



SWANA BEAVER CHAPTER

September 2008

Bulletin

A quarterly publication of the Oregon Chapter of the Solid Waste Association of North America

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THE SECRET LIFE OF BRIDGEPORT VILLAGE

By Jan O'Dell

Before it was a 500,000-square-foot shopping development with over 100 specialty stores and businesses, the site of Bridgeport Village in Tigard was a gravel quarry and clean fill landfill.

In July, SWANA Oregon members got an inside look at how this site is being managed for methane and other environmental impacts. The tour focused on the regulatory considerations, design elements, planning, engineering controls and monitoring that made this development possible in a regulatory environment where methane is defined as a hazardous substance and regulated by Oregon Department of Environmental Quality's hazardous substance rules.

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Paul Trone, GeoDesign project manager, Karen Trachsel, field geologist, and Mike Coenen, engineer, led the tour of the site; DEQ's Tim Spencer was also on-hand to answer questions.

Tim set the tone for how a "clean fill landfill" could produce a methane problem: "We've learned over the years that a lot more goes into clean fill landfills than just 'clean fill' – there's organic material mixed in too," Tim said. "When Washington County discovered the methane situation, it voluntarily entered into the remedial process."

The remedial process began with a site investigation, which included installing soil gas monitoring probes all over the site to help assess areas where methane existed, and whether methane was migrating toward the surrounding residential areas and other nearby developments.

One of the tricky technical problems was trying to get methane gas out of 80 feet of fill that was packed tightly – a different situation than a MSW landfill that is more permeable. This is one of the reasons gas pressure was found to be so high, resulting in the need for a high-vacuum extraction system.

Paul explained that to prepare for development of the site, they excavated three to five feet down under the building sites, screened the soil, removed the boulders, and then mixed the remaining material with cement to con-

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struct the building pads. Above the constructed pads, a layer of sand was placed, followed by a flexible membrane. A sub-slab vent system and sub-floor soil gas probes also were constructed under all the buildings. "These buildings are basically 'floating' on top of manufactured fill and a membrane," Paul said.

The entire 28-acre Bridgeport development site was not capped, Paul said, because the methane was concentrated only in certain areas – it wouldn't have been cost-effective to cap the whole site. He also said that while the developer looked into using the methane to generate power, there just wasn't enough time to fully explore it; plus, he didn't think the amount of methane would really justify a system.

Paul noted that the methane tends to move around: levels will be high under one building for a while, and then decrease. He added that they continue to monitor and do work as needed under the buildings. "Methane is just very dynamic, as you know," he told the group.

To protect the health and safety of the employees who work in the Bridgeport Village stores and businesses and the people who shop there, methane sensors have been installed within the buildings and are tied into the same alarm system as the fire alarms.

Karen pointed out that so far, all the alarms that have gone off have been "false alarms." If, for some reason, the alarm monitoring system is set off and Karen or Paul can't be reached, the Fire Department would be called and the building/site would likely be evacuated.

Paul said that sometimes a building tenant complains of odors, but the monitoring system isn't able to detect a source. He said they would probably do some kind of smoke test under a building if needed to investigate the odor source.

At the end of the tour, Karen took the group into a building space still under construction and explained what is done to prepare a space for a tenant: pre-occupancy monitoring, then approval by the City, and then approval by DEQ – all occurring before a new tenant sets up shop and opens its doors for business.



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Brideport Village site background

History

- Farm and residential use through the mid 1950's
- Washington County operated a gravel pit until the early 1970's
- Served as a clean-dirt landfill 1992-2002
- DEQ informed of the presence of methane in 2003; Washington County submitted a request to enter DEQ's voluntary cleanup program
- 2003-2005: DEQ staff work and public comment
- October 2005 – DEQ approves All-Inclusive Construction Completion Report

Site conditions

Max. methane concentrations (percent by volume)/max. pressures (inches water column)

