

Water Pollution Control Authority  
August 31, 2011  
Regular Meeting  
Town Hall – Council Chambers

Members Present: Mr. Steve Eberle  
Mr. Walter Gancarz  
Mr. Tim Pelton (Chairman)  
Mr. John Perrotti  
Mr. Mark Witek

Members Absent: Mr. Mark Korman  
Mr. Thomas Scannell

Others Present: Mr. Dennis Dievert, Superintendent, WPCD  
Mr. Donald Chelton, AECOM (and other representatives)  
Mr. David Schrumm, Town Council Liaison

Chairman Pelton called the meeting to order at 7:30 p.m. Roll was called and a quorum determined. The assembled group recited the Pledge of Allegiance. Mr. Pelton explained to the audience how to exit the chamber in the event of an emergency, in compliance with the Fire Marshal's order.

Mr. Pelton informed the Authority that the purpose of the special meeting would be discussion and possible action regarding the Value Engineering Report regarding the WPCP Upgrade Project.

Mr. Pelton thanked Mr. Chelton and his associates of AECOM for the excellent response to the value engineering report. He commented that the firm certainly did due diligence in their response to the recommendations contained in the report.

Mr. Chelton stated that he is hopeful that the Authority will make decisions regarding the responses to the Value Engineering Report at this meeting. Authority members decided that they would discuss items which may be resolved quickly, and defer others which require more consideration for discussion later in the meeting.

The report responses are listed on a grid prepared by AECOM. Each alternative has an identification combination of letters and/or numbers which will be discussed by their identification name.

**RP-1**

Eliminate disk filters and add chemicals to the mixed liquor and increase the robustness of control equipment.

Revisit

**RP-2**

Revisit

**RP-4**Use a green roof on the building

Authority members and AECOM staff discussed the fact that there are basically two types of green roofs, one that is installed over a traditional roof and the other that is installed over a previously installed green roof.

Mr. Perrotti inquired as to what stance the Town of Cheshire has taken regarding energy saving technology relating to roof installation. Mr. Eberle stated that the Authority must look at technical issues, as certainly the Authority believes in energy saving technology, but must also consider costs related to the project. Green technology is not mandated. The purpose of the value engineering process is to try to save the Town money.

Mr. Perrotti offered that the vision of the Authority is to bring the Wastewater Treatment Plant up to new standards, including issues relating to safety. The vision is also to make the plant easy to maintain. Reliability of the plant is a vision, as well as lower life cycle and operating costs.

Mr. Gancarz questioned the need for design of phosphorus treatment at this time. He noted that the Authority is trying to reduce the costs and scope of this project. Mr. Perrotti noted the need to consider the taxpayers in Town, especially in these tough economic times. He stated that it is necessary to look at every cost saving strategy, while continuing to address the visions of the Authority. Once that is accomplished, the WPCA will have performed due diligence regarding this project.

Mr. Chelton reminded members that there is currently a great deal of green technology at the plant and new technology has also been incorporated into the current design for the upgrade. There is some legislation that mandates going green. State reimbursement may award points for green technology. Mr. Chelton stated that the current design may afford Cheshire the ability to receive funds for the incorporation of energy savings.

It was the consensus of the Authority that green technology will be incorporated into design of the upgrade wherever possible and affordable. If the Town Council decides to appropriate additional funds specifically earmarked for energy savings, the Authority will follow that direction.

Mr. Schrumm informed the Authority that there is a town wide energy audit currently being conducted.

**RP-6**

Combine the disc filter backwash with digester filtrate before sending to the grit tanks.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding RP-6.**

**RP-7**

Discharge the disc filter backwash into the aeration tank splitter box.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding RP-7.**

**DW-1**

Continued use of chemical disinfection (Chlorination/Dechlorination) vs. Implementation of UV Disinfection

Revisit

**DW-2**

Provide Shed Roof over UV Equipment vs. Enclosed Building

Revisit

**DB-1**

Provide heat recovery for ventilation system

Revisit

**DB-2**

Delete the WAS thickening and maintain current solids handling approach

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DB-2**

**DB-3**

Use gravity thickener for primary sludge and WAS. Delete WAS thickening and send denitrification backwash to the head of the WPCP

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DB-3**

**DB-4**

Use a green roof on the building.

