

Yacolt Conference Call – Meeting Notes
September 22, 2011

Participants: Pete Roberts, Chuck McDonald, Tim Caire, John Peterson, Doug Quinn, Steve Prather, Jeff Niten, Dave Knight, Greg Zentner, Scott Boettcher, Cathi Read

‘Virtual Tech Team’ tool

Scott Boettcher explained how Yacolt might benefit from using this tool. Pete would like to use it to help keep the town council and the public informed of project status. Scott, Pete, and Crystal will be setting up the site for Yacolt’s use within the next couple of weeks. This tool:

- Provides applicants, agencies and others with a secure web environment to track project status, history and stay on top of latest project documentation.
- Provides an efficient alternative for receiving, retrieving and storing project information. The centralized document and information repository is a very valuable resource and solution for getting new staff up to speed in the event of staff-turnover as well a very useful resource for efficiently and comprehensively building a complete administrative record.

Monitoring well locations, property acquisition

- Ecology’s concerns have been addressed in the most recent version (9-7-11) of the ‘Yacolt Hoag Street Discharge Memo.’
- Tim checked with the low bidder on the monitoring wells; they are available to begin the week of October 17. This will be funded via Kennedy Jenks’ budget for the Wastewater Facilities Plan.
- Property owners who are adjacent to the monitoring wells were sent an agreement to sign regarding access to the monitoring wells. Dave encouraged the town to get the access agreements signed before construction starts; Pete said they should be signed next week.
- Monitoring well #1 needs to be moved to the west, out of the fenced area of MCI, and out of the groundwater mounding area.

Financial Analysis

- Shaun Pigott is now under contract for the financial analysis section of the Facilities Plan and he starts soon.
- Kennedy Jenks is refining the scope of major components for the project, which will result in revised cost estimates.

Collection system

- The General Sewer Plan (GSP) compared five types of collections systems and the recommended alternative was for a vacuum system.
- Kennedy Jenks received updated proposals for the vacuum system, and also for a different type of system ‘E/One’ – grinder.
- Tim asked if KJ would need to update the GSP if they changed their recommended alternative to the E/One grinder system.

- Dave said yes, they would need to update that chapter in the GSP if they decide to change their recommended alternative, and Ecology would need to approve the updated chapter. The Facilities Plan should be consistent with the GSP.
- The Town and KJ have decided to not pursue the community drainfield/ LOSS concept that was discussed on our August 18 conference call.

Treatment System

- We reviewed the Treatment Plant Design Criteria provided by KJ.
- KJ received updated information from Biolac. KJ is now proposing to use biological phosphorus removal rather than chemical/physical phosphorus removal.
- Ecology provided more input regarding phosphorus to KJ after our last conference call. Ecology accepts that they will optimize their treatment system for biological phosphorus removal. The drainfield will also reduce phosphorus, but that means it will build up in soils and may require them to use the backup drainfield earlier. Ecology does not anticipate setting an effluent limit for phosphorus until there is further evidence of the need for it.
- Tim developed process design parameters. Dave gave his feedback on 9-20-11. Tim will re-issue assumptions.
- Tim reviewed the process design schematic.
- Tim asked – Is it adequate to not have full redundancy at screen, but use bypass/manual bar screen?
 - Dave commented that a bar screen backup is approvable from a water quality standpoint, however, if the backup is ever used, and it is not a 1/4" or less grate, biosolids won't be able to qualify as Class A or B products, and can't go to a digester (at another POTW) that produces a class A or B product. This fairly well dictates that the backup bar screen be a 1/4"(-) screen.
- Dave commented on process parameters values. Tim said he appreciated Dave's clarification on design flow conditions
- Tim asked if Dave had any suggestions on appropriate weekly peaking factor?
 - Dave noted that while the default for limits is to set max week loadings at 50% over max month. With this new and fairly water tight collection system, estimates of a max week loading of only 30% more than max month would be more acceptable for design review purposes.
- Dave noted that Ecology will need to establish design loading rates for BOD5, TSS, and ammonia. But he doesn't anticipate either a design loading rate or a permit limit for phosphorus at this juncture. Dave said that in the Facilities Plan it is important to include reliably achievable levels for BOD5, TSS, and total nitrogen in the effluent, in addition to what the manufacturer says typical average effluent concentrations will be. Ecology may use "reliably achievable" (95% confidence level) performance to set permit limits. The proponent can anticipate such limits will be more stringent than the minimum secondary standards 30 mg/l monthly ave / 45 mg/l weekly ave limits for BOD and TSS. More typical effluent limits for this type of facility are 20 mg/l monthly, 30 mg/l weekly average BOD and TSS, and total nitrogen of 10 mg/l or less. The designer should ensure that such levels would not be a problem for the proposed system to meet.

- Tim contacted Biolac with a few questions about process design criteria following our last meeting:
 - Sludge age – Tim re-did sludge calculations to 56 days; MLSS – 3000
 - Temperature – Tim will check further
 - Clarifiers – overflow rates look good; Tim - KJ should identify peak day rate for clarifiers/sludge overflow. Dave thought the peak day flow of 0.77 MGD is probably high; 0.7 MGD is OK, but if the peak flow for more than four hours will really be 0.77 MGD, then a larger clarifier should be designed because the sludges from a Biolac system are not typically the “good settling” type.
- Aeration – three each – 15 hp blowers. Dave asked if these are variable speed blowers, linked to oxygen levels in system? Tim thought this was a good suggestion, KJ should be able to incorporate an online oxygen sensor.
- Disinfection – Dave endorsed the selection of UV disinfection; which avoids the chlorinated disinfection by-products that may require limits if chlorine is used. Dave said if the town does plan to use a little chlorine somewhere in the system, please include it in the facilities plan. In-plant reuse water is often effluent that is chlorinated enough to meet health concerns, and used for washdown of components or spraybars to keep down foam.
- Dave asked what will be done with solids? Answer – Could truck solids to Salmon Creek WWTP or other nearby WWTPs, or could construct a lagoon locally. (Dave suggested such municipalities will likely want the backup screen to meet the Solid Waste rule’s screening requirements then.)
- Tim pointed out that the third column of information in the treatment plant design criteria table shows values if one unit is out of service.
- Dave commented that what KJ has shown so far seems to be designed to meet the Class 2 Reliability Requirements, and that Ecology’s assessment was that this was the appropriate reliability class for this treatment plant.

Next conference call

Tuesday, October 11, 1:30 – 3:30 pm. Cathi will send call-in instructions.