- < 5 ft depth, 33.1 / 7.9
- Interior, 85.9 / 35
- Perimeter, 85.1 / 2.0
- Native gravels, 7.3 / 5.8
- 41 to 60 feet depth
- Interior, 89.6 / 15.7
- Perimeter, 11.2 / 10.5
- Native gravels, 0.8 / 3.0
- > 61 feet depth
- Interior, 99.9 / 7.9
- Perimeter, 0.6 / 0.5
- Native gravels, 0.4 / 1.2

Non-methane gasses

- VOCs
- Sulfur compounds

Groundwater

- Depth approx. 80 ft.
- Perched groundwater conditions exist
- Southwest flow direction
- One Voc detected – bromomethane
- One SVOC detected – bis(2-ethylhexyl)phthalate
- Low levels of total and dissolved metals (background concentrations)

Soils

- Diesel – and lube oil – range hydrocarbons
- PAHs
- Attributed to hardened asphalt

Remedial action plan - Engineering controls

Buildings

- Sub-slab passive vents
- Low permeability geomembrane
- Sub-slab probes
- Automatic gas sensors

Remainder of site

- Perimeter gas extraction system – active shallow and deep wells, blowers
- Interior as extraction system – active shallow and deep wells; blowers
- Utility trench plugs – at-site boundaries; over hot spots; at each building

Institutional controls

- Declaration of Easement and Restrictions

Methane monitoring

- Pre-construction – 1 year
- During construction – 1 year
- Pre-occupancy – one time upon substan-



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- tial completion of the building, and one time 24 hours prior to opening
- Post-occupancy – min. 1 year with evaluation to determine the scope and duration of additional monitoring

Current status

- 20 buildings and 7 kiosks completed with engineering controls
- 103 sub-slab vent risers with 45 probes to monitor
- 27 fixed gas sensors with monitoring service
- 9 active gas extraction systems with 345 monitoring points to monitor
- 50 outdoor confined spaces to monitor

Editor's note: Thanks to GeoDesign for providing the PowerPoint presentation that included the information above. Also, thanks to SWANA Beaver Chapter board members Erik Colville and David Vonasek for providing edito-



LET'S UPDATE THE BOARD!

A FEW CHANGES TO THE BEAVER CHAPTER BOARD

At its August meeting, the Beaver Chapter board voted unanimously to appoint the following members into new positions: David Vonasek as President, Brian May as Vice-president, Dan Hurley as Treasurer, and Donna Schneider as Secretary. At the September meeting, Erik Colville agreed to be the Membership chair. Don Alexander will continue as Past President and Timm Schimke will remain International Board Director.

Speaking of changes: David Vonasek recently announced that he has made a career change and left his position at Shaw Environmental. He's now employed by Weaver Boos Consultants, LLC and plans on remaining active with SWANA Beaver Chapter as a board member and officer.

PREIDENT'S CORNER

A WORD FROM THE NEW PRESIDENT

*from David Vonasek,
Weaver Boos Consultants,
LLC*



In our last newsletter, Jim Watkins announced that he had decided to take an early retirement from Metro and would be stepping down as Board President. At the following board meeting, I volunteered to step in and assume Jim's position as Board President. This motion was made and approved by your SWANA Board of Directors. Therefore, I will be serving the balance of Jim's position until the next scheduled election of officers and board members. Brian May, who was elected to the Vice President's chair last October, will continue to serve in that capacity. The Board also voted to approve Donna Schneider who will be taking over as Chapter Secretary and Dan Hurley to fill in the position of Chapter Treasurer.

In appreciation of all of Jim's hard work and service, the officers and board members of the Oregon Beaver Chapter of SWANA would like to thank him for his contribution to the success of SWANA and to wish him well with his future endeavors.

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I would also like to thank Gordon Brown, who has served as Chapter Treasurer for over the past four years. Our appreciation of Gordon's responsibilities and contribution to the chapter cannot be overestimated.

