

Brightwater Operations Center, Q Room	Tuesday, September 27, 2011	4:00 – 6:00 p.m.
<i>Board Member</i>	<i>Agency</i>	<i>Present</i>
Barry Bettinger	Community Representative	X
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	Woodinville City Council	X
Gary Hajek	MWPAAC Representative	X
Agata McIntyre, P.E.	Puget Sound Clean Air Agency	X
TBD	Community Representative	
TBD	Representative	

Non-Board Member Attendees:

Stan Hummel, WTD; Ron Kohler, Larry Sasser, Vanir; Jennifer Elstrott, 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:**

Meeting Notes – Meeting notes from the August 23rd meeting were approved.

King County Email Accounts – Yasmin will contact Board members who are not yet able to log on to their King County email accounts. She will also look into the option of setting up auto-forwarding to the member’s personal email accounts. At this time she sends a manual notification to members personal accounts, prompting them to check their KC email.

Board Membership – It was confirmed that Snohomish County Fire District 7 has declined participation on the Board; and that the second community representative will be unable to participate. It was recommended that King County continue to pursue identifying two more members to participate on the Board. Board members recommended multiple other agencies to contact. Stan Hummel will contact Steve Dickson of Snohomish County to get recommendations for possible community and agency representatives.

- 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. Ron explained that the odor control systems are operational although fine tuning is occurring and operations staff are gaining more familiarity with the operation.

The plant is currently taking in 4-4.5 mgd of wastewater per 24 hour period. The plant flows are relatively low because seeding the biological systems is occurring. As the biological processes are established, flows will be ramped up. Next week flows to the plant will be increased to 12 mgd which will be the limit during the first year of operations until the central tunnel and the Brightwater system is hydraulically complete.

- Q.** What is the schedule for increasing wastewater flows?
A. 2011-2012 - 12 mgd during interim commissioning
2012 (3rd quarter) - 20-23 mgd average wet weather flow

The plant has been designed to have a capacity of 36 million gallons per day (phase 1). Flows should increase from 20 to 23 mgd when the plant comes on line to reach the 36 mgd capacity between 2020 and 2030.

- Q.** Where can the Board find information to provide the community?
A. The website for Brightwater Odor Control is:
<http://www.kingcounty.gov/environment/wtd/Construction/North/Brightwater/Description/Treatment-Plant/OdorControl.aspx>

The website for the Air Quality Advisory Board is:
<http://www.kingcounty.gov/environment/wtd/Construction/North/Brightwater/Description/Treatment-Plant/AirQualityBoard.aspx>

Board members expressed interest in having information posted on the website that describes what is currently happening operationally at the plant. King County staff will look into this.

Board members are encouraged to let King County staff know what more information they would like and what questions they are being asked by the community so that it can be included on the website.

c. Agenda item #4 – Report of Complaints and Investigations:

Ron Kohler summarized the events of the weekend of September 3rd. During the period of September 3rd through 11th, Brightwater received a number of odor complaints. Complaints were phoned in directly to main control @ 263-9500 and emails were also sent to King County public involvement staff and other King County agencies. In all 20 odor complaints were received, recorded and investigated. Mr. Kohler provided a report on the odor investigation including the determination that the odors were from a source other than Brightwater. The investigation is summarized in the attachment to these meeting notes.

Mr. Kohler introduced the Brightwater Odor Complaint Log and explained how staff addressed the community concerns over that weekend.

- Q.** Although Brightwater was not the cause of the odors, this gave WTD the opportunity to implement our odor response procedures. How did the response procedures work? What were the lessons learned from this exercise?
A. WTD is satisfied that the odor monitoring and response procedures worked as planned; however there are some areas that will be modified to make the work flows smoother. The Odor Investigation Form will be updated. Changes to the form will be presented at the next board meeting. In addition, WTD will follow-up to notify other

King County sections of the correct phone number for Brightwater Main Control to forward odor complaints or concerns to.

Q. It was requested that the time of day King County staff respond to the complaint be included in the Odor Complaint Log.

A. The log is being modified to add this feature.

Q. What phone number should residents call to voice a concern about an odor?

A. Brightwater Main Control, (206) 263-9500

Q. Can you provide a summary of the odor control performance testing?

A. Yes, this will be provided at the next meeting.

- d. **Agenda item #5 – Odor Monitoring and Response Plan – presentation and review:** Stan Hummel gave a PowerPoint presentation summarizing the Odor Monitoring and Response Plan. The PowerPoint Presentation is attached.

Q. If H₂S is detected at a concentration of 3 ppb at the property boundary will someone be able to detect it?

A. The detection threshold for hydrogen sulfide ranges from 0.8 ppb to 7.0 ppb, depending on the sensitivity of the individual. Consequently some people may be able to detect 3 ppb, and some may not.

Q. Will the board receive notification when Snohomish County is notified of an odor problem?

A. Per the Odor Monitoring and Response Plan, Snohomish County will be notified if routine property boundary test samples for hydrogen sulfide exceed the instruments detection limit (3.0 ppb), and if stack emissions exceed 20 ppb. Staff will send an email to the Board members if Snohomish County is notified.

Q. Clarification was sought regarding the 0.8 ppb standard at the property boundary and the 3 ppb minimum detection limit of the Jerome meter.

A. Stan Hummel explained that the system is designed so that hydrogen sulfide emissions are less than 0.8 ppb at the property boundary. However, the Jerome meters detection limit is 3.0 ppb, so it is not possible to directly measure 0.8 ppb at the property boundary. Provided that stack concentrations remain below 20 ppb, and taking into account minimum dilution of 25:1, concentration at the fence line should be below 0.8 ppb.

- e. **Agenda item #6 – Review of Odor Control Design:**

Stan Hummel gave a presentation of the Brightwater odor control design. The PowerPoint presentation is attached.

