

Cedar Hills Regional Landfill Community Meeting Notes

April 25, 2012

King County Library Service Center, Issaquah

In Attendance

King County Solid Waste Division staff

Laura Belt, Landfill Engineer
Kathy Hashagen, Facilitator
Kathryn Killinger, Strategic Policy & Planning Advisor
Victor Okereke, Engineering Services Manager
Dean Voelker, Operations Manager
Polly Young, Communications Planner

Bio Energy Washington (BEW) staff

Ron Earnest, BEW Plant Manager

Interested Parties

Marissa Alegria	Richard Gilbert	Doug Ross
Bill Beck	Edie Jorgensen	Katie Saltanovitz
Mark Blume	Sean Kronberg	Gary Schimke
Jason Brown	Rich Nelson	Sharon Schimke
Karen Dawson	Charles Nevi	Mike Welling
Ed Davis	Alan Painter	Sharon Woodruff
Gladys Gilbert	David Prochazka	

Environmental Monitoring & Construction Activities (Victor Okereke)

Landfill Gas

At last October's community meeting, the Solid Waste Division (division) shared information about methane detected in one of the landfill gas probes along the western property boundary that exceeded regulatory limits. Since then, the division detected methane in another landfill gas probe along the western property boundary that exceeded regulatory limits. Landfill gas is made up of about 50 percent methane, 30-40 percent carbon dioxide, and about 10 percent of several different gases. In response, the division installed seven new landfill gas extraction wells. Since those new wells have been installed, there have been no new methane detections above regulatory limits except one blip during testing, which will be described later in the meeting.

The landfill gas management system includes landfill gas extraction wells and landfill gas probes. Landfill gas extraction wells help prevent landfill gas from moving away from the site by pulling it out of the ground. Landfill gas probes, which are located along the entire property boundary, are there to monitor the presence or absence of methane.

As reported at last October's community meeting, the landfill gas probes did what they were supposed to do. Landfill gas probe #33 indicated the presence of landfill gas at a level that exceeded regulatory limits. When that level was detected, the division took the following actions:

1. Notified the regulatory agencies, Washington Department of Ecology (Ecology) and Seattle-King County Public Health (Public Health)
2. Increased the rate of landfill gas extraction
3. Increased the frequency of monitoring the probes from monthly to daily
4. Notified neighbors within 1,000 feet of landfill gas probe #33 and offered to test their homes to see if any methane was present

Since last October, landfill staff detected methane in another probe, landfill gas probe #30, that exceeded regulatory limits. The division followed the same actions as before:

1. Notified the regulatory agencies, Ecology and Public Health
2. Increased the rate of landfill gas extraction
3. Increased the frequency of monitoring the probes from monthly to daily
4. Contacted nearby neighbors and offered to test their homes for methane

The division found no methane in any of the homes tested as a result of methane detections in landfill gas probe 33 and landfill gas probe 30.

The division wrote and submitted a landfill gas mitigation plan (*Cedar Hills Regional Landfill Mitigation Plan for Landfill Gas*) to Public Health outlining how to address the methane detections in landfill gas probes #33 and #30. Public Health approved that plan, which included installing the seven new landfill gas extraction wells.

The wells were installed and connected to the landfill gas extraction system. During the process of testing the new landfill gas extraction wells, which required that several of those extraction wells be turned off, there was a blip – the division detected methane at levels exceeding the regulatory limits in one of the same probes, landfill gas probe #33. Testing was stopped and all of the new landfill gas extraction wells were turned back on. Since then, the division has not seen any more detections of methane that exceeded regulatory limits.

Going forward, the division is evaluating other options to test the efficacy of the seven new wells. Options include the possibility of installing more landfill gas extraction wells.

