

# **Raymond - South Bend Regional Wastewater Coordinating Committee**

300 First Street • Raymond • WA 98577 •

---

## **RWCC MEETING MINUTES RAYMOND CITY HALL February 21, 2013 – 5:30 pm**

1. A regular meeting of the RWCC was held on February 21, 2013 at the Raymond City Hall. Introductions were made for three new people: Lisa Olsen (South Bend City Council), Karla Webber (South Bend City Council and new RWCC member), and Dave McAlister (Rognlin's). In attendance: Dean Parsons, Bob Jungar, Patricia Neve, Jerry Bowman, Kirk Church, Todd Stephens, Dale Little, Lisa Olsen, Karla Webber, John Dunsmoor, Tom Zerkel, Eric deMontigny, Cathi Read, Jay swift, Doug Welch, and Dave McAlister
2. Review agenda – additional items for discussion
  - a. Add construction issues
  - b. Add EZ view discussion
3. Review and approval of January 10, 2013 meeting minutes
  - a. A motion to approve the final draft of the January minutes was made by Jerry, seconded by John, and passed unanimously.
4. Regional WWTP Project Update
  - a. Construction progress
    - i. Testing
      1. A clean water test on the liquid stream portion was completed last week. Water was circulated from just downstream of the UV channel to the headworks for a week in the intended mode of operation. There are a few issues to work out, but overall it was successful.
      2. Testing was performed with automatic PLC control of the process functioning.
      3. Trojan was on site during the week of I/O testing. We were able to establish communication between the Plant PLC and the UV system PLC. One issue remains to be resolved.

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

4. The electrical system checked out with only a couple of items (including harmonic filters) to resolve after which it should be ready to go.
- ii. Liquid stream startup (on sewage) is still planned for the first week in March.
  1. Sludge (from Puyallup) will be brought in to seed the plant on Monday the 4<sup>th</sup> and Tuesday the 5<sup>th</sup>.
    - a. Puyallup sludge is preferred for seeding because it is a nitrifying sludge with very good settling characteristics. The solids in our lagoons are not acceptable for seeding as they are not very good quality. It's preferable to start a treatment plant up with microorganisms that will provide good process performance and stability.
    - b. The quantity of sludge is yet to be determined. Dale will provide Doug with the last two months of influent data for South Bend. Ron already provided data for Raymond to Aaron.
  2. Raymond Pump Station #11 will begin discharging to the new plant on Wednesday the 6<sup>th</sup>, while Raymond Pump Station #1 will be cut over Thursday the 7<sup>th</sup>. South Bend Pump Station #3 will be cut over on Monday the 11<sup>th</sup>, but will only be receiving flow from its direct service area at this time. South Bend Pump Stations #2 and #1 will cut over on Wednesday and Thursday, with Pump Station No. 1 being cut over first, followed by Pump Station No. 2. South Bend will be totally cut over by Thursday the 14<sup>th</sup>. The last Pump Station to be brought on line will be South Bend #2.
- b. Other construction related issues
  - i. The Problem: Doug Welch advised the RWCC that Rognlin's had contacted Gray and Osborne on January 31<sup>st</sup> with concerns over potential settlement related issues associated with the Plant Drain Pump Station Valve Vault and the FRP ventilation duct entering the basement of the Equipment Building. Dave McAlister's discovery of leakage was a light bulb to him and others who realized that this may have been happening for a while. It was

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

only at this point that little things like gutters not draining properly and slight slopes of floors (which should not affect any mechanical equipment) really registered. The realization that settling had probably been taking place over the last six months triggered further investigation into the extent and cause of the settlement.

ii. The Investigation and Observations:

1. Pacific Intertec out of Gresham, Oregon came to the site on Monday, February 4<sup>th</sup>, and video inspected the interior of several pipelines around the site. They inspected the influent lines to Secondary Clarifier No. 2 and the future clarifier, and several of the process pipe lines where they exit the basement of the Equipment Building. They also video-taped the Aeration Basin drain piping and the Aeration Basis Pump Station Discharge piping. The video indicated that the settlement in these pipe lines ranged from about 1 to 6 inches (the worst being the digested sludge line), although in general the observed settlement was more in the range off 2 to 4 inches. The scum line and return activated sludge lines to the future clarifier dropped immediately outside the Equipment Building, but then came back up and only had an inch to inch and a half of water in them further away from the building, indicating less settlement in this area at depth. The most extreme settlement that was observed was in the digested sludge line where it passed under the slab for the energy recovery unit. The lower FRP duct was also damaged where it enters the basement of the Equipment Building and has since been plugged using a 24-inch blind flange that had previously been used to test the outfall pipe line. The ducting to and from the energy recovery unit will be replaced as part of the mitigation measures that are currently under way.
2. At the request of Doug Welch HWA GeoSciences visited the treatment plant on February 4, 2013 to evaluate evidence of settlement at several locations around the site. Subsequently, HWA personnel returned to the site on

# Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

February 19, 2013 to take soil density tests during excavation and repair of some of the settlement-caused issues. Evidence of settlement was observed and included:

- a. Differential settlement (tipping) of the plant drain pump station valve vault located at the northwest corner of aerobic digester
- b. Similar but less significant differential settlement of the scum vault at the east end of Aeration Basin No. 1.
- c. Settlement under stair slabs on the west side of the aeration basins.
- d. Settlement under the UV disinfection facility slab.
- e. Settlement of several pipes where they pass through the below-grade walls of the Equipment Building into the backfill around the perimeter of the structure.
- f. Settlement of two below-grade circular FRP ventilation ducts where they emerge from the Equipment Building.

## 3. Testing

- a. Physical evaluation and density testing indicated that the material was loose and overly wet in the areas of settlement.
- b. G&O directed Rognlin's to excavate down to the majority of the piping exiting the Equipment Building to facilitate resetting these pipe lines to grade.
- c. Density testing performed after the plant drain valve vault had been removed also indicated that the subgrade backfill beneath the plant drain valve vault was loose and poorly compacted.

## 4. Conclusions (presented in a memorandum prepared by HWA under G&O's direction)

- a. Possible cause #1: Increase in stress in the underlying soils due to the additional surcharge that may have resulted from continued dewatering

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

- (and hence loss of buoyancy) of the main excavation during backfill around these structures. G&O believe that turning the dewatering system on and off may have exacerbated the problem.
- b. Possible cause #2: Potentially inadequate compaction of backfill around the structures, particularly beneath and around buried utilities. Test results indicate that the backfill in the areas where settlements have been observed was loose, and not in accordance with the specifications. Further testing will be performed to determine the current density of backfill in these areas.
  - c. Possible cause #3: Elastic rebound and recompression of native soils below the plant site. The excavation for the main structures significantly reduced the load on the underlying native soils, which may have rebounded slightly from their preloaded state. When backfill around the completed structures began, some recompression of the underlying native soils may have occurred. It is believed that if this recompression did occur it would have occurred soon after load was placed back on these soils.
  - d. It is possible that a combination of all three of the above have led to the observed settlement, but it is difficult at this time to determine the relative contribution of each.
  - e. Tom hypothesized that the piles provide some frictional resistance in the vicinity of the pile supported structures that may prevent the backfill from settling uniformly as a unit, and that this may somehow lead to loosening of the backfill, although he is not sure how this would occur.
5. Recommendations: G&O is proceeding under the assumption that the settlement is mostly complete, based on their interpretation of survey data over the prior couple of weeks. G&O recommended the following actions:

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

- a. Terminate dewatering as soon as possible to allow ground water to rise to normal levels.
- b. Excavate down to piping within 5 or 10 feet of the Equipment Building basement and bring the piping back to original grade. This needs to return the original flexibility to these piping systems just in case some additional settlement occurs. Some of the backfill that has been removed from these areas is fairly wet and difficult to compact. As a result G&O has given Rognlin's the option of either mixing a little cement in with the backfill to soak up the moisture or to haul in gravel base to backfill these areas. There are no plans to go below existing grading or to use CDF.
- c. Re-level piping and vaults.
  - i. Set piping back to original grades within 5 or 10 feet of the Equipment Building basement. Pipes will not be replaced. They should be able to be lifted up as is. The piping did what it was supposed to do in accommodating the settlement.
  - ii. The valve vault at the Plant Drain Pump Station will be removed and reset at its intended grade.
  - iii. Rognlin's will core drill a new penetration for the energy recovery unit return duct. The new penetration will be higher up the basement wall and will require some rework of the duct in the basement of the Equipment Building.
  - iv. The outdoor heat pumps that are located on a slab on the east side of the Equipment Building will be removed to allow access to the piping located beneath this slab. Once work on the piping has been completed this slab will be recast and the heat pumps will be reinstalled.

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

- v. Will realign the return activated sludge line to clarifier 1, which is located under the slab for the heat pumps.
    - vi. The effluent flow meter vault appears okay as is.
    - vii. The scum holding vault at the east end of the aeration basin has differential settling, but it is not significant and does not appear to be continuing so this vault will be left as is.
    - viii. As part of the ongoing survey effort to determine if additional settling is occurring, Rognlin's placed several survey stakes on the south side of aeration basin. Based on the last couple of weeks of survey data these survey stakes do not appear to be continuing to settle.
  - d. The plan is to monitor the site by regularly surveying the structures and staking around the site. The surveys will be every week for the next couple of weeks after which the site will be surveyed every other week until the project is complete. Doug will keep the RWCC up to date with testing and status reports.
6. Discussion and Questions:
- a. Corrective action cost is anticipated to be in the range of \$60,000 to \$80,000. There is a change order contingency in the RD outlay report for circumstances such as this; however, we need a better understanding of what happened before we determine how this gets paid. Is it a shared expense?
  - b. How did this happen??
    - i. Doug stated that G&O is comfortable with the work performed by Rognlin's. Doug thinks Rognlin's has done everything they were asked to do but the low compaction

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

results now are confusing. He reported that “weird things” have happened at this site: survey stakes moved; material pulled back from structures and piles. Dale: We all know soil here is tough. Everyone has done their utmost to mitigate settlement.

- ii. Was site adequately compacted? GO & Dale say yes based on the results of the compaction tests done by MTC. Compaction tests met or exceeded specifications and when they did not those areas were excavated and re-backfilled and compacted. However, initial indication from HWA’s recent compaction tests on the in-place fill indicate some areas are not well compacted. Why the results differ so much is a mystery. We await the results of additional compaction testing by HWA.
- iii. Tom noted one thing he thought was interesting. G&O had Rognlin’s excavate down to the grade beams near the north west corner of the Headworks Structure and observed that the preload material had fallen away from the underside of this structure. The grade beams for this portion of this structure were placed on Phase 1 preload with little or no excavation. The question was asked if Rognlin's re-compacted this area before they poured the grade beams. Dave noted that if they excavated 6” or more, Rognlin’s would have re-compacted, but in this case they did not.
- iv. Excavation to the bottom of the Headworks grade beams in this area did not reveal any apparent reason for soil loosening.
- v. The Headworks Building is a spread footing, slab on grade structure that was

