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**Minutes of a Meeting of the Technical Oversight Panel (TOP)
Held October 6, 2015, in the Room 333, 625 Fisgard St., Victoria, BC**

Present: **TOP Members:** T. Coady (Chair), S. Arora, R. Atkins, R. Bailey, B. Jank, J. Snyder
Consultants: S. Brubacher, Urban Systems; E. Lee, Urban Systems; C. Town, Urban Systems
Staff: J. Grelson, Project Scheduler, Parks & Environmental Services; D. Telford, Project Manager, Core Area Wastewater and Resource Recovery Project; D. Vanmoerkerke (recorder)

TOP members T. Coady, S. Arora, R. Bailey, B. Jank and J. Snyder; and consultants S. Brubacher and C. Town participated in the meeting via teleconference.

The meeting was called to order at 11:02 am.

1. Approval of Agenda

MOVED by R. Bailey, **SECONDED** by B. Jank,
That the agenda be approved as circulated.

CARRIED

2. Adoption of Minutes from September 28, 2015

MOVED by R. Atkins, **SECONDED** by J. Snyder,
That the minutes from the meeting held September 28, 2015 be approved as circulated.

CARRIED

3. Review of Revised Critical Path Schedule

Due to the tight timeline, Urban Systems/Carollo will not provide TOP with a second draft of Technical Memo #1 for comment prior to submission to the Core Area Liquid Waste Management Committee (CALWMC). Urban Systems/Carollo will submit the final draft to TOP, as submitted to CALWMC, by October 8. TOP will provide its comments to the CALWMC by October 12. TOP members will provide any further comments they may have on the revised final draft by adding "Sticky Notes" to the document by October 14. Technical Memo #1 will be considered for final approval by the CALWMC at its meeting on November 4.

The intent is for TOP to have two opportunities to review future draft technical memos before Urban Systems/Carollo's submission to the CALWMC.

Discussion followed on updating the critical path schedule, including all reporting dates, breaking down tasks and dates for Technical Memo #2, target dates for TOP comments, and decision tree for each technical memo. CRD will work with consultants and TOP to add more detail to the critical path schedule, including a subset for the public consultation process, by October 8. The critical path schedule will be Task Deliverable #3 for Technical Memo #1.

CALWMC will consider draft Technical Memo #2 at its meeting on November 4 as long as direction received from the CALWMC on October 14 enables Urban Systems/Carollo to proceed with the work on Technical Memo #2.

CALWMC discussed the timing of the public consultation process at its meeting on October 2. The Liquid Waste Management Plan (LWMP) Amendment Schedule was revised to start public engagement on the option sets on October 2 and carry through to December 2 with final public consultation in early December. The revised amendment schedule will be considered by the CALWMC on October 14.

On December 2, CALWMC is scheduled to approve the options sets chosen for the costing exercise and to take forward for public consultation. Connecting public engagement during October is crucial to maintaining the schedule and is a parallel process.

Urban Systems/Carollo will not have a deliverable on Technical Memo #2 by the October 22 TOP face-to-face meeting. The consultants plan to give TOP a draft of Technical Memo #2 on October 26 for comments back to the consultants by October 28, then to the CRD by October 29 for the November 4 CALWMC meeting. Urban Systems/Carollo is looking for direction from the CALWMC on November 4 to complete analysis for Technical Memo #2 for final approval on November 25.

The Westside Select Committee has moved forward with its option sets and the Eastside Select Committee is scheduled to meet on October 21 to consider its remaining option sets.

TOP's next face-to-face meeting is rescheduled to October 22 and a meeting with potential vendors will be scheduled on October 23.

4. Review of Technical Oversight Panel Technical Memo #1 Comments

The action list from TOP's September 28 meeting was reviewed. Items 1, 2, 3, 13 and 15 have been completed. Items 4, 5, 6, 7, 8, 10, 11 were covered in documents provided by TOP members to the consultants. Items 9, 12 and 14 are outstanding

Discussion followed on the written comments on Technical Memo #1 that were submitted by B. Jank, S. Arora and R. Bailey, and the consultants' response to those comments:

- Urban Systems/Carollo will edit the influent quality section to add organic loads
- the consultants' terms of reference was based on looking at the market for reuse opportunities and the ocean outfall
- Colwood's project team sent a document to the Ministry of Environment (MOE) dated July 7, 2015, regarding the city's wastewater recycling project (a copy will be distributed to TOP members)
- TOP would like to meet with Colwood's project team about their work on stream augmentation and aquifer recharge and their interface with MOE, and the viability of that option before Urban Systems/Carollo meet with the regulators
- Urban Systems/Carollo have confirmed for the Westside Select Committee that criteria required for an aquifer recharge system is within MOE regulations and that the regulation requires an alternate disposal option (e.g., disposal to CRD trunk for treatment)
- B. Jank would like the criteria to include a membrane bioreactor system as a positive barrier that would not require a bypass; regulatory alternatives will have to be investigated
- Urban Systems/Carollo is restricted from considering technologies that are not in provincial regulations

