
 - ◆ Submit one (1) hard copy and one (1) electronic PDF copy of the "draft Project Management Plan".
 - ◆ Upon receipt of City review comments submit eight (8) hard copies and one (1) electronic copy of the "final Project Management Plan".
 - (iii) Structure the Project into manageable sub-entities and prepare a Work Breakdown Structure (WBS).
 - (iv) Develop a Project schedule identifying Project activities, milestones, responsibility, time lines for each and links to other project activities and deliverables.
 - (v) Establish protocol for all communication issues throughout the Project including change management.
 - (vi) Establish appropriate levels of review and approvals for all Project deliverables.
 - (vii) Guide the Project team in the identification of risks and, where appropriate, contingency plans.
 - (viii) Ensure Project team members, including the Project Manager, understand the established project methodology and gain commitment from all team members on activities and deliverables identified in the plan.
 - (ix) Identify to the Project Manager the impact (time, quality, cost) of proposed changes, so that the Project Manager may make well-informed decisions whether or not to proceed with the proposed changes.

- (x) Continuously review and assess the status of the actual cost, projected costs to completion, and schedule.
 - Submit a monthly project status report outlining project cost, schedule and scope. Monthly report shall include: line charts detailing budget, actual cost, and projected costs for tasks defined in the WBS and an updated project schedule.
 - Monthly status reports shall be limited to a maximum of three (3) pages including charts.
 - Submit one (1) electronic PDF copy of the “Monthly Project Status Report” within three (3) working days of months end.
- (xi) Chair regular project meetings and provide minutes.
- (xii) Once per month meet in-person with the City’s Project Manager to discuss the Monthly Project Status Report and other project management related issues. This monthly meeting will be reserved for project management issues only and will not be used to discuss engineering design matters.
- (xiii) Resolve Project disputes in a timely manner.

(b) Conceptual Design

- (i) Collect and review all available existing information about the site including files, reports, drawings, operating manuals, etc. Where necessary conduct field surveys and investigations to verify existing conditions and to supplement available information.
- (ii) Conduct a structural condition assessment on the roof slab and structural components of digester 11. Present rehabilitation/reconstruction options. Provide recommendations for the concepts considered.
- (iii) Assess structural integrity of the interior concrete on holding tanks 5 & 7. Present rehabilitation/reconstruction options. Provide recommendations for the concepts considered.
- (iv) Review lining or coating alternatives for holding tanks 5 & 7, provide recommendations.
- (v) Review and provide recommendations and procedures for any additional corrosion mitigation requirements on holding tanks 5 & 7, such as discrete anodes
- (vi) Prepare concept level designs for the installation of a new mechanical digester Rotamixer system or approved equal mechanical digester mixing system such as the system found in Appendix A . The system must include:
 - (i) One (1) duty and one (1) standby mixing chopper pump.
 - (ii) The standby pump must be configured such that it can act as a back-up for more then one (1) digester. The configuration should take into consideration future upgrades to mechanical mixing on the remaining digesters
 - (iii) The mechanical mixing system must include a foam suppressant/scum assembly.
 - (iv) Configure the pumps such that they can be used to drain the digester tank for maintenance.
- (vii) All works associated with the retrofitting of digester 11 to mechanical mixing including but not limited to; associated pipe works, heat exchanger requirements and the removal of draft tube mixers. Investigate the sealing of existing and creating of new pipe entry holes into the digester tank and other repairs as may be required.
- (viii) Investigate scope of all electrical and distributed control system (DCS) and compatibility requirements.
- (ix) Prepare concept level designs for the installation of pressure relief manholes (MH’s) on the roof of digester 11. The MH’s should replace the existing goose neck relief valves. A minimum of two (2) manhole style relief valves should be considered in the design. Examples of the preferred MH style can be found in Appendix A.

