Whitewater Kayaking Association of British Columbia

Phone: (604) 515-6376
Web Site: www.whitewater.org
E-mail: admin@whitewater.org

PO Box 91549 West Vancouver
Postal Outlet, West Vancouver, BC
V7V 3P2

May 5, 2005

Knight Piésold Ltd.
1400 - 750 West Pender
Vancouver, B.C.
Canada V6C 2T8

Attention: Sam Mottram

Hello Sam:

To follow up on our site visit on April 18, 2005 and the memorandum you distributed on April 26, 2005 this letter outlines some of the items that have been brought forward by the paddling community as outstanding concerns regarding the Rutherford facility.

While most of these items have been discussed previously, there is a real concern that verbal interactions are not likely to be recalled months, or years, into the future, and the paddlers feel that getting these concerns documented is important, as the people involved are likely to change over time.

Certainly, if I were no longer involved, there would be a large loss of information and understanding as to the process of construction and agreements and understandings regarding the facility, and of the course in general. We feel that written documents provide some continuity on these matters, and while this is not intended to become an onerous list of nit-picking items, we feel that documenting concerns is required.

Additions to the April 26 Memorandum

1) The issue of the rip-rap sizing on the exterior (east) berm that separates the course from the Rutherford Creek drainage proper has been brought forward. Given the dimensions on the plans and drawings, the paddlers have noted that the rip-rap does not appear to be of the size specified.

We understand that the contractor, Peter Kiewit, has assured both you and the paddling community that the required rip-rap is in place, under the smaller debris which is overlaid on the rip-rap.

We believe this is a key item in terms of the course surviving high water and flood events, and the appearance is that the rip-rap is smaller than specified.

2) The course appears to be backing up water above Squamish Canyon. This is of concern as this appears to be occurring at the lower flows we have tested with to date (up to 8.8 cms).

There have been a number of discussions of this previously, and during construction it was noted that some material would be removed on the outside (river left side) of the entrance corner, and that the inside (river right side) of the channel has too much material on the sill that forms the lip of the drop. This material was marked and discussed during our site visit in August of 2004, and this was not subsequently removed.

While we agree that testing at full flows may prove that this is not an issue, we are concerned however that given what we know now, the water is backing up a bit, and the cross section profile on both sides of the midstream obstacle at the entrance to Squamish Canyon appears to be contributing to that.

3) There are a number of boulders which are grouted in place with undercut or hazardous upstream faces. While we attempted to identify most of those in August (at which time most of those were re-grouted to eliminate or reduce the upstream undercuts) the emphasis then was on the bottom portion (that is base and lower sides) of the channel. Should water depths be increased, as is expected due to installation of the movable obstacles, there are a number of boulders which may pose a safety hazard, and these will need to be evaluated at the increased water depths, and perhaps re-grouted as well.

4) The kayak pool proper looks to have less than design depth at the lower flows we tested at. We agree that placing a small weir across the main channel just downstream of the entrance to the pool will increase the water depth, however we are hopeful that as a solution to the pool depth, this does not impact the performance or safety of the Tumbleweed or Chicken Run drop, just upstream of the pool entrance.

5) We have made efforts to survey the two major features which have safety concerns (V-Box and Vancouver Wave) and we are working toward an estimation of an appropriate solution for both those features. It is envisioned that moving the recirculation downstream will reduce the hazard. While we are making our best efforts, as are you, at estimating a solution, the paddlers feel that it is unlikely that we will get everything correct on the first iteration, and would hope that despite concerns as to the costs and timing of further iterations (if required) these will be undertaken, if need be.

6) The moving of the final obstacles on the course (the line of boulders below Twin Falls) to produce greater water depth at the take-out eddy may back water up into Twin Falls, and in doing so reduce the height of the drop, and therefore reduce the fish barrier aspect of the drop, which was one of the key factors in its design.

As well, the concern has been raised that this will likely also increase the size of the recirculation below the drop, which would be of concern as the recirculation appears to be problematic now. This is of concern as during construction there was discussion that the depression at the take-out eddy was not sufficient, and this was noted as an item to be remedied before the final grouting occurred. This did not occur, and while we agree that backing up the water will increase the depth in the take-out eddy area, we are concerned that this might occur with the resulting concerns noted above.

As well, should the deflection of more water into the river left channel in Twin Falls (the lower of the two weirs) be required to alleviate the recirculation at Twin Falls we have seen in testing to date, the concern is that the river left wall will preclude exit from any recirculation that may be formed to a larger degree in the river left channel.

This was discussed at length on a number of occasions during construction, and while testing at full flows may reveal this is not an issue, we have concerns that the vertical nature of the left wall is going to be of concern. We feel that the river left wall below Twin Falls was not modified as discussed in August of 2004, and while we agree that testing at full flows, and other modifications that are made may show this to not be of concern, we are concerned that the structure of the river left wall will be problematic at higher flows. As such this will be a difficult situation to remedy, if it indeed does come to be of concern.

7) While not discussed during our April 2005 site visit, we have previously asked to be given an electronic copy of the plans for the course, in a CAD program file format. We feel this is important as in the future the association will not have the resources to undertake further design work, and we feel that having a set of plans for what is in place is important for any future work that may be undertaken by the association, and for understanding and documenting what is in place.

This has been discussed previously; however this matter has yet to be resolved.

To conclude, we are excited that this facility is nearing completion, and while there have been a number of teething issues as we have worked toward building the facility, and certainly a number of disagreements and to how that should be done, in the larger perspective we are nearing completion of what will be a monumental achievement by all involved, and a notable resource for paddlers in this area, and in Western Canada.

The paddling community is as guilty as anyone in loosing sight of that at times, and the comments from Nick during the April visit as to the relative lack of issues, particularly given the magnitude of the whitewater course, and the first time through for nearly everyone involved, were a reminder of the huge success this should be for everyone. With that as a point for re-focus, the progress to date has been immense.

We look forward to finishing that success.

Sincerely

Stuart Smith
WKABC River Projects Coordinator

PO Box 5537
Squamish, BC
V0N 3G0
Phone/Fax: (604) 815-4113
E-mail: riverman@shaw.ca