BELLEFONTE BOROUGH AUTHORITY MEETING
JANUARY 7, 2015

CALL TO ORDER

The regular meeting of the Bellefonte Borough Authority was called to order at 6:00 p.m. by Authority Chair Joe Beigle in the Bellefonte Borough Municipal Building.

Pledge of Allegiance:

ROLL CALL

Members Present: Beigle, Badger, Brown, Halderman, Thal, Clark, Scott

Members Excused:

Staff Present: Ralph Stewart, Borough Manager;
Eric Lundy, Nittany Engineering
Bob Decker, Nittany Engineering
Bob Cook, WWTP
Matt Auman
Don Holderman, Assistant Borough Manager and Acting Public Works Superintendent

Guests: Jim Anderson, JCI; Randy Schrekengast, JCI;

APPROVAL OF MINUTES

Mr. Halderman made a motion to approve the minutes of December 16, 2014. Mr. Clark seconded the motion. A voice vote was unanimous.

ELECTION OF OFFICERS

Mr. Beigle stepped down and turned the meeting over to Mr. Stewart for the election of officers. The current officers are:

Mr. Beigle - Chair
Mr. Halderman - Vice-Chair
Mr. Badger - Treasurer
Mr. Thal - Secretary

Mr. Thal made a motion to keep the current officers. Mr. Clark seconded the motion. A voice vote was unanimous.

Mr. Stewart turned the meeting back over to Mr. Beigle.

COMMUNICATIONS

ORAL

- Jim Anderson, Johnson Controls, was in charge of running the energy project at Bellefonte. The project is completed. There were ups and downs and challenges with the project. Randy has a report to show what the project has generated in savings.

Randy Schreckengast, Johnson Controls, is a Performance Engineer, which means he is responsible for the measurement verification of the energy savings. He has seven copies of his report to distribute to members while he reviewed it. The Savings Report is called an Installation Period Savings Report. It isn't part of the guaranteed savings, although they do project what the annual guarantee will be. The first year of savings isn't complete yet. The report he has discusses savings during the construction period. Savings were realized during the construction period because many of the energy conservation measures were completed before all the construction was completed. None of that is part of the guaranteed savings. It is just an added upside of the project. He included in the report a projection of what the annual savings would probably be based on the measured data they have during construction.

He reviewed the Executive Summary. Tab 1 states when the project began and sums up that it upgraded some things and provided some reduced costs. Tab 2 is the dated summary of the installation report. On the very bottom right $40,635.00 is the savings from the installation period. The way that was calculated is they looked at the measured annual savings and prorated it for the amount of days it was in service until the completion of construction. Construction was completed on August 31, 2014. The savings were from the lighting, the added insulation and infiltration induction (fixing leaks on the building exterior), replacing the boiler and chiller, a utility pump replaced and a VFD put on that, VFD's put on the ECU Basin blowers, a control system installed to control the building boiler and chiller, an energy conservation measure for demand response, and operational and maintenance savings. On Page 4 is the Annual Savings and Guarantee. This is a projected number based on numbers they had already measured. He looked at that versus the annual guarantee and came up of $101,000.00 in savings. The annual guarantee was very close to that so he feels it should break even or possibly exceed it a little. They went through the process and got a few thousand dollars of utility rebates. The next page is what the annual guarantee is versus the savings. The gray line is the guaranteed savings and the bars are what the savings actually are. Year one should be fairly close to the annual guarantee.

Randy paused to receive questions. The number for Capital Avoidance is a number agreed upon in the contract. Capital Avoidance is additional capital that was agreed upon that would be contributed to the project. It's not savings but it goes toward the annual guarantee. The numbers for the capital avoidance were the boiler, chiller replacement, controls upgrade, inflow fine screen upgrade. That amount is $53,000.00. Randy will need to get back to the Authority on what the dollar amount was for. He said the numbers were discussed up front and agreed upon. Mr. Halderman doesn't understand why all this money was spent and he is not seeing any extra money because it costs more to operate the system. He does not see any savings. The electricity this year cost more than before the project was started. If you pay the $53,000.00 for 15 years it adds up to $795,000.00. Mr. Beigle feels if a new boiler is being installed you would save money and he doesn't understand the capital avoidance. Randy will get the Authority a better explanation on this money.

