

**MINUTES OF THE REGULAR MEETING  
OF THE  
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY  
ENGINEERING COMMITTEE**

**January 14, 2010**

A Regular Meeting of the South Orange County Wastewater Authority Engineering Committee was held on Thursday, January 14, 2010, at 8:30 a.m. at the Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

The following Engineering Committee Members were present:

DAN FERONS, Santa Margarita Water District

LARRY DEES, Moulton Niguel Water District

DENNIS CAFFERTY, El Toro Water District

DAVID SHISSLER, City of Laguna Beach

ERIC BAUMAN, City of San Juan Capistrano

Also Present:

BRIAN PECK, SOCWA Director of Engineering

CHRISTINE HUTTON, SOCWA Administrative Assistant

MIKE DEMAREE, SOCWA Director of Finance

Mr. Peck, SOCWA, Director of Engineering, called the meeting to order at 8:35 a.m. and welcomed all those in attendance.

**Review/Approval of Meeting Minutes (October '09)**

DISCUSSION:

With apologies Mr. Peck stated that the October 8, 2009 Engineering Committee minutes had not been prepared in time for distribution to the Engineering Committee. These minutes will be distributed for review prior to the February 11, 2010 Engineering Committee meeting.

ACTION:

No action needed.

**Review of Draft Ten Year Plan (All Project Committees)**

DISCUSSION:

Mr. Peck presented a comparison of the proposed Ten Year Plan with the approved 2008 version. In the overlapping eight years of the two plans the 2008 Plan had an overall capital investment of \$133 million dollars while the proposed draft plan has a capital investment

of \$95 million. Mr. Bauman asked how the reduction had been achieved. Mr. Peck stated that extending the project planning time frame to 15 years had been a significant factor. The additional five years allowed some of the asset management driven projects in Years 8, 9 and 10 to be moved back. Mr. Peck stated that removing some of the more speculative projects from the Ten Year Plan had also helped to reduce cost. An example of a speculative project is the replacement of Reach B and C of the Effluent Transmission Main. It is generally agreed that these lines will need to be replaced at some point in the future. However, the timing is uncertain. Each treatment plant chapter now includes a table identifying potential speculative projects or issues. Typical issues include salinity and emerging contaminants of concern.

Mr. Peck indicated that another reason for the decrease in capital investment was a reduction in the inflation rate. The previously approved Ten Year Plan included very high inflation rates in the first two years of the Plan due to the rapid escalation in materials costs. The draft Plan is based on a flat 5% rate. The draft chapter 3 includes an interesting discussion on ENR indexes. It would seem intuitive that the current inflation rate should be almost nothing. However, this is not what one sees in considering the ENR indexes.

Mr. Peck noted that the draft Ten Year Plan focused on three types of projects: 1) retrofit – where parts of a piece of equipment are overhauled; 2) replacement – where individual pieces of equipment are replaced; and 3) reconstruction – where an entire system is replaced. The new version of the Ten Year Plan includes many examples of retrofit. This is notable because many retrofits are not large enough to be considered capital projects. These projects are generally taken care of in the Operations budget. The retrofits were included in the Ten Year Plan to show the life cycle of equipment up to replacement or reconstruction. Each year the Directors of Operations and Engineering will determine which budget a retrofit project should be placed.

Discussion ensued regarding system reconstruction. Someone asked if this included the whole structure. Mr. Peck responded that the proposed Ten Year plan includes only structural repairs. However, based on the expected 50 year life of concrete some complete structural reconstruction might be expected in the 2020's – at which point the original phase of the Latham Plant will reach 60 years of age.

Mr. Peck talked about speculative projects related to the ocean outfalls. It is possible that a future change in regulations or the Ocean Plan would require extension of the outfalls. These extensions would be huge capital investments. However, there is no evidence of a regulatory trend that would result in that type of project.

Mr. Peck indicated that the Latham Plant required the largest long term capital investment because 1) it has the oldest of facilities; 2) by comparison it's had less retrofit work than the other SOCWA facilities (except Plant 3A); and 3) the concrete is in the poorest

condition. Mr. Peck proposed that a Strategic Plan be included in the coming year's budget for the Latham Plant. The focus of the strategic plan would be long term planning for the facility. Technologies including biological membrane reactors might allow the equivalent capacity of the treatment plant to be handled with less basin space. This might allow some of the existing basins to be demolished rather than going through extensive concrete repairs. The proposed budget for the work is \$150,000. Mr. Ferons expressed concern that the \$150,000 might not be sufficient to provide a focused analysis.

