

Cedar Hills Regional Landfill Community Meeting Notes

October 24, 2013

King County Library Service Center • 960 Newport Way NW, Issaquah

In Attendance

King County Solid Waste Division staff

- Laura Belt, Senior Landfill Engineer
- Bill Berni, Operations Manager
- Kathy Hashagen, Facilitator
- Kevin Kiernan, Assistant Division Director
- Victor Okereke, Engineering Services Manager
- Polly Young, Communications Planner

Other King County staff

- Marissa Alegria, Department of Natural Resources and Parks, Community Liaison
- Ed Davis, Public Health, Health and Environmental Investigator

Bio Energy Washington (BEW) staff

- Don LeMaster, BEW Plant Manager

Interested Parties

- | | | |
|------------------|----------------------|--------------------|
| • Kim Brown | • Richard Gilbert | • Sean Kronberg |
| • Marlene Davis | • MaryAnn Hauschildt | • Erna Roth |
| • Karen Dawson | • Cathy Houghton | • Sharon Woodruff |
| • Scott Dungan | • Craig Houghton | • Jan Wuestenhoefe |
| • Gladys Gilbert | • Edie Jorgensen | |

Environmental Monitoring

(Victor Okereke)

Landfill Gas Management

Since October 2011, the Solid Waste Division (division) has been providing updates at these community meetings on our efforts to address landfill gas migration along the west property line that exceeded regulatory limits. Since then, the division installed additional landfill gas extraction wells along the west edge of the landfill to control the gas.

At the last community meeting in April 2013, we reported we were testing the effectiveness of those extraction wells to see if they were working as expected. The results of those tests show that the wells are working as expected; they are collecting the gas and there have been no further exceedances. A report outlining the results of this testing will be posted on the division's website by the end of the year.

Going forward, we will report on the landfill gas management system as part of a larger overarching project that was introduced at the last meeting which is called the "Cedar Hills Environmental Systems Modification Project." This project will evaluate all of the environmental control systems at the landfill, including landfill gas, leachate, stormwater and groundwater, to determine if they are working as planned.

Noise Controls

The division has been working on noise controls in response to neighbor concerns about noise since 2010. Two noise studies were done. During the latest study, done in 2012, noise monitors were located near suspected sources of noise: the north flare station, the BEW plant, and the property line adjacent to Cedar Grove Composting. Noise was also monitored at five locations around the site along the property line.

At the last community meeting, we reported that there were no noise exceedances during the day, but at night, noise regulatory limits were exceeded in two areas – the southwest and southeast areas of the landfill. We also indicated that we believe the reason for nighttime exceedances is due to background noise, and that we would evaluate opportunities to meet noise requirements. To that end, the division has hired a consultant to help us differentiate background noise from landfill noise sources. We expect to be able to report on our findings at our next meeting community.

The 2012 noise study also indicated that noise from the north flare station was below regulatory limits. As reported at the community meeting in April 2013, the division insulated a number of pipes at the north flare station to further reduce noise and received good feedback from neighbors that the noise level has been reduced. The division is looking at ways to further reduce noise from that operation.

Groundwater Monitoring

The division monitors 48 groundwater wells which are located in the buffer area throughout the site. There have been no significant changes in groundwater at the site since the last community meeting.

Once a year the division samples groundwater in four offsite locations. We sample water discharged from four drinking water well systems in the area; we do not sample water from the wells themselves. The results of those groundwater samples are sent to the well owners.

Quarterly and annual reports on groundwater are posted on the division's website, <http://your.kingcounty.gov/solidwaste/facilities/cedar-hills-meetings.asp>.

“Overarching” Cedar Hills Environmental Systems Modification Project

As described at the last community meeting, the division will undertake a project that evaluates all of the environmental control systems at the landfill to determine if they are working as expected. These systems include landfill gas, leachate, stormwater and groundwater. This project will evaluate how these systems are working and develop a plan to make any necessary changes in how we operate and maintain these systems.