In response to questions from participants about landfill gas, the division provided the following information:

- The last time a probe detected landfill gas above the regulatory limits was January 29, 2012.
- The probe that showed landfill gas above the regulatory limits during testing (the “blip”) was landfill gas probe #33 on January 29, 2012.
- In order to test the landfill gas management system, the division had to turn off several landfill gas extraction wells to see if the adjacent wells are doing what they are supposed to be doing. It was while several of the new landfill gas extraction wells were turned off that landfill gas was detected above regulatory limits.
- The seven new landfill gas extraction wells on the west side of the landfill are outside the lined areas of the landfill. Landfill gas extraction wells are installed wherever it is necessary to extract landfill gas from the ground, whether it is inside or outside of lined landfill areas.
- There has not been a need for landfill gas extraction wells on the west side of the landfill before, but now there is. The division is still investigating why there is landfill gas in that area. When the investigation is complete, the division will report on it.
- The purpose of landfill gas extraction wells is to pull landfill gas out of the ground.
- Landfill gas extraction wells are installed and replaced all the time as part of routine landfill maintenance.
- Landfill gas is made up of about 50 percent methane, 30-40 percent carbon dioxide, and about 10 percent of several different gases. Methane and carbon dioxide do not have an odor. Minor constituents of landfill gas, less than 2 percent, contain gases that have an odor.
- The division’s goal is that no odors leave the site. The division has an extensive monitoring system in place to help meet that goal. The system is continually upgraded. Area residents are encouraged to contact the division if they believe odors are coming from the landfill. Division staff will do an investigation, come out to your house if requested, and let you know the findings. There is more than one facility in the area that creates odors; the landfill is not the only one.
- The landfill gas management system is a vacuum system that pulls the landfill gas back toward the landfill. Landfill gas extraction wells are part of that system and the wells have a vacuum on them at all times. More landfill gas extraction wells may be needed. The primary consideration is to keep landfill gas on site; cost is not the primary consideration. The goal of the landfill gas management system is to prevent landfill gas from escaping from the site – either through the ground or through the air.
- The division monitors landfill gas emissions quarterly and monitors odors daily.
- Landfill gas being flared that is visible to neighbors could either be from BEW or the division.
- Landfill gas that is extracted goes into a series of pipes and is carried to the division’s flare station where it is burned. When BEW is operating, the landfill gas goes to BEW’s plant for processing.

Groundwater Monitoring

The division has an extensive groundwater monitoring system in place at the landfill. The division has been monitoring that system for more than 20 years. At last October's meeting, division staff mentioned the regulatory agencies might ask the division to do things differently from the current monitoring processes, but the division has not heard back from regulators about that.

The division produces annual reports about the landfill groundwater monitoring program. The 2011 annual report is posted on the division's website.

In response to questions from participants about groundwater, the division provided the following information:

- There are different types of water. Surface water is above ground and groundwater is located deep below ground, 200-300 feet below the surface.
- To monitor groundwater, the division drills deep wells to test if the water is clean. Water has many things in it that occur naturally. The division tests water based on regulatory levels. The division has tested the groundwater for years and has not measured levels that exceed drinking water standards.
- The division does not collect groundwater for any reason other than to test it.
- Leachate, or liquid that has passed through garbage, is piped along Maple Valley Highway and carried to the Renton treatment facility. Some rainwater is considered to be clean and some is considered contaminated. Rainwater that comes into contact with garbage in the active areas of the landfill and rainwater that runs into ditches is considered contaminated and is sent to the Renton Treatment facility. Water that doesn't come into contact with garbage is considered clean stormwater and is not sent to the Renton treatment plant.
- Division staff that work at the landfill site get their drinking water from Water District 90. When division staff are out working on the landfill, bottled water is provided.
- Wastewater from the landfill (flushed toilets, etc.) goes into the onsite leachate ponds and is then piped offsite to the Renton treatment facility.
- The testing done by area homeowners on their wells is probably similar to the testing done by the division since the drinking water standards are the same.

Construction Updates

Interim Closure of Area 6

At last October's meeting, division staff mentioned the interim closure of Area 6; however, that work was suspended last year due to weather. The division will restart that work and expects to complete it this fall. Currently, garbage is being buried in Area 7.

Wastewater Pipeline Construction along Cedar Grove Road and Maple Valley Highway

The division will be installing access points to the pipe ("force main") that carries wastewater from the landfill site to the Renton treatment facility. This will enable the division to inject a camera into the pipe for monitoring purposes. That work will involve

construction along Cedar Grove Road and Maple Valley Highway. The work along Maple Valley Highway will be done at night to reduce traffic impacts. This project is part of the division's maintenance program.