Per previous discussion at this meeting, the green roof will not be recommended at this time.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DB-4.**

**DB-5**

**Use green walls for the building**

Per previous discussion at this meeting, the green roof will not be recommended at this time.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DB-5.**

**DCB-2**

Provide heat recovery for ventilation system

Revisit

**OB-2**

Make small addition to Operations Building and delete new Administration Building

Revisit

**OB-4**

Use a green roof on the building

Per previous discussion at this meeting, the green roof will not be recommended at this time.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding OB-4**

**OB-5**Use green walls for the building

Per previous discussion at this meeting, the green roof will not be recommended at this time.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding OB-5.**

**OB-7**Replace only the primary sludge and scum pumps. Maintain the existing WAS and RAS pumps.

Revisit

**OB-8**Delete the VFD's on the primary sludge and scum pumps.

Revisit

**IPS-1**Provide heat recovery for ventilation system

AECOM has concerns regarding corrosion of equipment, thus causing increased cost for replacement of equipment.

Revisit

**IPS-2**Replace existing pump with one large pump vs. two small pumps

AECOM does not recommend this because the larger pumps would cycle on/off at low flows and will increase wear and tear on pumps and motor.

Revisit

**IPS-4**

Delete the channel grinder and add a second manual bar screen.

AECOM does not recommend this because the manual bar rack would have to be cleaned manually when the influent screen is out of service.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding IPS-4**

**GC-1**

Delete replacement of the blowers

Revisit

**GC-1 (AECOM)**

Delete the replacement of one of the blowers

Revisit

**GC-3**

Delete replacement of the clam shell system.

AECOM states that the clam shell system will be over 60 years old at the end of the project life, causing increased maintenance and difficulty in obtaining spare parts.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding GC-3**

**EPS-2**

Retain the existing storm water pumps

AECOM does not recommend this because the pumps will be over 40 years old at the end of this project life, thus causing increased maintenance and difficulty in obtaining spare parts.

Revisit

**EPS-3**

Replace only two of the four effluent pumps with larger pumps.

AECOM does not recommend this because costs include manufacturer evaluation and refurbishment of remaining pumps for improved reliability. This relates to the vision of the WPCA regarding reliability of the system.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding EPS-3**

#### **EPS-4**

Replace pump impellers to increase their capacity

AECOM does not recommend this for the same reasons stated in EPS-3

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding EPS-4**

#### **EPS-6**

Expand the existing wet well and add a 5<sup>th</sup> pump

AECOM states that value engineering costs are overstated and it would be necessary to install additional equipment to maintain.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding EPS-6**

#### **AB-1**

Use a green roof on the building

Authority members stated that this is not recommended for the same reasons discussed previously regarding green technology.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding AB-1**

#### **AB-4**

Use green walls for the building

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding AB-4**

## ELECTRICAL

### E-4

Use the generator for peak shaving during high demand periods.

AECOM recommends this because new automatic synchronizing switchgear allows for “bump less” power transfers and protects equipment during peak shaving.

**It was the consensus of the Authority to accept the recommendation of the Value Engineering report regarding E-4.**

### E-5

Reduce the size of the emergency generator

AECOM agrees with this recommendation because the size will be reduced by eliminating some design conservatism. The actual load reduction or savings will be determined in final design

**It was the consensus of the Authority to accept the recommendation of the Value Engineering report regarding E-5**

Mr. Schrumm informed the Authority that the Town has purchased a generator on wheels which can be used in emergencies. He requested that Mr. Dievert make sure that it can be installed at the Wastewater Treatment Plant if necessary.

### E-6

Maintain the existing switchgear, put the generator in a weather proof enclosure and delete the new Generator/Switchgear Building

Revisit

## SITE WORK

### SW-1

Use grass pavers in the new Administration Building parking lot.

Mr. Chelton stated that AECOM feels that there will be additional costs associated with the use of pavers, but it is up to the Authority to weigh the advantage of green project elements. Authority members are on record as being in favor of green technology, but are charged with considering costs as well. If the Town Council advises the Authority to move in the direction of pavers, and decides to use funds for that purpose then the recommendation will be reconsidered.



**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding SW-1.**

#### **SW-2**

Use grass pavers in the new north loop road around the Administration Building

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding SW-2.**

#### **G-1**

Perform a LEED study to identify sustainability opportunities.