Construction Activities

(Victor Okereke)

Interim Closure of Area 7

Areas of the landfill are closed incrementally in a process called interim closure. This involves placing soil, plastic liners and hydro seed over an area. The division is currently landfilling in Area 7, located on the west side of the landfill, toward the south end. Interim closure of that area began this summer.

Area 8

The last area to be developed under the current 2010 Site Development Plan is Area 8. Work on the development of Area 8 will begin in 2015 rather than in 2014. We expect Area 8 to be open to receive garbage from 2018 through 2026.

All dates about when the landfill will reach capacity are projections that are predicated on the amount of garbage we receive. Dates can change based on the amount of garbage received.

Operational Activities

(Bill Berni)

Bill introduced himself as the new Operations Manager. He has been on the job for eight weeks. Prior to working for the division he worked for Associated Grocers and the WA State Liquor Board. Both former jobs included work on transportation and distribution networks.

Annual Maintenance

Each year, landfill staff performs maintenance in the buffer area. That work was completed this summer. Crews will clean up any storm debris in the buffer area as needed.

Landfill Tour

On Saturday, October 19, the division hosted a landfill tour. About 25 people attended the tour. It was a very foggy morning. Several meeting participants attended the tour.

Bill encouraged participants to not only tour the landfill but to also tour the division's newly rebuilt Bow Lake Recycling and Transfer Station in Tukwila. The station has comprehensive recycling services (appliances, scrap metal, cardboard and mixed paper, yard waste, clean wood, etc.), compactors, and a number of innovative features.

In response to questions from participants, the following information was provided:

- The division will find out if and when the road on the east side of the landfill will be re-graded. *[Note: Division employees inspected the road condition soon after the community meeting and determined that it does not need to be re-graded.]*
- The purpose of the site wide assessment or “overarching” environmental systems modification project is to determine if the environmental control systems in place at the landfill are working as effectively as they should or if improvements are needed; the purpose is not to find out the source of the gas that caused the 2011 landfill gas migration along the west property line that exceeded regulatory limits. The division is not undertaking any studies to pinpoint the source of the landfill gas that migrated in 2011.
- Each year, the division looks at the landfill gas environmental control systems at the landfill to see if they are working as expected. New wells are added as needed and some are decommissioned.
- In 2008, with the economic downturn, the tonnage of garbage received at the landfill dropped by about twenty percent. In the past two years, tonnage has stabilized. The division updates tonnage projections every year. The projections will be used to calculate how long we expect Area 8 to receive garbage.
- The division’s regulatory requirements to test groundwater do not extend beyond the landfill boundaries. The regulatory agencies that monitor groundwater are Public Health – Seattle and King County, and the WA State Department of Ecology.
- Groundwater flows in a south to north direction across the landfill and discharges to surface water and creeks. Groundwater monitoring results are posted on the division’s website. The results show that water leaving the site is within regulatory limits, except for arsenic, which is a naturally occurring substance.
- The division tests for 50 analytes (chemical substances) such as metals and organic compounds in groundwater. Water is monitored as it enters and leaves the landfill site.
- Surface water from the landfill discharges to the northeast, south and southeast of the site.
- There are odor producing activities in the area; the landfill is one, and the Cedar Grove Composting facility is another.
- The division has an Odor Complaint Response System established. If you smell an odor that you think is coming from the landfill, call the Cedar Hills Main Office at: 206-296-4490 to report it. Landfill staff will investigate odor complaints.
- Potential odor sources at the landfill come from garbage as it is received at the site and from decaying garbage. The division uses three methods to control odors:
 1. Covering the garbage daily with either soil or tarps;
 2. Using gas extraction wells, part of the landfill gas management system, to make sure gas does not rise to the surface of the landfill and generate odors;
 3. Monitoring the surface of the landfill to make sure no gas leaves the surface
- Division staff received special training in detecting and identifying odors. Wind direction and activities at the landfill are factored into investigations of odor complaints.