Page 6 is a summary that tells which of the energy conservation measures made up the most of the project savings. The big ones were the lighting upgrade, boiler replacement, controls upgrade and infiltration reduction, which was the added insulation and sealing of the cracks in the wall.

Page 7 - lighting upgrades. The lights were upgraded at the WWTP. Newer technology was installed as far as lighting. That was based on the measurement of the lighting before and after. The watts were measured on the sample of the lighting and that was applied to the various types of lights in the project based on a reasonable sample size of a majority of the lights. The next several pages are the spreadsheet that shows the lighting types that were installed and the savings for each one, for each location of the facility and what type of light was installed there.

Page 10 shows what lights were measured and what the results were.

Building envelope is the next one. This includes insulation, infiltration reduction to make the building tighter. Just from reducing infiltration into the building made the gas bills drop. Less therms are being used. The Authority would like to see a before and after on the therms. A bill analysis was done earlier in the summer that shows that and shows how the bill has changed. When they use the price of therms they do an average rate for the year and then use an agreed upon rate that is in the contract and apply those to the calculation. It is annualized.

The next few pages show some examples of the infiltration and recording measures of where things were caulked or sealed. The first two in the garage were very significant. They added an insulating layer and ceiling into the garage at the WWTP. They also did caulking and weather stripping.

Page 14 - Boiler Replacement. There are pictures showing the new boiler and the old boiler as it was being demolished. That savings was based on the calculations done at the beginning of the project, based on the energy use, and the efficiency that is expected from the condensing boiler that was installed. It has a much smaller footprint than the new one.

Chiller replacement is similar to the boilers. There is a new piece of equipment that was installed, a chiller that uses water from the process loop to circulate through it. The improvement and efficiency was applied to the savings on the chiller.

The next one is the utility pump replacement. That was the last item completed. New variable frequency drives were put in and new pumps were put in. The horsepower was reduced. The reduction in power and run hour times the expected run hours is what they used to come up with savings on that.

Page 18 is the EQ Basin Blowers. New BFD's were installed and the savings were from operating one blower about 100% of the time and an additional blower about 20% of the time, which is different from prior operation. The power was actually measured directly on this for a period of about two weeks in the summer to see how much power the motor was using and that was applied to the calculations to come up with the annual savings. There were pictures showing what the new pieces of equipment look like at the WWTP.

Page 20 is the Control System. The pneumatic controls were replaced at the plant with DEC's to a direct digital control system. This allows the hot water and chiller systems to be controlled more closely to their set points. There were no specific measurements taken, but this is operating now tightly according to the set points. There is a web-based interface so it can be monitored.

The next one is Demand Response. This has to do with signing up for a program where you can load shed when you are called to shed electric. There was a strategy developed for that. Bellefonte is signed up in that program. JCI has the ability to monitor that program remotely and

see what the performance is. The revenue, a payment for the 2012-2013 Demand Response Year is how it was aligned in the contract since they got signed up pretty early in the process. There is a test done each year so if the Borough isn't called for an event the rate is based on the test. On the next page there is a screen shot of what that system looks like. You can see the WWTP and the Big Spring Pump House and what they did during the load test. The red and green vertical stripes show how the load dropped during the process.