Discussion took place regarding green technology and Authority members stated that they are certainly in favor of energy savings, but the focus of the Authority is on reliability and cost. Mr. Pelton stated that this design is for a 20-year window with a higher mgd.

**It was the consensus of the Authority not to accept the recommendation of the Value engineering report regarding SW-2**

#### **RP-1**

Eliminate disk filters and add chemicals to the mixed liquor and increase the robustness of control equipment.

Mr. Pelton inquired of AECOM as to whether this project is scalable, or can be completed in sections. Mr. Chelton stated that even if design is not for 4 mgd today it will still be necessary to have three disk filters, two working and one spare. Design is looking to treat peak flows and thus would be difficult to scale.

Mr. Perrotti offered that phosphorous reduction processes are and will be changing drastically in the next five years. Mr. Chelton commented that this is difficult to measure, in that some current technology is in the infancy stage.

Mr. Gancarz stated that presently there is no State funding for phosphorous reduction, and there is no set limit at this point. Equipment currently is in its infancy with no reliable track record. There is no DEP order to treat phosphorous. He further commented that he is not recommending cutting phosphorous reduction out, as it would not be prudent to have to go back to the voters for another referendum in two years. He questioned whether it should be built in at this time.

Mr. Perrotti agreed that phosphorous reduction has to be included in design, but questions whether the way it is designed right now will be the best that is out there in the future. Mr. Chelton responded that innovation is ongoing with any technology.

Mr. Witek questioned how design would be impacted if phosphorous reduction is put on hold at this time. He does not recommend eliminating design, but rather to hold off until there is further information regarding design and implementation is available. He questioned whether it would have to be redesigned. Mr. Dievert responded that phosphorous reduction is a standalone operation.

Mr. Eberle questioned which proprietor's equipment AECOM would allow for. Mr. Schrumm offered that bonding the project must also be taken into consideration. He queried if the phosphorous reduction could be bid as an add alternate to the project. At that time the Authority and AECOM will know more about that type of technology.

Mr. Pelton inquired of AECOM if it would be possible to delay the phosphorous design until the end of the project in order to revisit phosphorous reduction technology. Would it be possible to build around the new design in two years? Mr. Perrotti commented that this is a non-traditional approach, but worth considering.

Mr. Chelton stated that DEP will have a phosphorous requirement/limit within the timeframe of this project. Mr. Gancarz responded that the Town will have four years after the mandate to implement the requirement. Mr. Chelton offered that some activities become sequential rather than concurrent. Mr. Gancarz stated that if phosphorous removal is carved out at this time can we wait until it is necessary to move forward. At that time there would be more information available regarding effluent and influent.

Mr. Chelton advised that the Town will pay more if phosphorous removal is not designed as part of this project. There are cost efficiencies because the contractor will already be on the site. Mr. Chelton stated that he recommends bidding the phosphorous removal as an add on, but the decision should be made as to implementation when the contract is awarded. He stated that selection of the bidder would be somewhat more complicated.

In response to a query from Mr. Pelton, Mr. Chelton stated that his firm is almost ready to put the package out to bid—perhaps within the month. In response to a query from Mr. Witek, Mr. Chelton stated that there is space reserved on the site for this project. He also commented that there will be an inflation factor to be considered if phosphorous removal design is delayed.

Mr. Gancarz recommended that phosphorous removal be an add alternate to the project. Mr. Dievert commented that for the next four years the Town will not be required to remove phosphorous and the disk filter decision can be made at a later date. Mr. Gancarz commented that it is really only a question of WHEN it will be done.

Mr. Chelton reminded the Authority that this project is going to utilize a pre-selection process, as there are only two major manufacturers of phosphorous removal equipment.

Pre selection affords competitive bidding for equipment selection and contractor selection. There is no cost associated with the bidding process at this time other than design costs.

Mr. Pelton stated that it is necessary to start the pre-selection process soon. Mr. Chelton offered that design can continue during the pre-selection process. It was the consensus of the Authority that disk filter technology is the way to go, the question remains as to when is the best time to initiate design.

Mr. Chelton reminded the Authority that it will be necessary to approve an amendment to AECOM's contract to continue with the pre-selection process. He stated that it was not determined until design got underway that the pre-selection process should be used. He stated that the amendment was presented at the July meeting. AECOM needs this authorization to proceed with design.