- (x) Design new gas collection piping for digester 11. This piping will tie into the main gas system header servicing all digesters. Determine if existing gas system header is capable of handling increased gas volumes produced from mechanical mixing of digester 11. Evaluate DCS implications.
 - (xi) Installation of roof membrane damaged on digester 11 and tied into adjacent membranes.
 - (xii) Review lining or coating alternatives for digester 11, provide recommendations
 - (xiii) Examine site constraints and develop installation strategies for all works on digester 11 rehabilitation and holding tank works considering:
 - (i) Lead time for delivery or equipment
 - (ii) Lead time for the design of all mechanical mixer components
 - (iii) Site access
 - (iv) Evaluation of overall impact on plant operations throughout construction.
 - (v) Priority must be given to all works associated with digester 11.
 - (xiv) Supplementary Work
 - (i) Investigation and recommendation for the installation of a sludge degritting system or comparable alternate used prior to raw sludge entering the digesters.
 - (ii) Investigation and recommendation on the installation of radar foam level probes or alternates with alarms in digester 11.
 - (iii) Investigate foam leakage behind north wall cladding of digester 11. Assess damage and recommend course of action.
 - (iv) Review, assess and recommend alternative mechanical mixing systems for holding tanks 5 and 7. A Vaughan mechanical "Rotamixer" system should be one of the mixing systems reviewed.
 - (v) Review and confirm the existing Sludge Holding Tank Gas System is adequate to operate in conjunction with the mixing systems considered in (iv) above
 - (xv) Provide recommendations from the concepts considered.
 - (xvi) Adherence to appropriate safety protocols for all work in the NEWPCC.
 - (xvii) Prepare concept level cost estimates and project schedules for all the conceptual design options and supplementary work.
 - (xviii) Throughout conceptual design meet with City Steering Committee to discuss findings, obtain input from City personnel, and discuss design options. A minimum of three (3) formal meetings will be required: 1. project kickoff, 2. interim status update, and 3. present and review draft conceptual report. Additional formal meetings can be accommodated to suit consultants requirements.
 - (xix) Prepare a comprehensive Conceptual Design Report documenting investigations performed, findings, conceptual designs, recommendations, cost estimates and project schedules.
 - (xx) Submit ten (10) hard copies and two (2) electronic PDF copies of the "Draft Conceptual Design Report"
 - (xxi) Upon receipt of City review comments submit ten (10) hard copies and three (3) electronic PDF copies of the "Final Conceptual Report".
- (c) Preliminary Design
- (i) Perform further engineering assessment and design on digester 11 and holding tanks 5 & 7. The assessment should incorporate roof works, structural components repair requirements, ancillary work, and supplementary work based on the preferred option selected from the conceptual design.
 - (ii) Perform further engineering assessment of mechanical mixing system for digester 11, ancillary work, and supplementary work based on the preferred option selected from conceptual design.
 - (iii) Perform further engineering design for the installation of MH style pressure relief valves.

- (iv) Provide lifespan expectations for structural refurbishment works, coating and lining alternatives considered on both the holding tanks and digester 11.
 - (v) Prepare preliminary design drawings and tender package including technical specifications.
 - (vi) Identify all permits necessary for construction.
 - (vii) Identify required instrumentation, controls, and programming. Define work needed to install new instrumentation and controls within the plants existing distributed control system (DCS).
 - (viii) Develop a construction work plan addressing site constraints identified from conceptual design.
 - (ix) Prepare preliminary level cost estimate and project schedule.
 - (x) Throughout preliminary design meet with the City Steering Committee to discuss findings, obtain input from City personnel, and discuss design. A minimum of four (4) formal meetings will be required: 1. interim status update, 2. interim status update, 3. present and review draft functional report, 4. review preliminary design drawings and tender package. Additional formal meetings can be accommodated to suit proponents and city requirements.
 - (xi) Prepare a comprehensive Preliminary Design Report documenting investigations performed, findings, functional design, recommendations, cost estimates and project schedule.
 - (xii) Submit ten (10) hard copies and two (2) electronic PDF copies of the "Draft Preliminary Design Report"
 - (xiii) Upon receipt of City review comments submit ten (10) hard copies and three (3) electronic PDF copies of the "Final Functional Design Report".
 - (xiv) Submit ten (10) hard copies of the "Draft Preliminary Design Drawings" and "Draft Preliminary Tender Package".
 - (xv) Upon receipt of City review comments submit ten (10) hard copies and three (3) electronic PDF copies of the "Final Preliminary Design Drawings" and "Final Preliminary Tender Package".
- (d) Detailed Design
- (i) Make application to public agencies (e.g permits) for necessary authorizations, prepare and submit reports and drawings thereto, and appear before the same in support of all applications.
 - (ii) Submit a detailed design notes package including items such as structural, geotechnical, mechanical and electrical design calculations related to process equipment and building services; process design calculations; and instrumentation and process control design calculations; detailed engineering calculations, drawings, and criteria employed in the design(s).
 - (iii) Prepare detailed engineering drawings and tender package including technical specifications.
 - (iv) Submit detailed drawings and tender package to Materials Management for public bidding.
 - (v) Prepare a detailed engineer's cost estimate.
 - (vi) Provide appropriate response to bidders and advice to the City during tender call and issue addenda to the contract documents as necessary.
 - (vii) Arrange for and attend bidder's site visit(s).
 - (viii) Submit a review, analysis, comparison, tabulation, calculation, and evaluation of the tenders received. Make recommendation for award of Contract.
 - (ix) Conduct a pre-award meeting with Contractor.
 - (x) Throughout detailed design meet with City Steering Committee to discuss findings, obtain input from City personnel, and discuss design. A minimum of two (2) formal meetings will be required: 1. interim status update, 2. review detailed design

