

<b>Brightwater Environmental Education and Community Center</b>	<b>Wednesday, March 14, 2012</b>	<b>4:00 – 6:00 p.m.</b>
<i>Board Member</i>	<i>Agency</i>	<i>Present</i>
Barry Bettinger	Community Representative	
John Buckley, P.E., J.D.	Independent Expert	X
Pam Elardo, P.E.	WTD Division Director, King County	X
David Evans	Snohomish County, Public Works	X
Scott Hageman	Councilmember, City of Woodinville	X
Gary Hajek	MWPAAC Representative	X
Dan Kalstad	Community Representative	X
Agata McIntyre, P.E.	Puget Sound Clean Air Agency	X
Bob Van Horne	Fire Chief, Bothell Fire and E.M.S.	X

**Non-Board Member Attendees:**

*Stan Hummel, WTD; Robert Waddle, WTD; Ron Kohler, WTD; Carol Nelson, WTD; Yasmin Mudah, WTD*

**A. Call to Order**

- a. Meeting was called to order by Board Chairman, John Buckley at 4:00 p.m.

**B. Meeting Agenda - Key Points of Discussion**

- a. **Agenda item #2 – Board Business:**

**Introductions** – Robert Waddle, East Section Manager was introduced. The East Section consists of South Plant, Brightwater, Carnation and Vashon Treatment Plant.

**Meeting Notes** – Meeting notes from the January 3<sup>rd</sup> meeting were approved.

- b. **Agenda item #3 – Odor Control System Operational Status Report:**

Ron Kohler updated the Board on the operational status of the treatment plant and the performance of the odor control systems.

The Treatment Plant has been in operation for 6 months without generating odors. The odor control systems are operating within established criteria.

PSCAA received two odor complaints since January 3<sup>rd</sup>, the last time the Board met. One complaint was from a resident in the vicinity of the treatment plant and the other from a motorist near the Influent Pump Station. In both cases, the compliance inspector from PSCAA conducted an investigation including visiting the treatment plant site and reviewing odor control system performance data.

The Plant operation staff reviewed odor control performance with the PSCAA inspector and determined that the odor control system was performing within odor response

standards and that no corrective action was necessary. PSCAA was not able to determine the source of the odor. PSCAA investigation reports have been provided to King County and were emailed to the Board.

Since the last meeting, the reengineered odor control fan impellers have been installed and have operated more than 500 hours. They have been periodically inspected and there are no signs of delamination.

**Q.** Are the defective fan impellers a Siemens responsibility?

**A.** Siemens has unit responsibility for the odor control system under the Solids contract. Hartzell is the supplier for the fan impellers. Hartzell replaced the impellers.

**Q.** Are the impeller fans under warranty?

**A.** King County asked for and received a 5 year warranty for the reengineered impellers to ensure that the manufacturer retains responsibility for any defects.

**Q.** How did the power outage scheduled in January go?

**A.** The solids area was successfully depowered and there were no incidents or odor issues. PSCAA was notified before the outage.

**Q.** During the summer will Brightwater be running less than 50 percent capacity?

**A.** Yes, hydraulically, however all odor control systems will be running at full capacity. The projected flow when we transition to full flow in September 2012 is approximately 21-23 mgd. Currently during the interim commissioning period, 10-12 mgd is being treated each day. In the fall of 2012, we will transition to full flow operations and begin discharging to Puget Sound through the outfall.

**Q.** Is there a difference in odor control system operation with winter flows vs. summer flows?

**A.** Currently the Plant is not processing enough flow to maintain the biology within the bioscrubbers. We expect that once full flow is achieved, the bioscrubbers will become acclimated and can be performance tested. The biology within the bioscrubbers is healthier during the summer months when peak odor production occurs.

**c. Agenda item #4 – Performance Testing Status Report:**

Stan Hummel provided an update of the performance testing status.

Performance testing of the bioscrubbers is scheduled during fall 2012 when there is increased load and will be a suitable opportunity to test performance.

**Q.** With the bioscrubbers not fully acclimated, is the County getting the needed performance?

**A.** The bioscrubbers provide initial treatment and reduce chemical usage in subsequent treatment phases. There is a benefit to using biological treatment rather than chemicals as they reduce chemical use and carbon replacement.

**d. Agenda item #5 – Report of Complaints and Investigations and Odor Complaint Log:**

Ron Kohler provided an update of the complaints and investigations for the Treatment Plant. Based on discussions at the last Board meeting, an external agency complaint log was developed to record odor complaints made to agencies other than King County and

reported to Brightwater. PSCAA has agreed to send odor investigation reports related to Brightwater.

