



DEPARTMENT OF THE ARMY
WASHINGTON AQUEDUCT
U.S. ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT
5900 MACARTHUR BOULEVARD, N.W.
WASHINGTON, D.C. 20016-2514

May 3, 2007

Office of the General Manager

Mr. Jon M. Capacasa
Director, Water Protection Division
US EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Capacasa:

Washington Aqueduct is requesting modifications to the Federal Facilities Compliance Agreement (FFCA) Docket No. CWA-03-2003-0136DN. The requested modifications are to the interim and final milestones set forth in paragraph 22 of the referenced agreement. The modifications we are seeking are required to allow us to efficiently and safely provide the planned project facilities and processes necessary to avoid returning sediment and coagulant to the Potomac River. Please note that such a final milestone modification would not have the effect of making any previously considered project alternative more viable. None of the other project alternatives considered and ultimately rejected at any point in our National Environmental Policy Act (NEPA) evaluation process were rejected solely based upon time or schedule concerns. Also, since all alternatives except the status quo of returning the residuals to the Potomac River involved construction, the costs of all alternatives would have risen due to material cost increases due to United States gulf coast reconstruction and international markets.

Since the issuance of the FFCA in June 2003 Washington Aqueduct has been fully engaged and working diligently to study alternatives and to design sediment collection and treatment facilities to bring its sedimentation basins' discharges into compliance with the discharge limitations of its National Pollutant Discharge Elimination System (NPDES) permit DC0000019, issued the same year. We believe that the facilities and processes that are being designed will allow Washington Aqueduct to meet with great reliability the numeric discharge limitations set forth in NPDES permit DC0000019 and will allow Washington Aqueduct to produce and deliver water that meets all Safe Drinking Water Act standards while these facilities are constructed.

Based on the design of the facilities and processes, the field conditions, the effects of the necessary construction schedule on operations -- and looking at the cost implications of the current schedule -- we have determined that we require an 11 month extension to the current December 30, 2009, final milestone making the new deadline November 30, 2010.

We have also determined that there will be significant monetary costs and/or operational risk that will be added to this project by meeting the interim milestone of one basin obtaining permit sediment discharge limits by March 1, 2008. We are therefore requesting that this

provision be withdrawn with the understanding that all Washington Aqueduct discharges under NPDES permit DC0000019 will meet the permit's sediment limits by November 30, 2010.

Extended NEPA Process

To complete the NEPA process successfully, far more time had to be used than had been originally allocated on the schedule. There was significant interaction with community members, interest groups and federal, state, and local elected officials. Washington Aqueduct evaluated 160 residuals management alternatives and eight options, many identified by the community, and we responded to hundreds of written and verbal comments. The process was emotionally and politically charged. We found in consultation with your office, that it was necessary to offer additional public comment and review opportunities. We determined that to have done otherwise may well have resulted in litigation that would have prevented further progress in the time frame envisioned by the milestone schedule in the FFCA. The following summarizes the NPEA action we took:

- Although we sent out required letters and placed sufficient advertisements, the scoping meeting held on January 28, 2004, was poorly attended. On May 26, 2004, Washington Aqueduct held its first public forum after the scoping meeting. Although we sent out more letters and placed more advertisements, that meeting was also fairly poorly attended. However many of the community members in attendance reacted negatively to the project concepts that were presented and they mobilized community involvement. In the following weeks and months neighboring communities were brought into the discussion of the project. On September 7, 2004, we held our second public forum. Hundreds of community members attended this meeting and demanded that we slow the progress and return to the scoping period to allow the community more time to educate themselves about the project and recommend alternatives. As a result even though the formal scoping period had closed on February 11, 2004, we established a period between September 10, 2004, and November 15, 2004, during which the community could offer project alternatives. At the request of U.S. Senator Paul Sarbanes writing on behalf of his Maryland constituents, we extended the period during which the community could offer project alternatives an additional two months to February 14, 2005.
- By letter dated February 7, 2005, we notified you that we had agreed to provide an extended opportunity for the public to suggest additional alternatives and comment and requested an extension to the deadline for identifying in a notice the engineering/best management practices we would implement in order to achieve compliance with the NPDES permit. We indicated that we would use our best efforts to comply with the overall deadline for construction and operation of the facilities and processes to collect and dispose of sediment.
- The Draft Environmental Impact Statement (DEIS) was made available for a 45 day review on April 21, 2005. In response to various requests for an extension from individuals and community representatives, the comment and review period for the DEIS was extended 30 days from the originally established 45 days to 75 days.
- After a study period, much longer than anticipated due to the extremely high level of public participation, the Record of Decision was signed on October 28, 2005.