drawings and tender package. Additional formal meetings can be accommodated to suit proponents' requirements.

- (xi) Submit two (2) hard copies and two (2) electronic PDF copies of the "Detailed Design Notes Package".
 - (xii) Submit ten (10) hard copies of the "Draft Detailed Design Drawings" and "Draft Tender Package".
 - (xiii) Upon receipt of City review comments submit ten (10) hard copies and three (3) electronic PDF copies of the "Final Detailed Design Drawings" and "Final Tender Package".
- (e) Contract Administration
- (i) Administer construction contract.
 - (ii) Conduct a pre-construction meeting.
 - (iii) Prior to construction prepare and submit a written and photographic record of the physical condition of work area, existing facilities, and structures sufficient to equip the City to provide valid evidence and relevant testimony in settlement of any claim involving the City by any court of law, or by any other party for damages thereto arising from the project.
 - (iv) Review and accept shop drawings supplied by the contractor or supplier to ensure the drawings are in conformance with the drawings and specifications, without relieving the contractor of his contractual and other legal obligations in respect thereof.
 - ◆ Submit one (1) hardcopy and three (3) electronic PDF copies of all final shop drawings.
 - (v) Arrange for, review and report laboratory, field, shop and other tests conducted upon materials and/or equipment placed or installed by the contractor to ensure conformance with the drawings and specifications, without relieving the contractor of his contractual and other legal obligations in respect thereof.
 - (vi) Review and provide recommendations for requests for alternate materials and methods. No alternates shall be approved without written authorization from the City.
 - (vii) Consult and advise the City during the course of construction.
 - (viii) Furnish the City with a copy of all correspondence relating directly or indirectly to the project, originating from or distributed to, parties external to the consultant, immediately following receipt or dispatch of same by the consultant.
 - (ix) Arrange and chair regularly held on-site or off-site review meetings, which meetings shall include representatives of the Contractor and the City. Prepare and distribute records of meeting minutes in both hard and electronic version, shop drawing submission log, and change management log.
 - (x) Provide full time inspection services when the Contractor is on-site to ensure that the construction carried out in conformance with the drawings and specifications.
 - (xi) Visit and inspect work at fabrication shops, staging areas, manufacturing facilities as necessary.
 - (xii) Keep a continuous record of project activities including but not limited to daily reports, photographic record of construction work and equipment, working days, teleconferences, emails, inspections and observations sufficient to equip the City to provide valid evidence and relevant testimony in settlement of any claim involving the City by any court of law, or by any other party for damages thereto arising from the project.
 - (xiii) Monitor and manage the Contractors schedule
 - (xiv) Co-ordinate all work by third parties including but not limited to traffic signal installations, hydro, telephone, and gas utility work, railway work, and City personnel. Prepare and submit applications, reports, drawings, and other information as required in support of work by third parties.