Mr. Perrotti opined that the pre-selection process should have been incorporated into original design costs, as it was known what type of process would work best with this project. He stated that it should have been expected that there be a pre-selection process.

Mr. Gancarz agreed, stating that AECOM prepared the Facilities Plan and should have had the knowledge that pre-selection would have to be used. He further commented that he is not opposed to some additional costs which will be incurred, i.e. for monitoring or tasks associated with it.

Mr. Chelton stated that he is aware of DEP regulations. The issue is that the realization of the need for pre-selection came into the picture late. He offered that most likely no other consultant who came before the Authority mentioned that there would have to be a pre-selection process because they also did not know. He stated that any way it is viewed, the agreement does not include design work related to the pre-selection process.

In response to a query from the Authority, it was noted that the amendment cost will be approximately \$91,000. Mr. Chelton informed the Authority that because of the fact that there is some disagreement with this amendment, in addition to the long standing relationship that AECOM has had over the years, his firm will reduce the fee by 10%, which will mean that the work will be done at cost.

Mr. Perrotti suggested that the Authority do some value engineering on the amendment to see where some costs can be cut. Mr. Pelton expressed concern that if the Authority does not approve the amendment that design work will stop. Mr. Gancarz offered that there are different interpretations regarding the amendment—some areas are definitely costs that should be reimbursable, but others should have been known after the Facilities Report was completed—specifically the pre-selection process.

Mr. Chelton reminded members that it is not known what the design costs for the additional work are at this time. The project is right on target at this point. He further noted that it would be possible for his firm to work up to the 1.425 M approved in the

original agreement, and then evaluate reimbursement for the remaining work. Approval of the new agreement could be put off until after the referendum. The current agreement will get the project to approximately 82% completion.

Mr. Pelton moved that the Water Pollution Control Authority approve the modification to the original agreement with AECOM for design of the WPCP which includes Value Engineering and the Pre-Selection process, which increases the original agreement to \$1,480,915.00.

After discussion, Mr. Pelton withdrew his motion.

Mr. Pelton moved that the Water Pollution Control Authority authorize AECOM to proceed with the pre-selection process for the WPCP upgrade with the understanding that it will reduce design completion from 90% to 85%. The motion was seconded by Mr. Witek.

Discussion of Motion:

Mr. Gancarz stated that while he will support the motion, he is still in disagreement that there should be an additional amendment for the pre-selection process. He does agree that there should be additional costs for certain portions of design. He does not agree with the contract in its current format.

Mr. Perrotti asked Mr. Chelton what more his firm could do to reduce design costs. He requested that Mr. Chelton consider this request. Mr. Pelton withdrew his motion and Mr. Witek withdrew his second to the motion.

Mr. Pelton recessed the meeting for ten minutes, and then resumed discussion.

Mr. Witek pointed out that this is a cost plus contract. Mr. Chelton stated that his firm will proceed with the pre-selection process. His firm is covered for expenditures at this time, and when work reaches the end of the contract amount, AECOM will stop and the Authority may consider an amendment to continue work. Mr. Chelton will consider the request of the Authority to see how the amendment amount may be reduced. Mr. Pelton commented that discussion regarding this issue will be placed on next month's agenda.

Mr. Witek suggested that there be two amendments with AECOM, one for the pre-selection process and the other for value engineering. As discussed at the last meeting, Mr. Chelton stated that his firm did not include value engineering in the original amendment, although other areas of design have come in under, so the net increase will not be the total of the value engineering costs. He will present more accurate numbers in the near future.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding RP-1.**

**DW-1**Continued use of chemical disinfection (Chlorination/Dechlorination) vs. Implementation of UV Disinfection

AECOM's stance on the use of UV disinfection is that it costs less—both in Capital costs and operating costs. Mr. Chelton stated that the value engineering report costs for chemical disinfection are low due to several items not being included in their analysis. The Value Engineering report also does not include costs for replacement parts or labor costs.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DW-1.**

**DW-2**Provide Shed Roof over Filters vs. Enclosed Building

AECOM does not recommend that the shed roof be placed over the filters rather than within the building because of increased maintenance, especially during the winter. It is also the recommendation of the manufacturer that the disk filters be enclosed in a building.