- The original FFCA schedule had contemplated, in error, the uninterrupted use of the same Architect/Engineer for both the NEPA work and the follow-on design work of the selected alternative. As a result, the original contract scope of work also reflected this intent. When the error was finally discovered, it required separate readvertisement for an Architect/Engineer for preliminary and final design services to cleanse the project of potential conflict of interest concerns under NEPA and the Federal Acquisition Regulations. Therefore even though the Record of Decision was signed on October 28, 2005, the Architect/Engineer contract for design could not be awarded until May 15, 2006. To date the Architect/Engineer has made each of his submissions on or within two weeks of the scheduled date. The 95 percent design submission is due on May 7, 2007.

Construction Issues

To construct the facilities required to remove water treatment residuals from the sedimentation basins and transport them to the processing facility, major elements of the treatment process at the Dalecarlia and the McMillan Water Treatment Plants will have to be removed from service from time to time. This is simply a consequence of having to install equipment in conduits and basins that are normally full of water. Most of these plant outages must be limited to the low-demand season (i.e., November to April) in order to safely and reliably produce quality drinking water. Planning these outages around the spawning season limitation (i.e., no discharge to the Potomac under the discharge provision in the FFCA between February 15 and June 30) and our own maintenance requirements (e.g., washing sedimentation basins and performing routine checks and services on the large production equipment) is challenging, but feasible. Since the issuance of the FFCA in June 2003, Washington Aqueduct has been fully committed, using its best engineers and managers, to design and schedule this project to meet the permit and the FFCA request, but the aforementioned additional NEPA work has had the effect of reducing the construction time available within the constraints of the FFCA timeline.

Construction of the residuals processing facility (RPF) is the critical path in the construction project. Under straight forward and non-accelerated construction conditions, we project that the construction of just that facility will take a minimum of 30 months.

When we began the project development in 2003 there were 36 months allocated to construction. Given the NEPA delays and assuming a notice to proceed in December 2007, if we implemented the most accelerated construction regime possible, the facility would not be complete until March 2010. (In the project cost issue section later in this letter we will discuss the implications of acceleration.)

The site selected for the RPF as a result of the NEPA process is the best location to minimize impacts to the neighbors. In the analysis we reported that this was a fill area. What the detailed soil borings for design of the building foundation have revealed is that the site has many large boulders through which the foundation piles must pass. Our Architect/Engineer advised us in April this year that it will not be possible to drill standard piles for the building's foundation but instead they recommend using micro-piles. Based on information they obtained from contractors, they estimate that it will take 24 weeks to drill the micro-piles in lieu of 12 weeks planned for standard piles. This condition could not have been known until the complete geotechnical work was underway. The resulting foundation using the micro-piles will be sound,

but it will require additional time to construct. This time cannot be made up later in the construction schedule.

So that would push the earliest completion date to June 30, 2010, and would still require acceleration of standard construction practices.

If March 2010 could be accomplished (and we now know it is not possible) we had planned to meet the discharge limitations of the permit upon expiration of the relief granted by the FFCA by storing residuals in the sedimentation basins after December 30, 2009, until the building was complete and in service. But the operational risk of holding the residuals in the basins from December 30, 2009, to June 30, 2010, (the end of the spawning season) is too great to accept. The 45 day period before the spawning season begins is potentially the time of greatest turbidity of raw water and freezing temperature and ice buildup in November and December could make discharge before December 30, 2009, impossible.

Project Cost Issues

When we programmed funding for this project we used the Architect/Engineer's estimated construction cost in 2004, escalated it to the midpoint of the scheduled construction and then applied a significant contingency factor in order to ensure that we had programmed and the customers had approved sufficient funds to award the construction contract. Since that time we have continued to update the estimated cost and have seen the contingency dwindle. We are concerned that the remaining period in the current schedule available for construction will tax the abilities of any contractor to construct the new facilities on this schedule within our current budget. As a result, the available funding may be exceeded. Lengthening the construction period will give the contractor relief and should result in a lower bid price that could ensure keeping the construction cost within the existing funding capacity of our customers. These are some of the specific cost issues we have considered:

- Construction of a project of this size, covering four distinct separate project locations (RPF site, Dalecarlia water treatment plant site, Georgetown Reservoir site and Dalecarlia Reservoir forebay site), is challenging for contractors. Factoring in the coordination required for sequencing the start-up and testing of the separate components and the tight water treatment plant outage limitations, the challenge becomes greater. We believe that these challenges will be reflected in high bid prices.
- Construction costs have increased dramatically in the past two years as recorded in *Engineering News Record* and other journals and articles. There are several reasons for this, including the rising costs of petroleum products, as well as demand-driven rises in the costs of both construction labor and materials internationally and nationally due to large scale construction and reconstruction efforts in China and among the states bordering the Gulf of Mexico. This factor is volatile and difficult to anticipate, but there will be an impact.
- Locally in the District of Columbia Metropolitan Area, the timing of this project happens to coincide with the Department of Defense Base Realignment and Closure (BRAC) program. The U.S. Army Corps of Engineers, Baltimore District has advised us that they are expecting to advertise BRAC projects totaling \$2 billion in construction within the next 30 days and over \$2.5 billion in 2008. Their construction phase will coincide with

the construction solicitation for our residuals treatment project. These very large BRAC projects are sure to affect the number and the experience of contractors who may bid on the residuals project. These projects will also drain the available labor pool in the metropolitan area thereby impacting construction cost.

- The overall project cost is currently estimated at \$86 million. A project of this size would typically take about 24 months to design and 36 to 40 months to construct. All of the delays prior to beginning of design resulted in significantly shrinking the available design and construction time in order to meet the established compliance deadline. The design was accelerated as much as it could be and now we face the construction phase. A method of assessing the intensity of a construction contract is looking at the “burn rate,” or average dollars expended per month. A typical “burn rate” for a project such as our residuals project would be in the range of \$2.4 million to \$2.1 million per month (\$86 million over 36 to 40 months.) If the construction period for our project is limited to 25 months the “burn rate” is \$3.4 million per month. Construction of a project with this higher level of intensity requires contractors to expend additional resources, including working extended shifts and hiring higher priced labor. The short construction period presently planned for this project will relate to a higher construction cost. Lengthening the construction period will give the contractor some relief and should be reflected in a lower bid price.

We have consistently used our best efforts to meet the established deadline, but we now believe that we will not be able to meet the full compliance deadline of December 30, 2009. Based on the explanations in this letter, we are requesting a revised full compliance deadline of November 30, 2010. Doing this would be consistent with the previously established 36 month construction period.

Interim Milestone

As to the interim deadline for discharge limit compliance in one of the six sedimentation basins by March 1, 2008, there are three possible ways to meet that provision. One would be to drain the basin before February 15, 2008, and leave it out of service until the entire residuals treatment project was complete. Another would be to keep it in service but to setup portable dewatering equipment and clean it periodically (i.e., every three months) until the residuals treatment project is complete. The third way would be to periodically take the basin out of service and pump the contents of the basin to the Dalecarlia Reservoir forebay.

The first option is too risky. Should an upset occur in another basin we cannot artificially keep a major portion of our coagulation and sedimentation process out of service for two and a half years — especially because other basins will be out of service in this period being retrofitted with residuals collection apparatus. The second option is unnecessarily expensive both in terms of equipment rental, personnel, and disposal charges. The third option is also expensive in terms of equipment rental and it adds material back to the forebay of the reservoir which, while not unsafe for operations, is counterproductive.

Washington Aqueduct (and its customers) are fully committed to the construction and operation of well-designed, well-constructed and well-operated residuals collection facilities. Still, as we have explained earlier, the cost of meeting the interim milestone represents a significant expenditure by the customers which will be passed on as a retail rate increase to the

public and to the owners of the offices and public buildings. As discussed above, some additional costs will be necessarily spent in order to meet the final milestone. Forcing us to unnecessarily incur the other additional costs to meet the interim milestone would be unduly burdensome and will likely not result in any measurable difference in the effect on the Potomac River between the interim milestone date and when the complete facility goes into operation.

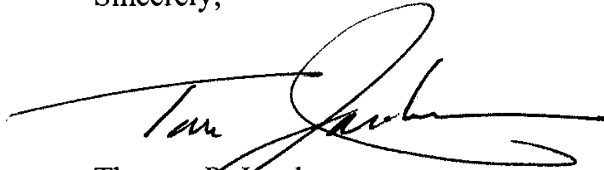
Therefore, we request that you eliminate the interim milestone for one basin to be in compliance by March 1, 2008.

We believe that the milestone shifts reflected in this letter are all that will be required (short of a force majeure event occurring during construction) and we have waited until now to ask for any adjustment in order to have the best information available. This is our best assessment of our ability to comply with the original schedule.

We are close to the time that the construction contract document must be prepared and those documents must include an allowable period of construction. We expect to advertise on August 1, 2007, so to properly incorporate a revised schedule into the documents we would appreciate a response from you by July 13, 2007.

Please let us know if you need any additional information or wish to meet. You may reach me at 202-764-0031.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Jacobus", with a long horizontal flourish extending to the right.

Thomas P. Jacobus
General Manager