The capital replacement planning for Plant 3A remains relatively light. The key concern at Plant 3A remains the continued settlement between the main structures. Various projects are included in the Ten Year Plan as place holders. But the scope for these projects remains largely undefined. It was suggested that SOCWA consider the use of flex balls.

The rate of capital investment in the Coastal Treatment Plan is slowing as all the major systems at the Coastal Plant have been retrofitted except for the secondary sedimentation basins. However, there are a series of issues at the Coastal Plant that might be expensive to address. SOCWA is just finishing a project that includes replacing the trip mechanisms in the switchgear circuit breakers. This required the use of temporary breakers from an outside vendor. It was found that the agency's breakers have become so obsolete that it was difficult to find spare units. Another switchgear issue is that within the existing facility the space around the switchgear doesn't meet National Electric Code. One potential project involves the installation of new switchgear in a new engineered building similar to the project currently being performed at the Latham Plant. Another potential issue is the handling of screenings. Compactors have been installed at other SOCWA facilities to allow the screened material to be less than 50% water by weight. However, the screenings facility at the Coastal Plant does not lend itself to the installation of the compactors. Finally, there is the Export Sludge System which remains a needed and yet ill defined project.

Mr. Peck stated that the Ten Year Plan for the Regional Treatment Plant was unique in that many of the projected expenditures might not take place. The Plan includes over \$3 million for compliance with AQMD Rule 1110.2 and the retrofit of the co-generation engines. At this point in time, the AQMD still has not approved retrofit technologies. The plan for Regional also includes a major overhaul of the digesters in the later years of the Plan. The digesters remain in relatively good condition so this project is highly speculative.

Mr. Peck indicated that the new features of the Plan include 1) a listing of speculative projects for each plant that are not included as projects in the Ten Year Plan; 2) a cost loading for the next five years; and 3) a projection of costs between Years 11 through 20. Mr. Peck indicated that the cost loading for each agency would be transmitted in the next two weeks.

Discussion ensued regarding the long term project costs. Mr. Peck indicated that whereas he had been comfortable laying out projects for Years 11 through 15 he felt that it was too nebulous to try to do the same for Years 16 through 20. Mr. Shissler stated that the twenty year projections was still important to the City of Laguna Beach. Mr. Peck indicated that an alternative approach would be to mathematically estimate annual capital investments for each facility based on statistical evaluation of the expenditures in the first 15 years of the Plan. Mr. Shissler indicated that this type of approach would be acceptable.

**ACTION:**

The Engineering Committee members are to continue review of the Ten Year Plan after receipt of the cost loading tables.

**J.B. Latham Treatment Plant East Plant Upgrade Progress Report (PC 2)**

**DISCUSSION:**

Mr. Peck presented four change orders for the East Plant Upgrade Project for Engineering Committee review:

- Change Order No. 1: Request by San Diego Gas and Electric for additional conduit and handholes at the new switchboard
- Change Order Nos. 2 and 3: Relocation and removal of buried utilities not shown on drawings. Relocation necessary for new electrical facility pad
- Change Order No. 4: Spare conduit requested by SOCWA staff during design was missing from plans. Conduit added to new duct bank installation.

The total for the four change orders is \$34,025.95 for the project. The project is well below budget. However, there remains a significant potential for additional change orders on the project due to the potential for the relocation of existing utilities. Mr. Peck presented pictures from the potholing for the suction line for the new emergency raw sewage pumps. The photos show a labyrinth of buried pipe and concrete encased duct.

**ACTION:**

The Engineering Committee approved recommendation of Change Orders No.1 through No.4 to the Board of Directors.

**Coastal Treatment Plant Headworks Upgrade Construction Services Proposal Review (PC 15)**

**DISCUSSION:**

Mr. Peck indicated that Carollo and SOCWA were still negotiating contract terms. This item is therefore not ready for Engineering Committee review.

**ACTION:**

No action needed.

**Coastal Treatment Plant Primary Upgrade Phase I Progress Report (PC 15)**

**DISCUSSION:**

Mr. Peck reported the Coastal Treatment Plant Primary Upgrade Phase I project was substantially complete including the installation of the new influent flow meters. Pascal & Ludwig is currently working on punch list items. Mr. Shissler asked when the flow numbers would be transmitted to the member agencies. Mr. Peck indicated that the calibration of the meters was currently being checked; the data will be transmitted when Mr. Wilson is comfortable with the reported numbers.

**ACTION:**

No action needed.

