WINNIPEG SEWAGE TREATMENT PROGRAM

SOUTH END PLANT

PAGE

PROCESS SELECTION
REVIEW WORKSHOP GUIDELINE

A	ISSUE FOR REVIEW WORKSHOP	23/08/10	ASI	
Rev	NATURE OF REVISION	DATE	MADE	APPROVED

SUMMARY

1. PREAMBLE

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1. THE CONTEXT

The City of Winnipeg and Véolia, together known as "The Program", are currently working on the extension / upgrade / refurbishement project of SEWPCC which will have to face new license requirements for Dec 31st 2012.

Some advanced studies have already been made by some local consultants prior to the constitution of the Program. Thus, in order to capitalize and to update/upgrade/complete the existing work, the Program decided to begin its project process by a "Process selection step" aiming to :

- Aim 1 : define clearly the assumptions of the project,
- Aim 2 : select the best process option which will then be the object of the Design & Build contract.

At this stage, four (4) process options have been preselected by the Program for going through this selection process. Two of them are closely inspired from those formerly studied by Stantec and the two others have been developed by the Program itself as new options as they are viewed as being of interest for either capital or operation concerns.

In order to insure the best transparency, the Program decided to hire the services of a panel of experts (Expert Advisory Panel) to have an additional and external view and can provide impartial advice about the job done within the process selection step as related to the aim 2.

2. OBJECT OF THE MEMORANDUM

It has been acknowledged that the best way of getting the EAP into the process most efficiently would be a review workshop. As the job to do during this workshop will not be easy and the time is already running out for the project, this memorandum aims to serve as a guideline for the workshop so that all attendees will know the objectives and process.

On that basis, the memorandum will go through the following topics :

1. Definition of the workshop objectives
2. Constitution of the workshop teams
3. Proposed agenda and logistical issues
4. Deliverables

2. WORKSHOP OBJECTIVES

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The first steps of the SEWPCC project can be roughly resumed as follows :