Site Development Plan Update

The King County Council directed the division to explore ways to increase capacity and extend the life of the Cedar Hills Regional Landfill. In 2009-2010, the division did an environmental assessment that looked at increasing landfill capacity; that assessment was shared with the community. The division looked at five alternatives. The alternative approved by the King County Council in December 2010 extends the estimated life of the landfill for an additional five to six years, until approximately 2026. Construction of the new area, called Area 8, is expected to start in 2014 and last through 2017. The division is currently doing preliminary design work. The new landfill area is expected to open in 2018.

Operational Activities

(Dean Voelker)

The division will continue to do maintenance projects this summer. There are 6-7 miles of roads around the landfill that need maintenance. The division will also be spreading rock, improving drainage ditches, and cutting brush and other vegetation in the buffer. The division will send out notice to immediate neighbors about this work. Hopefully you won't see or hear the work, but call the division (206-296-4490) if you have any concerns.

In response to a question from a participant, the division provided the following information:

Division staff have not seen pedestrians from the YWCA's Passage Point facility use 228th Ave. SE. The division does not want to see people walking along 228th Ave because it would be unsafe given the truck traffic. Neighbors are encouraged to contact Passage Point directly if they see pedestrians from Passage Point using 228th Ave.

Bio Energy Washington (BEW) Update

(Ron Earnest)

Ron Earnest introduced himself as the new BEW plant manager; his first day on the job was Feb. 20, 2012.

On March 29, 2012, BEW received approval from Puget Sound Energy (PSE) to export electricity to PSE. BEW has been consuming landfill gas to run a total of six generators for their own power requirements and export to PSE, but BEW is not currently sending any purified gas to the pipeline.

BEW staff are currently in the midst of a major engineering overhaul to address machinery issues. Those changes are expected to be completed by the end of April. The projected date to re-commission the plant is June 18, 2012. The commissioning process is expected to take two weeks after which BEW plans to operate at full capacity.

Ron is getting up to speed on the plant and looks forward to its re-opening in June.

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

- The plant is currently using six generators. When the plant is running at full capacity, there is the potential to use up to sixteen generators.
- Several noise mitigation measures were put in place just as the plant shut down a year ago, so the effectiveness of those noise reducing measures has not been tested. BEW expects noise generated from the plant to be no louder than it was before it shut down last year and possibly produce even less noise than before for several reasons:
 - the engineering changes will improve how landfill gas flows through the plant,
 - the use of bigger pipes and buffer tanks should help reduce noise, and
 - sending the landfill gas through the plant at a continuous level should help keep the plant quieter.
- BEW's plant purifies landfill gas and then sends it to PSE.
- BEW has an exhaust system which cleans the plant's air emissions – similar to a catalytic converter on a car. No landfill gas escapes from the plant; it is all captured and compressed and sent to PSE via the pipeline.
- BEW is using the fuel gas to generate electricity which operates the plant. The long term plan is for the plant to generate natural gas, not electricity.
- To assess and address noise from the plant, BEW has a permanent noise monitoring station at the plant and portable noise monitoring equipment that they have been using in different areas around the plant since it shut down about a year ago. BEW will continue to monitor noise and work toward decreasing noise from their operations. BEW has not closed the door to doing more noise abatement measures.
- BEW has two portable sound monitors that are being used to maintain a base-line ambient sound level for the property. In the event of an issue, BEW will offer their equipment as it is available to help identify and resolve noise complaints.
- Ron will provide a tour of the BEW plant for anyone who wants to see how it operates. Ron's contact info: **Phone:** 425-557-6623; **Email:** rearnest@bioenergy-wa.com

Meeting participants were encouraged to contact the Solid Waste Division at any time to request a tour of the Cedar Hills Regional Landfill. To request a tour, call 206-296-4490 or visit <http://your.kingcounty.gov/solidwaste/facilities/cedar-hills-meetings.asp> and click on "request a tour."

Meeting adjourned at 8:20 p.m.