Capital Cost Avoidance is on the next page and the language comes right out of the contract. Randy gave a few minutes for the Authority members to read it over. He said this was for the boiler plant boilers, the aging chiller, inflow fine screen filter and the controls upgrade for the pneumatic system. He said it varies year over year depending on things such as the pump maintenance, which doesn't happen every year. Mr. Stewart will need to get the contract out so the Authority members can read what it says in there about Capital Cost Avoidance. When Mr. Halderman sees this he feels the Authority didn't get what they thought they were getting, they didn't get what he thinks they paid for. They paid a lot of money for engineering services, which he never saw. He is still upset about things and now when he sees this Capital Cost Avoidance where the Borough has to raise taxes to pay $53,000.00 every year to help make the payment for the project that was done that JCI talked the Authority in to. He feels they were sold a bill of goods and now have a big debt with no money to pay for it. There is no money in savings like they said there would be and now they are saying the Authority has to pay $53,000.00 every year for 15 years. He feels JCI owes the Authority $53,000.00 every year for 15 years to help pay for this project. Randy said it is not the goal of JCI to pull the wool over anyone's eyes. Mr. Stewart feels the Authority needs to review the report and then go back to JCI with questions.

The next page is Operation Maintenance Standings, which is savings based on warranty on the new lamps. There is a three year warranty on the lamps and a five year warranty on the ballasts.

Page 25 shows rebates generated from lighting that came as a benefit of the project. The utility will pay you to put in high efficiency lighting. Some of that money will come from Act 29.

Tab 4 is the Appendix and shows the rates that were established.

The last page says the Authority accepts the report, but they would like some time to look over it.

Mr. Beigle said whenever this was presented to the Authority they had the money that was borrowed and felt the money saved would pay the debt. That is not the case right now. He wants to know why. The bills are higher. Randy doesn't feel there is anything in this project that made the bills go up. Randy feels the bills at the WWTP this summer was increased loading at the plant and less efficiency out of the plant. He knows this is a general answer because he doesn't have an expert standing next to him with the details. The projected savings were for year one. It took two or three years to do the construction when it was to take six months. Mr. Beigle asked Randy what he would do if he were in his shoes and what the next step would be. Mike told the Authority that it would be Budget Neutral. The Authority would like to see where the revenue savings is paying the debt. The Authority will not be satisfied until they see Budget Neutral. Randy will take these questions back to get answers.

Randy stated the contract gives the ability for them to continue measuring annually, which involves the variable. Lighting does not get re-measured. The ECU Basin Blower and the monitoring of that energy direct digital control system. If the Authority does not want that service they need to let JCI know, but it is in the contract.

The direct digital control system could be looked at remotely. Randy did this through the fall. If the Authority is going to continue service Randy would spend an afternoon trying to get that back up. There should be trending in the system for a period. All the data there is would be on the computer at the WWTP.

WRITTEN

- A copy of a letter from Nittany Engineering & Associates, LLC to Warren Miller, Executive Director, Spring-Benner-Walker Joint Authority in reference to the Response to a SBWJA letter dated December 1, 2014 on the Bellefonte Borough Authority WWTP Pending Capital Projects.

Authority members feel this is a good letter. There has not been a response back. The Authority is willing to meet with Warren Miller and SBWJA if they would like to meet.

- A letter from Randy Schreckengast, Energy Solutions Performance Engineer, Johnson Controls, requesting the Authority sign an allocation letter so they can engage an outside 3rd party to review their energy efficient design and calculations in order to determine the amount of deduction for the IRS 179D Deduction.

Authority Members do not want to sign anything at this point.

COMMITTEE REPORTS

Finance Committee – Mr. Badger reviewed the Finance Reports.

We are 100% through the year. The total water revenue was only 92% of the budget. Highlighted expenses are the Health Insurance, the pump repair, the cell phone expense, and Workmen's Comp. At the end of the year there was a net loss of $317,535.35. The checking account balance is $90,408.99. The Water Meter Loan Balance is $157,080.97. The Corning Pump House Loan is $357,556.50.

Mr. Stewart mentioned that the Authority approved rate increases that will begin with the January 2015 billing. The increase is $1.00 per 1,000 gallons for water and for wastewater it was $1.00 per quarter.