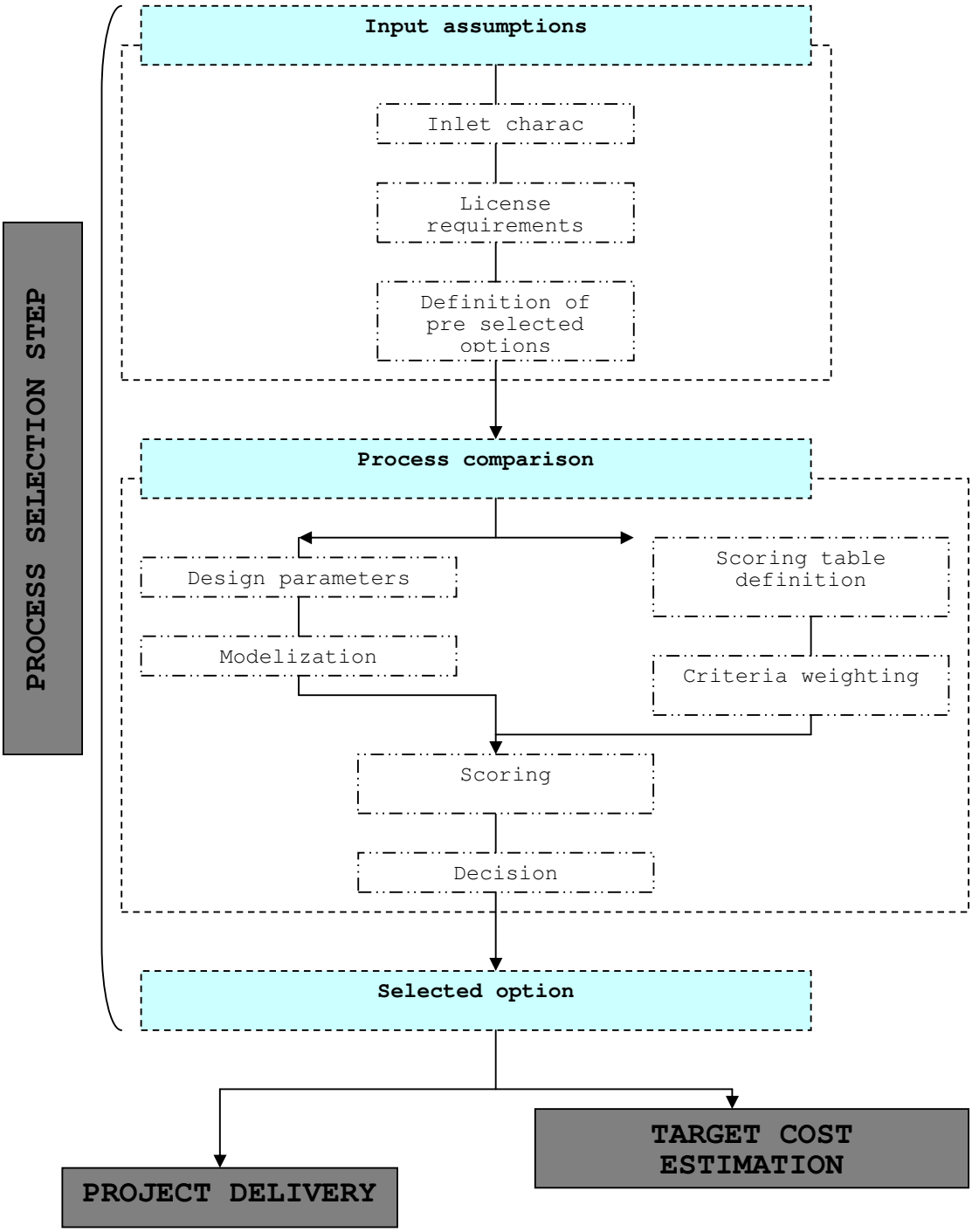

FIGURE 1: PROCESS SELECTION SCHEMA

Regarding the figure 1, it has been acknowldeged by the Program that the workshop will aim to :

- **Goal 1 – "assumptions presentation"** : present for information the results of the work done on :
  - the raw wastewater characterization,
  - the comparison of inputs between Stantec and the Program (including the comparison between Simulo and BioWin models),
  - the license requirements,
  - comparison criteria table;
- **Goal 2 – "process optimization"** : present and discuss the process description of the pre selected options – review alternatives for refinement;
- **Goal 3 – "pre-design review"** : present and discuss the results of the pre-design done;
- **Goal 4 – "pre scoring scan"** : go through the technical criteria table for each option.

3. GOAL 1 : ASSUMPTIONS PRESENTATION

Since the Program started to work on the SEWPCC project, a lot of the work has been done on the definition of the assumptions for the South End plant. The work has mainly concerned the raw wastewater characterization, the license interpretation, the analysis of what had been done previously by Stantec and the definition of the comparison criteria.

The Program will present to the EAP the results obtained.

Important note : during a first presentation meeting of the pre selected options (July, 23rd 2010), some significant discrepancies have been identified between Stantec's design for option C and G and the Program's design for the option 1 and 2 (option 1 being similar to option C and option 2 to option G). Thus, the explanation of these discrepancies will be part of the goal n°1 as well as the comparison of the 2 modeling software used : BioWin for Stantec and Simulo for Véolia.

4. GOAL 2 : PROCESS OPTIMIZATION

The Program has pre selected 4 process options and started working on them in order to select the best one for the further steps of the project. The pre selected options have been chosen by the Program based on its experience and on the widest range possible of existing technologies.

The aim of the process optimization won't be to redefine each option but only to discuss their possible fine tuning, as it has been initiated during the presentation meeting of July, 23rd 2010. This will lead to 4 optimized pre selected options.

Important note : any additional process option raised by the EAP will be discussed during the workshop to figure out if it should replace one of the existing pre selected options. Indeed, it is acknowledged that at the end of the workshop there will be no more than **three (3) pre selected options** which will be compared futher.

5. GOAL 3 : PRE DESIGN REVIEW

For each pre selected option, the Program will present the results of the pre design realized with Simulo.

The design parameters will be reviewed by the EAP in order to i) check that all the options have been designed with standard design parameters in order to insure the fairness of the comparison and ii) identify the opportunities of optimization for each solution.

Indeed, as the Program won't have time to optimize the design of each option at this stage of the project, it is acknowledged that the CAPEX of each option will be estimated on the basis of a standard design and that the design optimization capacity will be scored as an opportunity in the R&O matrix.

6. GOAL 4 : PRE SCORING SCAN

To complete the review, the Program expects the EAP to make a pre scoring scan of the 4 pre selected options to set out the key factors to consider in scoring by option.

Important note : no indication of numbers will be given by the EAP for any criteria in order to insure the objectivity of the future scoring. The EAP will point out the strength and the weakness of each option regarding every comparison criteria.