**Coastal Treatment Plant Primary Upgrade Phase II Request for Proposals (PC 2)**

**DISCUSSION:**

Mr. Peck noted that as the Coastal Treatment Plant Primary Upgrade Phase I project was drawing to a close it was time to begin work on Phase II of the project. The second phase will include replacing the sludge collectors in the west primary basins and installing new scum skimmers in all of the primary basins. The project will also include replacing all of the basin covers. A copy of the draft request for proposals (RFP's) was presented for review. Proposals will be limited to eight pages in length. The proposals are not to have a formal cover. They are to be simply stapled. The fee is expected to be between \$50,000 and \$100,000.

Discussion ensued among the Engineering Committee members regarding the number of recipients for the request for proposals. The Committee agreed that sending it to all ten members on the select consultant list was not warranted. Mr. Dees commented that setting a limited on the number of RFP's transmitted was not the main point; it was a matter of getting proposals back from most of the recipients.

**ACTION:**

The Engineering Committee directed Mr. Peck to contact three to six consultants who were interested in submitting a proposal for the subject project. RFP's could then be mailed out.

**Regional Treatment Plant Clarifier Upgrade – Phase I Construction Services Proposal Review (PC 17)**

**DISCUSSION:**

Mr. Peck indicated that SOCWA staff had solicited a construction services proposal from Dudek for the Regional Treatment Plant Clarifier Upgrade – Phase I. These services cover only the Emergency Interstage Pump Station (the only portion of the clarifier project designed by Dudek). The scope of services include the standard elements of most construction service contracts for SOCWA: review of shop drawings, response to requests for information, on-call inspection services, development of punch list and preparation of as-built drawings. Mr. Peck also requested a task for approximately \$10,000 of electrical inspection services. The Emergency Interstage Pump includes a significant amount of complex electrical and instrumentation work. Dudek has proposed a fee of \$82,785. This fee would amount to 5.5% of the bid amount. SOCWA staff is satisfied with this proposal. The Engineering Committee agreed to the proposed fee.

Mr. Peck indicated that there would be also be construction service agreements with Brown and Caldwell, HSA, and Harper and Associates. The fee for each these consultants will be under \$25,000. Therefore, SOCWA will handle these services through purchase orders.

Mr. Ferons asked if the existing generator can be permitted as a portable unit. Mr. Peck responded that Don King of DHK Engineers will be working on the permit application. Mr. King did not think that it would be a problem. Mr. Ferons indicated that it might be easier to get the certificate through CARB.

**ACTION:**

The Engineering Committee recommended the proposed construction services contract with Dudek for approval by the Board of Directors.

**Miscellaneous Plant 3A Issues (PC 3A)**

**DISCUSSION:**

Mr. Peck reported on the preliminary findings of a memorandum prepared by Carollo Engineers regarding the digester capacity at the Latham Treatment Plant. This study had been prepared at the direction of SOCWA staff to address the possibility of diverting waste solids from Plant 3A to the Latham Plant for digestion and dewatering. The goal would be to minimize solids handling costs (the bin hauling cost for Plant 3A is more expensive than trailer hauling from either the Regional Plant or the Latham Plant). The interagency agreement for Project Committee No. 2 indicates a solids handling capacity of 18.5 mgd for the Latham Plant. If true, this would mean that there should be sufficient solids handling capacity at the Latham Plant to handle both the Latham and the 3A solids loads.

Mr. Peck reviewed Table 3 from the Carollo memorandum. This table estimates equivalent capacities of the digesters for different criteria including stabilization and Class B compliance. SOCWA staff believes that the key criteria are odor control and operational

stability. With all four of the Latham digesters online the table sets a maximum capacity of 15.6 mgd. Currently the Latham plant is operating with the smaller Digester No.3 out of service pending reconstruction later in 2010. Under this condition the maximum Latham solids capacity ranges between 12.9 to 13.7 mgd. This is slightly higher than the current combined operating rate of 12 mgd. The possibility of doing a field test on the bypass of solids from Plant 3A to the Latham Plant will be reviewed with Mr. Wilson.

**ACTION:**

No action needed.

**Public Comments on Items 1, 2, 3, 4, 5, 6, 7 and 8**

**DISCUSSION:**

Mr. Peck asked if there were any public comments on items 1, 2, 3, 4, 5, 6, and 7 and 8. There was none.

**ACTION:**

No action needed.

There being no further business, the meeting adjourned at 9:40 a.m.

/Christine Hutton /

Christine Hutton, Administrative Assistant/Recorder