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

- constructed on top of Phase 1 pre-load.  
This structure has differentially settled between 2 and 4 inches, with the greatest settlement occurring adjacent to the excavation for the aeration basins.
    - vi. The Control Building is also a spread footing, slab on grade structure, but this structure was constructed on the Phase II pre-load. To date this structure does not appear to have experienced much, if any, settlement.
    - vii. G&O is hopeful that these events will not affect liquid stream start up dates.
  - c. Payments are on track.
  - d. Change orders and potential construction issues – Two change orders have been acted upon
    - i. Modifications to grating support around flash mixer at the Headworks structures –\$800 – (already done)
    - ii. Change of materials for high purity water system in control bldg. \$2300 including tax (materials have been ordered).
    - iii. Doug suggests that we hold these to see if more items come in to make a change order package.
    - iv. The RWCC requested that Doug send out proposals for input and/or approval.
    - v. Future change orders will be sent to RWCC prior to work being completed.
  - e. Schedule - As of this date the project remains on schedule
  - f. Quality remains acceptable
5. Biosolids removal / lagoon decommissioning
- a. Jay's handouts
  - b. Ecology Meeting Report
    - i. Ecology's new coordinator (replacing Kyle Dorsey) is Jamie Olivarez. He works closely with Peter Lyon, also with Ecology. Jay met with them on January 25th to bring them up to speed regarding the plans for permitting and fate of the biosolids in the Raymond and South Bend lagoon WWTPS as well as for the new

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

Willapa Regional WWTP. Jay handed out copies of the meeting notes as well as comments he's received.

- ii. Their meeting lasted 4 hours and 15 minutes.
  - 1. Jamie and Peter did not seem to be at all familiar with South Bend's plan to take biosolids, screen them, and put them back along with planting cattails to restore the area as a habitat for wildlife. Jay went through analytical results, notes and feedback.
  - 2. They pushed back on leaving the Raymond biosolids on site. They asked a lot of questions but Jay is confident that we can answer all their concerns.
  - 3. Raymond has two groups of solids: 500 dry tons will need to go to a landfill. 1400 dry tons are planned to be land-applied. Ecology brought up a number of issues and questions:
    - a. Permitting to transport across state lines.
    - b. Suggestion that additional Toxicity Characteristic Leaching Potential (TCLP) and/or fish bioassay testing may need to be performed.
    - c. The path forward on both lagoons will involve public notice and meeting with SEPA and other stake holders such as Fish & Wildlife, Corps of Engineers, etc. Both cities would benefit from attending these meetings. Jay reminded Misters Olivarez and Lyon that both cities are already facing rate increases.
    - d. Jay presented the draft Habitat Enhancement Plan, created for presentation to stakeholders including wetlands and fish biologists. Jay asked for RWCC comments so he can make revisions and get it to these groups as soon as possible. All stakeholders do not have regulatory authority they do weigh in on SEPA issues and their support is important. Jay will go with whatever comments he receives within the next week. Some RWCC members indicated acceptance of Jay's documents at the meeting. The RWCC will need to meet within

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

3 weeks of their receiving it. A more detailed document (Site Specific Land Application Plan) was prepared for Ecology and the biosolids group. The next step will be a meeting with the RWCC and the regulatory stakeholders. It would be ideal to hold that meeting here and couple it with a facility tour. We are looking for concurrence at the ultimate goal, realizing that even though the site is currently owned by Weyerhaeuser we are moving ahead with an appraisal and sale process.

- c. Letter of understanding with Weyerhaeuser
  - i. G&O and Weyerhaeuser have agreed on an appraiser (Shapiro). Weyerhaeuser agreed to pay half of the appraisal fee and RD will reimburse the City of South Bend for its \$3,750 share.
  - ii. Mr. Shapiro is ready to go. His cost is \$7,500. He committed to complete the project within 5 weeks. He will prepare two appraisals:
    - 1. One appraisal will be with dikes attached and the roads serviceable.
    - 2. One appraisal will be with no dikes and the roads not serviceable.
  - iii. Jay will resubmit his proposal for land appraisal services to show South Bend owing \$3,750 with a notation that it is RD reimbursable. A motion to move forward was made by Jerry, seconded by Todd, and passed unanimously. Mr. Shapiro will be told he can proceed at his own risk pending approval by the South Bend and Raymond City Councils. Otherwise, work would not begin until after Mr. Shapiro returns from vacation.