- (xv) Provide a reference line and elevation to the Contractor and check the Contractor's adherence thereto.
- (xvi) Prepare, certify and submit progress estimates to the City for payment to the Contractor for construction performed in accordance with the drawings and specifications.
- (xvii) Co-ordinate and manage training sessions for City personnel for the operation and maintenance of new facilities and equipment. This includes but not limited to planning and scheduling of training sessions, review of training procedures and training documents prepared by the Contractor.
- (xviii) Co-ordinate and manage start-up and commissioning of new equipment and facilities. This includes but not limited to preparing a commissioning plan, planning and scheduling of commissioning work, co-ordination of City personnel, full time site inspection during commissioning work, review of contractor submissions, and record keeping.
- (xix) Perform a detailed inspection of the project with the Contractor and the City prior to commencement of substantial performance and prior to total performance. Provide written appropriate recommendation of acceptance of the constructed or partially constructed project.
- (xx) Prepare and submit "as-built" drawings for the project within 1 month of Total Performance.
 - ◆ Submit five (5) hard copies of 11 x 17 size "draft as-builts" and one (1) electronic copy of PDF and AutoCAD files.
 - ◆ Upon receipt of City review comments submit five (5) hard copies of 11 x 17 size, one (1) hard copy of 24 x 36 size Mylar and three (3) electronic copies of PDF and AutoCAD files of "final as-builts".
- (xxi) Operation and Maintenance manuals: review, co-ordinate and manage the submission of Operation and Maintenance manuals prepared by the Contractor.
 - ◆ Submit four (4) hard copies and one (1) electronic PDF copy of the "draft Operation and Maintenance Manual".
 - ◆ Upon receipt of City review comments submit four (4) hard copies and four (4) electronic copies of the "final Operation and Maintenance Manual".
- (xxii) Provide inspection services during the maintenance guarantee period of the Contract.
- (xxiii) Provide a detailed inspection of the project with the Contractor and the City prior to the end of the period of Contractor warranty period.

SUBMISSIONS PRIOR TO START OF SERVICES

D5. AUTHORITY TO CARRY ON BUSINESS

- D5.1 The Consultant shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Consultant does not carry on business in Manitoba, in the jurisdiction where the Consultant does carry on business, throughout the term of the Contract, and shall provide the Project Manager with evidence thereof upon request.

D6. INSURANCE

- D6.1 The Consultant shall procure and maintain, at its own expense and cost, insurance policies with limits no less than those shown below.

- D6.2 As a minimum, the Consultant shall, without limiting its obligations or liabilities under any other contract with the City, procure and maintain, at its own expense and cost, the following insurance policies:
- (a) Comprehensive or Commercial General Liability Insurance including:
 - (i) an inclusive limit of not less than \$2,000,000 for each occurrence or accident with a minimum \$2,000,000 Products and Completed Operations aggregate and \$5,000,000 general aggregate;
 - (ii) all sums which the Consultant shall become legally obligated to pay for damages because of bodily injury (including death at any time resulting therefrom) sustained by any person or persons or because of damage to or destruction of property caused by an occurrence or accident arising out of or related to the Service or any operations carried on in connection with this Contract;
 - (iii) coverage for Products/Completed Operations, Blanket Contractual, Contractor's Protective, Personal Injury, Contingent Employer's Liability, Broad Form Property Damage, Employees as Additional Insureds, and Non-Owned Automobile Liability;
 - (iv) a Cross Liability clause and/or Severability of Interest Clause providing that the inclusion of more than one Insured shall not in any way affect the rights of any other Insured hereunder in respect to any claim, demand, suit or judgment made against any other Insured;
 - (v) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Consultant directly or indirectly in the performance of the Service. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
 - (b) Professional Errors and Omissions Liability Insurance including:
 - (i) an amount not less than \$5,000,000 per claim and \$5,000,000 in the aggregate.
- D6.2.1 The Consultant's Professional Errors and Omissions Liability Insurance shall remain in force for the duration of the Project and for twelve (12) months after total performance.
- D6.3 The policies required by section D6.2 above shall provide that the City is named as an Additional Insured thereunder and that said policies are primary without any right of contribution from any insurance otherwise maintained by the City.
- D6.4 The Consultant shall require each of its Subconsultants to provide comparable insurance to that set forth under section D6.2(a) and D6.2(b).
- D6.5 The Consultant shall provide the Project Manager with a certificate(s) of insurance for itself and for all of its Subconsultants, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Service, but in no event later than the date specified in C4.1 for the return of the executed Contract. Such Certificates shall state the exact description of the Service and provide for written notice in accordance with D6.10.
- D6.6 The Consultant may take out such additional insurance, as it may consider necessary and desirable. All such additional insurance shall be at no expense to the City.
- D6.7 All insurance, which the Consultant is required to obtain with respect to this contract, shall be with insurance companies registered in and licensed to underwrite such insurance in the province of Manitoba.
- D6.8 If the Consultant fails to do all or anything which is required of it with regard to insurance, the City may do all that is necessary to affect and maintain such insurance, and any monies expended by the City shall be repayable by and recovered from the Consultant.
- D6.9 The failure or refusal to pay losses by any insurance company providing insurance on behalf of the Consultant or any Subconsultants shall not be held to waive or release the Consultant or Subconsultants from any of the provisions of the insurance requirements or this Contract. Any insurance deductible maintained by the Consultant or any Subconsultants under any of the

insurance policies is solely for their account and any such amount incurred by the City will be recovered from the Consultant as stated in D6.8.