On December 15<sup>th</sup> 2011, a complaint was made to PSCAA. PSCAA conducted a site visit to Brightwater. King County provided the representative performance trends, meteorological data, and accompanied the PSCAA representative to the odor control system. King County conducted an odor survey using the Jerome analyzer while at the odor control system. Data indicated that performance was within odor response standards and that no corrective action was necessary.

On January 30<sup>th</sup>, 2012, a complaint was made to PSCAA. PSCAA conducted a site visit on January 31<sup>st</sup> and inspected the facilities and odor control system. PSCAA was unable to determine the source of the odor.

**Q.** What is the H2S spike in the instrument reading referenced in the PSCAA report?

**A.** There is a problem with the lower range of the monitoring instrument on the discharge air stack. The Sycamore monitoring equipment is registering data spikes that do not appear to correlate with actual H2S concentrations. When the data spikes are observed the Jerome meter is used to analyze the discharge air at the stacks. The Jerome has not registered the presence of H2S above the instruments detection limit.

King County is working with the equipment manufacturer to analyze why the instrument is registering elevated readings of H2S when it is not detected with the Jerome meter. The County believes that it is not H2S causing the spike in the system. The manufacturer has recalibrated the instrumentation and is looking into other possible causes including a chlorine based compound interfering with the signal and the unit's temperature regulated cabinet. The instruments that monitor the air inlet are not showing a correlation between inlet air H2S concentrations and outlet air H2S concentrations.

**Q.** Is it difficult to change the system?

**A.** We are working with the equipment manufacturer to analyze the root cause of the problem and to make the installed equipment work. If the system does not perform, the County will evaluate other monitoring equipment options.

**Q.** Is the manufacturer being cooperative?

**A.** The manufacturer is cooperating and continuing to research the issue. The County has stressed the urgency in finding a solution.

**Q.** Who takes the lead in problem solving?

**A.** We are working as a team, but the County is urging the manufacturer to analyze the problem and identify a solution. The manufacturer along with the design, construction management and operations teams are working to test the unit.

**Q.** What size is this problem?

**A.** The County has accepted the odor control system, however this equipment is still under warranty. King County is following the odor response and monitoring plan – when a spike shows at the unit, our process is to document spikes with the Jerome analyzer at the stack immediately.

**Q.** What is a spike/blip?

**A.** A “spike” is a term we use when we see an aberration in an instrument reading. It generally means that you get a short intense reading, much higher than instrument readings before and after the “spike”. At Brightwater, we refer to these as a “spike” because when we perform tests alongside the sycamore unit, we can’t replicate the readings with the Jerome H2S unit.

**Q.** Is there any other equipment that performs at a higher level?

**A.** There is competing technology, but the County does not know if it will perform better than the installed instrumentation or not. The first step is to prove that the Sycamore unit cannot perform under contract.

**Q.** Are these units being used elsewhere?

**A.** Yes, however the County does not know if these units are used for H2S monitoring at such low concentrations. The County is unaware of other treatment plants that monitor at such low levels. We are currently using the bottom detection range of this instrument.

King County is continuing to evaluate and analyze the reason for the observed H2S spikes. We will also evaluate other monitoring equipment to determine if there is equipment available that should potentially be considered if a replacement is needed.

An addendum to the Odor Response and Monitoring plan was presented to the Board. “Section 4.5 Procedures when Notified of an Odor Complaint Referred to King County from an External Agency” will be added to the Odor Monitoring and Response Plan.

**Board Action:**

**Sycamore Unit Update** - The Board has requested that the County provide a follow up report at next board meeting.

**Odor Complaint Log** - The Board requested changes to the layout of the Odor Complaint Log and requested that wind speed and direction be included for each complaint.

e. **Agenda item #6 – Property Boundary Odor Monitoring Report and Log:**

Yasmin Mudah reported the results of recent property boundary odor monitoring and presented the updated odor monitoring log. The property boundary odor monitoring data on the east and southern portion of the site have generally been below the 3ppb detection limit of the Jerome analyzer. Monitoring locations along Route 9 continue to periodically record observations slightly above the 3 ppb detection limit. The County believes this is attributable to interference from automobile exhaust.

**C. Board Actions**

- a. **Meeting Notes** – Meeting notes from the January 3<sup>rd</sup> meeting were approved.
- b. **Sycamore Unit Update** - The Board has requested that the County provide a follow up report at next board meeting.

- c. **Odor Complaint Log** - The Board requested changes to the layout of the Odor Complaint Log and requested that wind speed and direction be included for each complaint.

**D. Standing Items**

- a. **Next Meeting** – May 17th, 4:00-6:00pm Environmental Education and Community Center
- b. **Proposed Agenda:**
  - a. Odor Control System Operational Status
  - b. Performance Testing Status Report
  - c. Update on Sycamore instrumentation
  - d. Odor Complaint and Investigation Update
  - e. Odor Monitoring Update