- concern was expressed about not having enough time to proceed through the sequence of steps that have to be completed before proceeding with costing initiatives
- CALWMC may want to consider an option set that is more innovative and has more cost savings than a traditional system required by PPP Canada
- Urban Systems/Carollo prefer to put in the criteria document what can be defended
- distribution option sets will be outlined in detail in Technical Memo #2
- stream augmentation and aquifer recharge can deal with treated effluent and 100% reuse
- Langford is an ideal place for aquifer recharge
- Calgary-based Sewage Recycling Systems (SRS) should be invited to the vendor meeting on October 23
- Urban Systems/Carollo is suggesting 2045 as the planning horizon for lifecycle costing and have come up with a methodology to generate those numbers
- direction from the Westside Select Committee on September 29 clarified use of existing infrastructure and sewer sheds and respecting the flows how they flow today
- Urban Systems/Carollo will reference the Stantec study on influent criteria
- CALWMC is hopeful the funding agencies will consider an additional request for more funding for infrastructure or levels of service that were not part of the original request
- Appendix C shows analyses done by the CRD on a membrane plant and the Saanich Peninsula secondary process which shows different levels of emerging contaminants removal that will be brought into the body of the text
- Urban Systems/Carollo were brought in to provide an independent perspective so they are developing cost estimates from their own sources and Discussion Paper 036-DP-2 Development of Distributed Wastewater Management Strategies prepared by CH2M Hill will be considered for consistencies
- Urban Systems/Carollo will add text on how to derive lifecycle costs that is dependent on technology
- need to ensure all costing assumptions are clear to prevent inaccurate impressions
- need to clear that capital project costs reflected in Table 5.1 is a small percentage of total operating cost with -15% and +25% range of accuracy
- long-term water supply trends need to be considered when considering aquifer recharge
- Urban Systems/Carollo will add background information to the preliminary information about resource recovery
- relative to the issue of recycled water, water supply and watershed, a perspective of recycled water opportunities is needed and that needs to be reconciled with water supply of the region
- Technical Memo #2 will go into more detail about the supply and demand for water recycling and reuse potential
- need a process that leads from broader inventory of options and a methodology to a target market
- resource recovery has the biggest potential and it is worthwhile to spend time to optimize the options relative to recycled water usage

5. Discussion of Budget versus Funding and Cost Criteria

and

6. Discussion of Project Delivery and Cost Criteria

R. Atkins spoke to his report to TOP. There has been critical talk about lifecycle costing being geared to potential revenue. The methodology needs to be fleshed out and developed. Revenue is a big risk item in costing. Liquid waste treatment is key to the

whole program. There may be some by-product that ameliorates the cost but that will incur additional capital cost.

Reference was made to the generic table in Technical Memo #1 that shows capital cost breakdown and is preceded by a paragraph that introduces lifecycle costing, which may be misleading. Urban Systems/Carollo will add a section on the elements of lifecycle costs, such as capital cost, time factor, and lifecycle cost for each option, so they are treated with the same level of importance.

The CRD is starting to look at options for funding other than from the forms of funding currently agreed to. Additional funding will depend on the final choice of options. The CRD is gearing to establishing a preliminary cost forecast. The main purpose of costing is for comparative purposes. The CRD is a long way from establishing a budget.

As consultants work towards Technical Memo #4, there is a requirement in the costing section to support the funding application. D. Telford will provide TOP with a summary of the requirements for MOE.

R. Atkins would prefer the CRD consider a design/build/construct/operate procurement method to diminish the risk to the CRD. This is a complex project particularly if things are not well defined, such as revenues.

TOP requested that Urban Systems/Carollo add a paragraph on project delivery options to Technical Memo #1 to ensure readers understand some options are more suited to some project delivery styles that will have to become part of the evaluation criteria.

R. Atkins would like to see the source of cost information reflect local cost indicators instead of Engineering News Record cost information. TOP was advised that, based on legal advice, confidential financial costs for the winning request for proposals are not available.

6. New Business

None.

7. Adjournment

MOVED by S. Arora, **SECONDED** by B. Jank,
That the meeting be adjourned at 1:10 am.

CARRIED

8. Next Meeting: Tuesday, October 13, 2015 (phone conference)

CHAIR