- D6.10 The Consultant shall not cancel, materially alter, or cause any policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the City.

SCHEDULE OF SERVICES

D7. COMMENCEMENT

- D7.1 The Consultant shall not commence any Services until he is in receipt of a notice of award from the City authorizing the commencement of the Services.
- D7.2 The Consultant shall not commence any Services until:
- (a) the Project Manager has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D5; and
 - (ii) evidence of the insurance specified in D6.
 - (b) the Consultant has attended a meeting with the Project Manager, or the Project Manager has waived the requirement for a meeting.
- D7.3 The City intends to award this Contract by March 31, 2011.

APPENDIX A – RELEVANT DOCUMENTS

Drawing No**Drawing Title**

744-2010_1-0101W-G-A0287 Process and Instrument Diagram Digested Sludge Holding Tank 5
 744-2010_1-0101W-G-A0288 Process and Instrument Diagram Digested Sludge Holding Tank 6
 744-2010_1-0101W-G-A0289 Process and Instrument Diagram Digested Sludge Holding Tank 7
 744-2010_1-0101W-G-A0290 Process and Instrument Diagram Digested Sludge Holding Tank 8
 744-2010_1-0101W-G-A0291 Process and Instrument Diagram Holding Tank Circulation Pumps W367-CP1 & W368-CP1
 744-2010_1-0101D-G-A0241 Process and Instrument Diagram Waste Gas Burner #4
 744-2010_1-101D-G-A0239-R2 NEWPCC Digesters Process & Instrumentation Diagram Waste Gas Burners
 744-2010_PE-1-R0 Site Plan Sewage Plant Extension
 744-2010_PE-4-R0 Digesters Key Plan and Digestion Tank Pile Plan
 744-2010_PE-5-R0 Typical Digester Section & Key Roof Plan
 744-2010_PE-8-R0 Tunnel Entrance To Digester Tanks
 744-2010_PE-9-R0 Steel Walkway Between New Digesters
 744-2010_PE-29-R0 Digestion Tank
 744-2010_PE-30-R0 Digestion Tank Wall Reinf. Details
 744-2010_PE-31-R0 Digestion Tank No. 1 Roof Plan
 744-2010_PE-32-R0 Digestion Tank No. 2 Roof Plan
 744-2010_PE-33-R0 Digestion Tank Roof Plan Bar Support - All Tanks
 744-2010_NEP-108-R0 Contract A - Digestion Area Structural - Tanks Foundation & Roof Plans
 744-2010_NEP-109-R0 Contract A - Digestion Area Structural - Tanks Sections & Details
 744-2010_NEP-112-R0 Contract A - Digestion Area Structural - Gallery no. 4 Main floor and Roof Profile
 744-2010_NEP-113-R0 Contract A - Digestion Area Structural - Gallery No. 5 Foundation Plan
 744-2010_NEP-114-R0 Contract A - Digestion Area Structural - Gallery No. 5 Main Floor Plan ELEV. 40.0
 744-2010_NEP-115-R0 Contract A - Digestion Area Structural - Gallery No. 5 Roof Plan ELEV. 53.0
 744-2010_NEP-116-R0 Contract A - Digestion Area Structural - Gallery No. 5 Entrance Floor Plans
 744-2010_NEP-117-R0 Contract A - Digestion Area Structural - Gallery No. 5 Entrance Roof Plan and Sections
 744-2010_NEP-119-R0 Contract A - Digestion Area Structural - Gallery No. 5 Entrance Roof Plan and Sections
 744-2010_NEP-123-R0 Contract A - Digestion Galleries Mechanical Sludge Flow Diagram
 744-2010_NEP-124-R0 Contract A - Digestion Galleries Mechanical Gas System Flow Diagrams
 744-2010_NEP-125-R0 Contract A - Digestion Galleries 1 to 3 Mechanical Gas System Plan & Sections
 744-2010_NEP-133-R0 Contract A - Digestion Galleries 5 Mechanical Plan Elevation 24.0