- Investigations of odor complaints are handled as soon possible after they are reported. For example, if an odor complaint is reported in the morning, division staff will investigate it in the morning.
- Methane gas is a component of landfill gas. Landfill gas has an odor, but methane does not.
- The division cannot predict whether or not there will be another site development plan required after the (current) 2010 Site Development Plan. The division receives direction about landfill development from elected officials; we cannot know what future elected officials will do or decide about landfill site development.
- The division does not have information about the Queen City Farms Superfund site. *Note: This information was not provided at the meeting, but was included in the April 24, 2013 meeting notes and is repeated here. For questions about the Queen City Farms Superfund site, please contact EPA Project Manager Jannine Jennings at 206-553-2724 or Jennings.jannine@epa.gov.*

Bio Energy Washington (BEW)

(Don LeMaster)

BEW Plant Manager Don LeMaster reported the following:

- Don is the new Plant Manager; he's been on the job for two weeks.
- The BEW plant has produced the following metrics:
 - Landfill gas consumed: 2.16 billion cubic feet
 - Natural gas produced: 0.80 billion cubic feet
 - Electrical power generated: 11,579,400 kwh (enough, for example, to power about 2,050 homes)
 - Plant up time: 95%
- The BEW plant has the following operational accomplishments:
 - Changed out an activated carbon filter bed, which helps remove volatile organic compounds.
 - Changed out the sulfa treatment bed in one of two large vessels, which removes sulfurs; disposed of 220,000 pounds of impurities in the landfill.

In response to questions from participants, Don provided the following information:

- The five percent of the time that the plant is not operational is mostly due to unforeseen situations. The plant is on a maintenance schedule, during which planned shutdowns occur.
- On October 23, the plant had a power surge. As a result, the plant shut down unexpectedly. The gas went seamlessly from BEW processing it to the gas being burned at the division's North Flare Station. Victor Okereke noted that full automation of the process that allows for the division to burn gas in the event that BEW unexpectedly shuts down has not fully been achieved. The division responded to the unexpected shutdown on October 23 through a combination of manual and automatic procedures.

- In response to the question of what happens to the gas if none of the treatment systems (flares and/or BEW's plant) is operational, Victor noted that collected gas can temporarily remain in the collection and transmission system until it is burned at the division's North Flare Station or received by BEW.
- Noise abatement has been completed by BEW. *[Note: at the time of the community meeting, the new BEW plant manager was not fully aware of the noise monitoring undertaken by plant employees. The following information about monitoring of BEW plant noise was subsequently provided by the BEW plant manager:*
 - BEW monitors plant noise in the following ways: 1) continuously with a permanent noise monitor located on the Northwest perimeter of the BEW plant site; 2) using portable, handheld monitors, BEW staff measure and log noise two times weekly on Tuesday during the day and at night at the eight locations described below; and 3) using portable, stationary noise monitors deployed, as described below, BEW records sound at two additional locations. Six of the eight locations where the portable, handheld noise monitors are read are located along the landfill fence line perimeter South, East and Northwest from the plant. The other two locations are outside the landfill fence line to the Southeast of the plant. The two, portable, stationary noise monitors are deployed outside the landfill fence line to the South East of the plant and inside the landfill fence line to the Northwest of the plant. The protocol for these deployments is as follows: the monitors are deployed on Tuesday; retrieved on Thursday at which time the data is downloaded and the batteries are recharged; the monitors are again deployed on Friday and retrieved on Monday at which time the data is downloaded and the batteries are again recharged. This deployment protocol is then repeated.
- In response to two neighbors who live in the Maple Hills neighborhood and are hearing noise at their homes ("all the time", except on June 13, 2013) that they believe are coming from the BEW plant, Don suggested that they call the BEW phone number. Don was not sure if someone from BEW would go to a neighbor's house if a neighbor called to complain about the noise. *Note: BEW's phone number is on the handout provided at the community meetings. BEW's number is: 425-392-3918.*

The division's Bill Berni noted that the division is looking at the possibility of using natural gas to fuel tractors at the landfill.

Meeting adjourned.