7. WORKSHOP TEAMS

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1. THE EXPERTS TEAM

The expert advisory panel (EAP) is planned to be composed of the following persons :

- Dr. Jan Oleszkiewicz (University of Manitoba),
- Dr. Jong Hyuk Hwang (University of Manitoba),
- Qiuyan Yuan -note taker- (Ph.D candidate – University of Manitoba),
- Dr. JB Neethling (HDR Sacramento CA),
- Frank Rogalla (Aqualia in Madrid, Spain) and
- Joe Husband (Malcolm & Pirnie New York).

Joe Husband won't attend the workshop but should reachable by phone if required.

2. THE PROGRAM TEAM

The Program team will be composed as follows :

- Chairmen :
  - Nick Szoke (COW),
  - Aymeric Simon (VW),

- Core technical team :
  - Antonella Fioravanti, process expert (VW),
  - Daniel Lamarre, senior process engineer (VW),
  - Kumar Upendrakumar, wastewater expert (VW),
  - Kim Sorensen, waste water technical department (VW),
  - Dominika Celmer Repin (COW),
  - Arnold Permut (COW),
  - Ken Smyrski (COW),
  - Ron Hahlweg (COW),
  - Al Zaleski (COW),
  - Andrew Ziegler (COW)

- Partial / Optional :
  - Barry Macbride (COW),
  - Moira Geer, Leadership Team (COW),
  - Bruno Valla, Project leader – Management Team (VW),
  - Tom Pearson, Management Team (COW),
  - Mike Shkolny, Management Team (COW),
  - Bill Borlase, Management Team (COW),
  - Dwight Gibson (COW),
  - Jerry Comeau (COW),

8. PROPOSED AGENDA AND LOGISTICAL ISSUES

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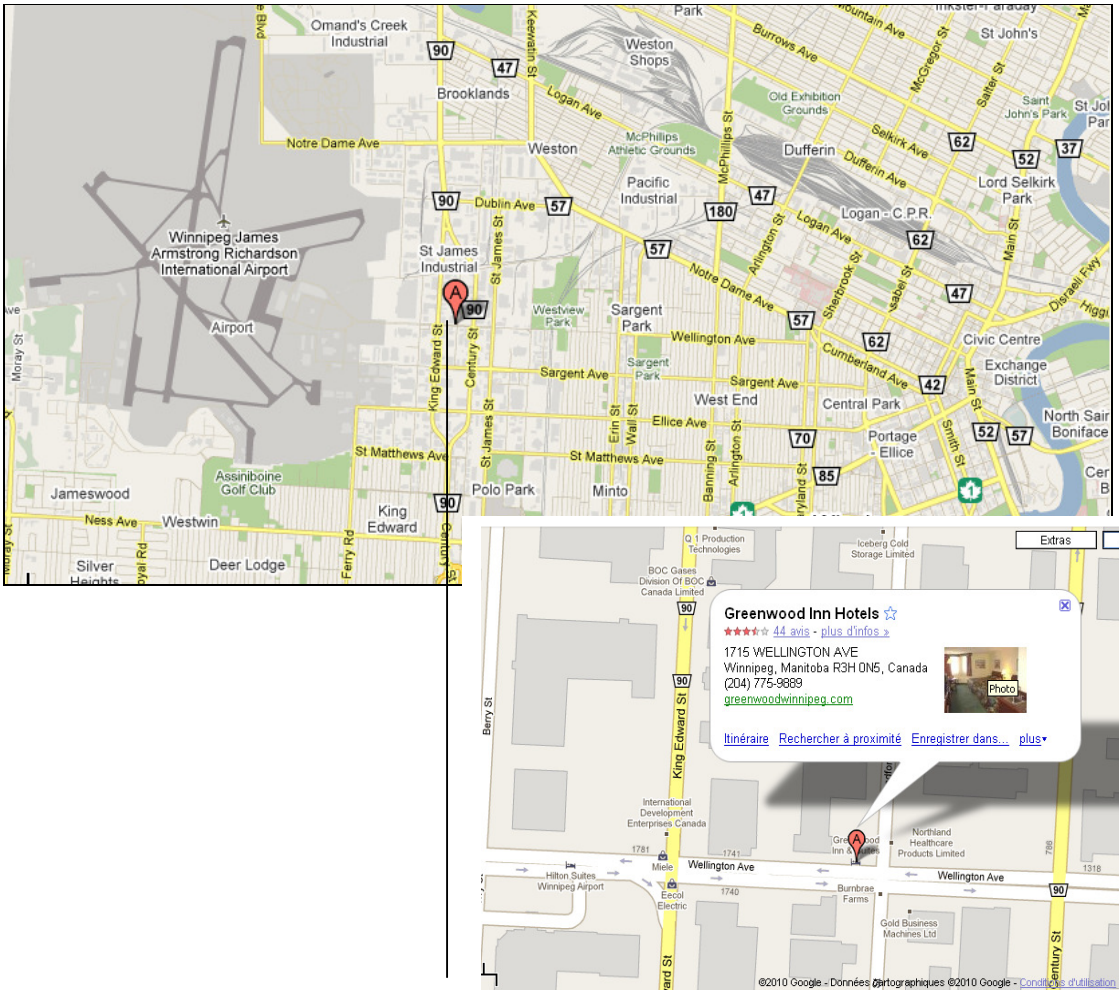
3. DATE