There was a question regarding insurances and the way salaries are allocated to insurances. Mr. Stewart will check with Ms. Walker to see if she could provide more detail on how she does that.

For the sewer fund the revenues were 53% of the budget and total expenses for the year was 51%. There was a net loss of $216,560.64. The checking account balance is $202,389.59. The Bond Redemption checking is $244,843.87. The Money Market Fund is $1,132,411.90. The Reliance Loan is $725,924.57. The Plant Upgrade Loan is $3,904,201.54.

Mr. Halderman made a motion to approve the Finance reports. Mr. Clark seconded the motion. A voice vote was unanimous.

ENGINEER'S REPORT:

Matt Auman was introduced as the Assistant Superintendent for Public Works.

He received a quote from L/B Water regarding the Penn Eagle Pump Station approved. To do one it would cost approximately $1,400.00. Mr. Stewart informed the Uni-Tec engineer that the Authority only wanted to do one check valve/filling station at this time. The Borough can install the check valve. DEP will inspect and then finish the permit. This could be permitted as potable water.

Water Report - by Eric Lundy

Corning Pump House - Pump Upgrades - NEA has been working on the Corning Pump House upgrades. Jason developed an equipment matrix draft for the Team's review with specific input to be provided by Martz Technologies on the contractor's requirements for the controls package. He has been working with Mr. Stewart to get additional quotes on VFD drives to get the best pricing and save some capital money.

NEA has things where they need to be and the ball is in the Authority's court as far as purchasing equipment. Things are moving forward at the pace the Authority wants it to move. The target date for construction is spring/early summer.

Bob Cook reported there were 23 applications for the job opening at the WWTP. The first round of interviews will begin Monday, January 12th.

Sewer Report - by Bob Decker

RBC System Upgrade/IFAS Evaluation - NEA has worked with staff recently to obtain a proposal from Evoqua that could also provide a very economical upgrade.

Major new concern with existing plant is the increased organic and solids loading. BIOMAG upgrade will handle this loading and we will re-rate the plant for the increased loading.

The Evoqua BIOMAG has the following advantages:

- Eliminates the need for the RBC treatment train's
- Provide additional/enhanced treatment in existing aeration tanks
- Provide increased capacity of the plant without building additional tankage. Other options will not increase the capacity. *Note, we do not anticipate to increase hydraulic capacity at this time, only organic and solid loadings, but increase in hydraulic capacity can be made at any time in the future.*
- Allow for future treatment options if effluent nutrient limit changes apply (without major plant upgrade capital). Other options will not allow this flexibility.
- A reduction in carbon (glycerin) feeding for de-nitrification.
- Very energy efficient process.

BIOMAG appears to be the best long term option that will allow for the most flexibility in future upgrades with minimal capital contributions while maintaining higher treatment.

NEA has worked with Evoqua-BIOMAG to finalize a proposal that takes advantage of the existing facility equipment and infrastructure.

NEA has forwarded a scope and capital cost estimate to SBWJA for their budgeting purposes and comment/review.

BBA received a comment letter from SBWJA on the proposed project that generally questioned the necessity of the BIOMAG treatment upgrade. BBA/NEA responded to the SBWJA letter providing additional information in an attempt to convey the necessity of the project based on increased loading in the past two years to the core area of the plant (activated sludge process). The SCI Benner Facility has been a large increase in organic loading to the plant. The activated sludge process was not upgraded in the 2008/2009 VNR upgrade based on the loading at the time (need) and the project budget/scope (funds). However, it was documented in the WQM permit as the next limiting process. As indicated, the BIOMAG process is an overall upgrade to the activated sludge process and not just the RBC trains as a clarification to SBWJA. Also noted in the BBA/NEA response, the plant influent loads have exceeded the permit. In addition, the construction of the upgrade will limit the plant to one activated sludge tank complicating the ability to maintain effluent permit limits.

A meeting will be scheduled to talk about the funding.