Q. Clarification was sought between the 97% and 85% at carbon scrubber?

A. The expected removal of hydrogen sulfide by the carbon scrubber is 97%. Total cumulative removal across all odor scrubbers is greater than 99.9%. The 85% removal refers to the calculated removal efficiency of Odor Units by the carbon scrubbers alone.

Q. Where are the biosolids going?

A. 100% of King County's biosolids are recycled through land application projects, including forestland application in Eastern King County and agricultural application in Eastern Washington. Some of the biosolids are composted and used in landscaping.

Q. What if the odor control system doesn't work in 2020 as flows increase to the Plant?

A. The odor control system is designed with capacity to handle airflow and odor emissions associated with a 36-mgd facility. We do not expect to utilize this capacity until beyond 2020 and there is capacity available. If there is a problem with how the units operate, it will be corrected.

C. Board Actions

- a. **Meeting Notes** – Meeting notes from the September 23rd meeting were approved.
- b. **Board Members** – Snohomish County and King County to identify two new members for the board and bring them up to speed before next meeting.

D. Standing Items

- a. **Next Meeting** – Second week of November. Yasmin to follow up with members to finalize date.
- b. **Proposed Meeting Items:**
 - a. Revisions to Odor Report and Odor Investigation Forms
 - b. Update of Odor Complaint Log
 - c. Presentation of Performance Testing
 - d. Update of Odor Monitoring Log



King County

Wastewater Treatment Division

Department of Natural Resources and Parks
Brightwater Operations Center
22505 State Route 9 SE
Woodinville, WA 98072-6010

September 12, 2011

TO: Odor Control Complaint and Response File

FM: Ron Kohler, Brightwater Treatment Plant Manager, Wastewater Treatment Division,
Department of Natural Resources and Parks

RE: Odor Event Response and Investigation

This odor event report details King County's response to odor complaints received from September 3-11, 2011. After an investigation of the complaints, and consultation with the Puget Sound Clean Air Agency (PSCAA), it was determined that the odor complaints were not attributable to the Brightwater Treatment Plant. The following provides a description of the complaints that were received, the response actions taken, and the conclusions of the investigation.

The Brightwater Treatment Plant received approximately 20 odor complaints beginning on Saturday, September 3, 2011, and continuing through Sunday, September 11, 2011. Some of the complaints were phoned in directly to the 24-hour plant main control number, and some were forwarded to Brightwater from other King County regional treatment plants. Other complaints were transmitted by email and were not received until Tuesday, September 6, 2011, by public involvement staff in the Wastewater Treatment Division (WTD). Complaints specifically referenced strong odors with characteristics of poop or manure.

In response to the complaints, Brightwater staff adhered to the protocols for odor response and investigation contained in the Brightwater Odor Monitoring and Response Plan. The complaints were documented on an Odor Report Form, and an investigation performed to determine if the odors were from the Brightwater Treatment Plant. Odor control system performance was checked and determined to be within standard operating parameters. Inlet and outlet concentrations for the odor control scrubbers were monitored and determined to be within acceptable levels. Weather conditions, including wind direction, were observed and documented. In order to document the specific odor characteristics at the point where the odors were observed, personnel made site visits to several of the residents who had complained. The results of the investigations were documented on an investigation report form. Investigations occurred Saturday, Sunday, and continued into Monday morning. By noon on Tuesday, September 6, 2011, the Brightwater facility had received approximately ten additional complaints.

Operations with sewage had not commenced during the time period that the odor complaints occurred, although seeding of the digesters was initiated on Thursday, September 1, 2011. The seeding operation consisted of hauling digested biosolids from the South Treatment Plant in covered haul trucks, and unloading the solids within the completely enclosed truck loading bay. As the solids were unloaded, staff monitored the hydrogen sulfide (H₂S) concentration within the truck loading bay which registered at approximately 7 parts per billion. This is considered low, but within the human detection threshold. However, this air was treated and discharged, and hydrogen sulfide in the treated air was below detection limits.

Investigations determined that the source of odors could not be from an on-site source at the Brightwater Treatment Plant for the following reasons:

- Scrubber inlet and stack emissions data were within acceptable levels;
- Reported odor characteristics were not of a nature consistent with sewage odors;
- Prevailing wind direction was from the north of the Brightwater Treatment Plant during the time the complaint occurred. The majority of complaints received were from residences to the north.

On September 7, 2011, WTD contacted the PSCAA. The PSCAA then dispatched a compliance inspector, Mr. John Schantz, to the Brightwater site to investigate and review odor reports and field investigations. Mr. Schantz determined that the Brightwater treatment facility was following documented requisite odor response monitoring and response procedures, and further concluded that the cause of odors was from a source other than the Brightwater Treatment Plant. He also stated that the widespread odor was likely coming from agricultural sources in the Snohomish valley farmland area. He did not believe that the odor source could have been the Brightwater facility due to the fact that at the times referenced by the callers, and their locations, they would have been upwind of the facility. The wind for this extended period was consistently from the north.

Due to the number of calls over a short time period and the fact that the callers identified the same odor event, the investigation performed provided coverage for a number of complaints so multiple investigations were not required. The on-site investigations were representative for those days, indicating that there was zero to low H₂S (4 to 5 parts per billion) in the exhaust stream from the Brightwater odor control units. Sensory observation from field visits indicated the presence of odors, but not consistently. No high H₂S or ammonia readings were detected at the property boundary or off-site locations in the community.

On Wednesday, September 7, 2011, the PSCAA publicized that the odors were not from the Brightwater Treatment Plant facility but were caused by agricultural sources in the Snohomish valley. This received a great deal of media coverage. This determination confirmed WTD's findings.