Mr. Chelton informed the Authority that AECOM does not have a strong feeling about this recommendation. He stated that many facilities that have erected a shed roof over their filters believe that they should have erected a building instead.

Mr. Dievert commented that he also can see both sides of this recommendation—the shed roof and the building enclosure. Mr. Chelton, Mr. Dievert and Authority members will look at this item more closely before making a decision.

**DB-1**Provide heat recovery for ventilation system

Mr. Gancarz offered that he is in favor of energy conservation regarding this recommendation.

Mr. Chelton stated that the energy savings are over estimated in the Value Engineering report because it was assumed that the building was solely heated with fuel oil. The building is heated with digester gas also. There are also concerns with erosion of the equipment, thus increasing costs.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DB-1.**

**DCB-2**

Provide heat recovery for ventilation system.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding DCB-2.**

**OB-2**

Make small addition to Operations Building and delete new Administration Building

A lengthy discussion ensued regarding this issue, specifically the pros and cons of leaving the lab in the old building. It was noted that the lab is small and overcrowded and the computer operator has a very small area in which to work. At times he has to move out to the reception desk to work.

Mr. Pelton suggesting leaving the lab in the old building, and providing storage area in the new administration building. In response to a query from the Authority, Mr. Dievert stated that it is not a health and/or safety issue as it is currently used. There was discussion regarding the possibility of reducing the size of the administrative building as it is proposed. Mr. Dievert commented that the original scope was only a small addition to the current building.

Mr. Pelton stated that he would like the Authority and AECOM to look at this issue in more depth. He questioned whether the Town should spend 1.7M. He said that he would like to see what could be accomplished with a smaller building.

This item will be examined further before a final decision is made.

**OB-7**

Replace only the primary sludge and scum pumps. Maintain the existing WAS and RAS pumps.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding OB-7.**

**OB-8**

Delete the VFD's on the primary sludge and scum pumps.

Mr. Chelton stated that AECOM accepts this recommendation because system controls will be provided that will allow for flow control flexibility of a VFD.

**It was the consensus of the Authority to accept the recommendation of the Value Engineering report regarding OB-8.**

**IPS-2**

Replace existing pump with one large pump vs. two small pumps

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding IPS-2.**

**GC-1**

Delete replacement of the blowers

Mr. Chelton stated AECOM does not recommend that the blowers be eliminated as they will be extremely old at the end of this project life, and will be very costly to maintain and difficult to find spare parts.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding CG-1.**

**EPS-2**

Retain the existing storm water pumps

Authority members reviewed Mr. Chelton's previous responses regarding the age of the equipment.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding EPS-2.**

**E-6**

Maintain the existing switchgear, put the generator in a weather proof enclosure and delete the new Generator/Switchgear Building

Mr. Pelton commented that the cost of \$1,356,000 for this part of the project seems extremely high. AECOM does not recommend placing the generator in a weather proof enclosure and deleting the building from the project. He stated that physical space is limited and there is a need to protect electrical equipment.

**It was the consensus of the Authority not to accept the recommendation of the Value Engineering report regarding E-6.**

Authority members discussed the budget for this project. Although it has been projected that the cost could be 30M, it is anticipated that with funding from CCI as well as the State the cost could be less. There will also be savings from the Value Engineering report. Hopefully, the bidding climate will be favorable with this project goes out to bid.

Mr. Dievert informed the Authority that money can be saved by eliminating the purchase of a new truck as was requested. Although the truck is 12 years old, he feels that it still has several good years and he can work with it.

Mr. Pelton summarized the findings at this meeting, stating that AECOM and the Authority will look further at the design of the Administration building as well as the UV shed.

## **ADJOURNMENT**

Mr. Pelton moved that the Water Pollution Control Authority adjourn at 10:05 p.m. The motion was seconded by Mr. Gancarz and carried unanimously.

Respectfully submitted,

Tim Pelton, Chairman  
Water Pollution Control Authority

Attest:

Susan F. Zwick

Distribution:

Members: W.P.C.A.  
Michael Milone, Town Manager  
David Schrumm, Town Council Liaison  
Andrew Lord, Town Attorney  
Donald Chelton/Jon Pearson, AECOM  
Joseph Michelangelo, Ex-Officio Member  
George Noewatne, Operations Manager  
Dennis Dievert, Superintendent [WPCD](#)  
Susan Zwick, Recording Secretary