 744-2010_NEP-134-R0 Contract A - Digestion Galleries 5 Mechanical Sections
 744-2010_NEP-135-R0 Contract A - Digestion Area Mechanical Gas Room Plans, Sections & Details
 744-2010_NEP-136-R0 Contract A - Gas Equipment Room & Control House - Mechanical Sections & Details
 744-2010_NEP-137-R0 Contract A - Digestion Area Mechanical - Tanks Typical Plan & Sections
 744-2010_NEP-139-R0 Contract A - Digestion Area Mechanical Tanks Gas Recirculation System
 744-2010_NEP-393-R0 Gas Recirculation System General Arrangement In Digester Control Building
 744-2010_NEP-394-R0 Gas Recirculation System Discharge Piping
 744-2010_NEP-871-R0 Contract A - Digestion Area Structural - Gallery No. 5
 744-2010_NEP-1003-R0 Sludge Gas Recirculation System
 744-2010_NEP-1004-R0 Sludge Gas Recirculation System Schematic & Details
 744-2010_NEP-1189-R0 NEWPCC General Arrangement EL 237.840 Plan and Sections
 744-2010_NEP-1211-R0 Digestion Gallery No. 5 Structural - EL 230.020 Exit Floor Plans
 744-2010_NEP-1212-R0 Digestion Gallery No. 5 Structural - EL 233.820 Exit Floor Plans
 744-2010_NEP-1213-R0 Digestion Gallery No. 5 Structural Roof Plans
 744-2010_NEP-1214-R0 Digestion Gallery No. 5 Structural North Exit Sections and Details
 744-2010_NEP-1274-R0 Tanks No 5-8 Process Waste Gas Burner
 744-2010_NEP-1638-R0 Digested Sludge Holding Tanks and Transfer Pumps
 744-2010_NEP-1802-R0 NEWPCC Sludge Tank Mixing Site Plan - General
 744-2010_NEP-1803-R0 Digested Sludge Holding Tanks and Circulation Pumps Floor Plan, Sections & Detail
 744-2010_NEP-1224-R0 Digester Roof Plan West
 744-2010_NEP-1226-R0 Digester Wall and Roof Sections and Details
 744-2010_NEP-1227-R0 Wall and Roof Sections Details
 744-2010_NEP-1228-R0 Roof Sections Wall Expansion Joint Details
 744-2010_NEP-1253-R0 Digestion Gallery No. 5 Process Alterations
 744-2010_NEP-1254-R0 Digestion Gallery No. 5 Process Alterations
 744-2010_NEP-1255-R0 Digestion Gallery No. 5 Process Alterations
 744-2010_NEP-1258-R0 Digestion Gallery No. 5 Process Prespective Views & Sections
 744-2010_NEP-1260-R0 Digestion Gallery No. 5 Process Gas System Alterations
 744-2010_NEP-1261-R0 Digestion Gallery No. 6 Process Plan
 744-2010_NEP-1265-R0 Digestion Gallery No. 6 & 7 Process Sections
 744-2010_NEP-1266-R0 Digestion Gallery No. 7 Process Sections
 744-2010_NEP-1274-R0 Tanks No. 5 - 8 Process Waste Gas Burner
 744-2010_NEP-1276-R0 Waste Gas Burners Gas Process Alterations
 744-2010_NEP-1280-R0 Digestion Galleries No. 5 - 7 Process Service Piping
 744-2010_NEP-1282-R0 Miscellaneous Details (1)
 744-2010_NEP-1283-R0 Miscellaneous Details (2)
 744-2010_NEP-1284-R0 Miscellaneous Details (3)
 744-2010_NEP-1285-R0 Miscellaneous Details (4)
 744-2010_NEP-1331-R0 Digestion Gallery No. 5 Gas Process & Instrumentation Diagram
 744-2010_NEP-1332-R0 Digestion Gallery No. 7 Gas Process & Instrumentation Diagram
 744-2010_NEP-1333-R0 Waste Gas Burners Gas Process & Instrumentation Diagrams
 744-2010_Rotamix_Chopper_Pump
 744-2010_Rotamix_Configuration
 744-2010_Rotamix_FB+Scum Nozzle
 744-2010_Roatmix_FM6-1N-LP

Document Title

Digester Processes 24 pages
 NEWPCC Storage Tank #5 Concrete and Corrosion Assessment May, 2010
 NEWPCC Digester 11 Condition Assessment
 Varec MH Style Release Valve Brochure