The workshop is scheduled from Aug 31st to Sept 3rd 2010, in Winnipeg.

4. LOCATION

The meetings will take place in the Spruce Room of the Greenwood Inns and Suites Conference center.

Hotel address :
1715 Wellington Ave.
Winnipeg, Manitoba R3H 0G1



Rooms are booked in the same hotel for the following people :

	Rooms booking	
Antonella Fioravanti	From Aug 30th to Sept 4th	
Daniel Lamarre	From Aug 30th to Sept 3rd	
Kumar Upendrakumar	From Aug 31st to Sept 4th	
Kim Sorensen	From Aug 30th to Sept 2nd	
Jan Oleszkiewicz	From Aug 31st to Sept 3rd	
JB Neethling	From Aug 30th to Sept 3rd	
Frank Rogalla	From Aug 30th to Sept 3rd	(late arrival on Aug 30th)

5. AGENDA

The proposed agenda is as follows :

Tuesday Aug 31st	7:30 - 8:00	Continental breakfast	
	8:00 - 10:00	Introduction / presentation of agenda "Rules" of the workshop	Goal 1
	10:00 - 10:15	Coffee break	
	10:15 - 12:15	Inlet & outlet assumptions Scoring table presentation	Goal 1
	12:15 - 13:00	Lunch	
	13:00 - 15:00	Process selection background & presentation of 4 preselected options	Goal 1
	15:00 - 15:15	Coffee break	
	15:15 - 17:00	Discussion about Simulo and BioWin	Goal 1
Wednesday Sept 1st	7:30 - 8:00	Continental breakfast	
	8:00 - 10:00	Option 3 : process optimization & design review	Goals 2&3
	10:00 - 10:15	Coffee break	
	10:15 - 12:15	Option 4 : process optimization & design review	Goals 2&3
	12:15 - 13:00	Lunch	
	13:00 - 15:00	Option 2 : process optimization & design review	Goals 2&3
	15:00 - 15:15	Coffee break	
	15:15 - 17:00	Option 1 : process optimization & design review	Goals 2&3
Thursday Sept 2nd	7:30 - 8:00	Continental breakfast	
	8:00 - 10:00	Pre scoring	Goal 4
	10:00 - 10:15	Coffee break	
	10:15 - 12:15	Pre scoring	Goal 4
	12:15 - 13:00	Lunch	
	13:00 - 15:00	Pre scoring	Goal 4
	15:00 - 15:15	Coffee break	
	15:15 - 17:00	Preparation of the presentation to MT	
Friday Sept 3rd	7:30 - 8:00	Continental breakfast	
	8:00 - 10:00	Summary of the workshop	
	10:00 - 10:15	Coffee break	
	10:15 - 12:15	Presentation of the results to the Management Team	
	12:15 - 13:00	Lunch	

9. DELIVERABLES

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6. THE PROCESS SELECTION REPORT

In order to be efficient as soon as the workshop will begin, the Program aims to provide the EAP a "process selection report". This report will, as far as possible, be provided before the workshop begins.
The table of content of the report should be as follow :

Important : the part V will be completed after the workshop.

7. WORKSHOP'S DELIVERABLE

The minutes of all the meetings will be taken by a note taker. They will be consolidated at the end of each day and distribute to the attendees every morning. A review of these minutes will be done at the beginning of each day. The minutes will present clearly the progress of the work done and the issues newly raised and still ongoing.

In addition a report is expected from the EAP after the workshop. The details of this report will be given at the beginning of the workshop.