### 6. G&O Scope and Budget Proposals

- a. Proposal Overview: A proposal for engineering services for design and bidding services for the City of Raymond's lagoon WWTP decommissioning and biosolids removal was submitted by Jay and discussed. The proposed project will decommission the existing City of Raymond lagoon including removal of the sludge stored in each of the six aerated lagoons, removal and disposal of remaining equipment and piping, and fill/restoration of the lagoons. In addition, the biosolids

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

stockpiled in the former West Polishing Pond will be land applied on site and/or removed to another permitted site depending on the final outcome of the permitting process. Previously, all of the biosolids in the polishing ponds were air dried and stockpiled in the north end of the former West Polishing Pond. The not-to-exceed cost for the proposed scope of work is \$49,740. G&O hopes to complete this project by the end of the year.

- b. Biosolids Sampling and Analysis: Prepare a biosolids and sludge sampling plan and submit it to Ecology for review and approval. This will include:
  - i. Quantify and characterize the sludge currently stored in the six aerated basins.
  - ii. Quantify and characterize the biosolids currently stored in the polishing ponds. To comply with potential site-specific disposal requirements, the biosolids will also be analyzed for TCLP and a fish bioassay.
  - iii. The group discussed collection of representative samples of Raymond's and South Bend's sewage before the changeover. Per Todd, Ron could perform a test tomorrow. Raymond's samples would be analyzed to determine if metals currently present in accumulated biosolids continue to be present in the influent wastewater. South Bend has a sampler on site. The main issue with local sample collection is the cleanliness of the collection equipment and sample handling. It was decided that samples be taken and sent to ALS Environmental for testing. Jay provide contact information for ALS Environmental. They will send bottles to South Bend for the samples with return shipment instructions.
- c. Permitting:
  - i. Prepare an outline for the submittal to Ecology of the proposed biosolids and sludge sampling and analysis plan, removal and dewatering methods, areas on the site to be used for land application of the polishing pond biosolids per site specific land application plan, and decommissioning of the lagoons.
  - ii. Additional problems may arise should the ultimate disposal site be across the Washington state line.
  - iii. Revise Application for Coverage in accordance with comments from Ecology staff.

## Raymond - South Bend Regional Wastewater Coordinating Committee

300 First Street • Raymond • WA 98577 •

---

- iv. Prepare a SEPA checklist to Ecology and assist the City with providing public notice as required.
- v. Prepare a Construction Stormwater General Permit. Assist the City with providing public notice as required.
- vi. Produce a Site Specific Land Application plan for the City of Raymond similar to that produced for South Bend.
- vii. Documentation and response to Jamie Olivarez's bullet items should be completed by the end of Summer 2013.
- d. A motion to approve the Engineering Services proposal was made by Todd, seconded by John and passed unanimously.

### 7. EZ View

- a. RWCC Secretary Patricia Neve expressed concern that the effort required to post RWCC documents on the EZView site is disproportionate to citizen interest. Cathi Read countered that it would still be a good idea to have the information available if for nothing else but historical purposes.
- b. Patricia agreed to upload files. She and Chairman Eric deMontigny will determine which of the plethora of available documents will be on the site. This pool of documents will include only what was distributed at RWCC meetings.
- c. It was suggested Patricia be paid for her efforts on this project. The RWCC asked Patricia to submit a proposal for the cost of uploading documents.

### 8. Annual RWCC administrative actions

- a. Membership changes
  - i. Karla Webber will be replacing Kirk Church as an RWCC voting member
  - ii. Ray Robinson will be replacing Todd Stephens as an RWCC voting member. Todd Stephens questioned the procedure of his removal from the RWCC. Charges of a conflict of interest were made as Todd is now an employee of the City of Raymond as a Wastewater Treatment Plant Operator classification.
  - iii. Jerry Bowman and Dale Little brought the allegations to Mayor Kirk Church's attention. Mayor Church by-passed the Interlocal Agreement protocol and went directly to Mayor Jungar.
- b. Officers – No change

## **Raymond - South Bend Regional Wastewater Coordinating Committee**

300 First Street • Raymond • WA 98577 •

---

9. Set next meeting – March 21, 2013 – Raymond City Hall – 5:30 PM

10. Adjourned at 7:42 PM