NPDES-EPA Pretreatment Program - Headworks Analysis - NEA met with Bob and it was decided to resubmit back to EPA.

Sludge Dewatering Equipment - Evaluation/Replacement - To be included in the plants capital project.

User Rate Analysis - NEA completed a User Rate Analysis to show the cost impact from the additional capital cost financing for the plant upgrade under 14-001K above. Please note that the User Rate Analysis assumes that SBWJA will finance their portion of the project as they have directed in recent correspondence.

Engineers Insurance Certificate - NEA completed the review of current Borough/Authority assets and corresponding insurance documentation/coverage as required annually by a loan provider. This is part of the requirement of the Bond issue.

Higher BOD Loadings - When looking at surcharges at the airport and Rockview...there is a lot in the pretreatment ordinance rules and regulations that needs to be updated within the DEP regulations. He said you need to be sure you are evaluating all customers. He also feels NEA and the Authority needs to work with the airport to see just exactly how the system works. The airport is late with two reports at the moment.

OLD BUSINESS

- Don will be the acting superintendent for Public works and Matt will be the assistant superintendent. The main goal for Public Works in the next few years is to get it set up more efficiently with better standard operating procedures, better planning and more cost effective in the operations.

Frank Noll and Bob Cook take care of the WWTP.

- Bill Houser, Blanchard Street, said around 1990 the Borough made him get on the public system. The Borough did the connection of his sewer line into the main. Whatever they used for a coupling wasn't done correctly and he has had sewer backup trouble for thirty years. He wants to know if the Borough would dig up that connection and do it right. It is under his driveway. Mr. Stewart cannot find any documentation regarding this.

Mr. Stewart will talk with him and do some sort of mutual thing. It was suggested a camera be taken in to assess it.

- At the last meeting it was mentioned that there is some data missing. Federal Authorities are looking in to this situation.

- Mr. Stewart will talk with Ms. Walker and Ms. Watson to come up with numbers for an additional charge on the Corning system, due to the upcoming upgrades that only serve those customers.

- The proposal with Martz Technologies was signed. They need the Borough to look into the communications at each of the pump houses. Costs are being explored and a choice will be made.

- Penn Eagle pumping station should be permitted soon.

- There have been ongoing water and sewer line breaks. Mr. Stewart suggested doing some proactive work on sewer lines.

- SR #144 will be resurfaced. It includes West Linn Street, all of Allegheny Street to West Bishop, parts of South Spring Street to Stoney Better. It will be done late summer/early fall. It is concrete underneath the road. There is not any capital to replace any lines but if there are any problem areas or laterals that are causing problems perhaps that work could be done.

The area of West Linn Street along the hill will be a separate project because it is such a large project.

- There was a meeting with J H Waters personnel, the people that put the original cover on at the Big Spring. They gave some preliminary thoughts about how they would address the situation, which would meet the requirements from DEP. It would be a blue aqua cover on it with a fountain on top of it. They will be sending CAD drawings and information for everyone to review. Jake Corman is in support of this project. It was suggested that some lighting be put on the fountain. Most of the funding for this would be grants and contributions from Coca Cola. The cost would be approximately $100,000.00 for the new cover.

- The sewer main line in various places is not along the road or under the road, but goes through one house to the next house. Recently there was problems with this type of line in the Logan Street area. Long-term there needs to be an alternative main line along the curb and then laterals run into each house.

- Brandy, from Senator Corman's office, received a complaint about the odor at the WWTP. The system has been tweaked to improve the situation. It seems like the problem worsened after the BNR upgrades.

NEW BUSINESS

- The Pennsylvania Public Utility Commission is hosting a cyber security tabletop exercise April 28, 2015 in Harrisburg.

ADJOURNMENT

- Mr. Thal made a motion to adjourn the January 7, 2015 meeting of the Bellefonte Borough Authority at 7:37 p.m. Mr. Clark seconded the motion. A voice vote was unanimous.