As I take over the reins as your president of the Oregon Beaver chapter of SWANA, I am looking forward to working along side your team of officers, board members, and past chapter presidents to assure that the Oregon Beaver Chapter will continue with its agenda and the traditions set forth by my predecessors in forming the chapter into one that you can be proud of.

As you have probably noticed, I have made frequent references to "you" and "your." As Board President, I will strive to make sure the Oregon Beaver chapter of SWANA is here to serve and support you, the wide variety of solid waste professionals in the Pacific Northwest. The Oregon Beaver chapter will continue to work with other industry organizations, such as AOR and ORRA, to provide you with site tours, training sessions, symposiums, meetings, and other events that will hopefully make your day-to-day operations more rewarding.

However, to that end, we in turn will need your continued support. Your membership and representation only strengthens our cause; working together, we can continue to achieve the goals and objectives set forth by SWANA, while making the Oregon Beaver chapter a model of success.

As you read this newsletter you will see that over the next six months there will be a number of local – as well as national, industry-sponsored events – scheduled within the Pacific Northwest. In October, the Oregon Beaver chapter will be scheduling a site tour of a landfill closure in Scappoose. Also in October, the APWA will be sponsoring a pump station design seminar in Portland. Finally, in February 2009, SWANA will be hosting its national "Thinking Outside the Blue Box" recycling conference, also here in Portland.

In closing, I would like to again extend my appreciation to all of the Oregon Beaver chapter officers and board members for their continued hard work and efforts. However, more importantly, I want to thank you, the general membership, for your continued support. For without you, SWANA would not have been able to realize the degree of success it has achieved today. The solid waste industry continues to face ever-changing rules and regulations, as well as increasing economic challenges. Only by working together can we truly make a difference!

David Vonasek, President - Oregon Beaver Chapter



SWANA OREGON BEAVER CHAPTER

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BEN MASENGIL SCHOLARSHIP PROGRAM IN ITS FOURTH YEAR

Elsbeth Centola is honored for her achievements

Elsbeth Centola is this year's recipient of the Ben Masengil Scholarship Award for a returning student. If her name sounds familiar it's because two years ago she won the scholarship for a high school graduate.

Elsbeth is entering her junior year at Delaware Valley College in Doylestown, PA, studying for bachelor degrees in Zoology and pre-veterinary medicine. She has developed a strong reputation and relationship with the faculty and staff at Delaware Valley as a student role model. Her GPA stands at 3.79, and she still manages to fit in a variety of extra-curricular activities, including:

- Secretary for the Class of 2010
- Student Government Board
- Student Activities Council
- Tutor for the college's writing center
- Protection and Awareness of Zoos and Aquarium Club
- Residence hall assistant
- Laboratory dog enrichment team
- Habitat for Humanity Club
- Wildlife Society

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Elsbeth is planning on attending graduate school to get a master's degree in veterinary medicine, specializing in exotic animals. For six years, she volunteered at the High Desert Museum of Central Oregon in their teen program. For the past three years Elsbeth has held a summer paid position in the museum's wildlife program, providing interpretation, hosting wild animal shows, and taking care of the museum's animals. She is particularly fond of the museum's birds of prey.

The SWANA Beaver Chapter usually awards two scholarships every year – one for a high school graduate entering college and one for a returning student – but this year Elsbeth's application was the only one that met all application requirements. All nominees must be children or grandchildren of current SWANA members.

Information is available on the Oregon Beaver Chapter's website, www.swanaoregon.org. Click on "news & info" and then scroll down to the scholarship connection.

Congratulations to Elsbeth, as well as to proud dad Chad Centola of Deschutes County!

SYMPOSIUM UPDATE

Alaska to host annual Symposium in 2010

In a show of support for a fellow SWANA chapter, both the Washington and Oregon chapters have voted to support an Alaska Symposium in May of 2010. This, for now, is a one-time opportunity that will shift the annual Symposium rotation.

Here's how the rotation lines up for the next three years: British Columbia in 2009, Alaska in 2010, Washington in 2011 and Oregon in 2012.

The Alaska SWANA chapter has agreed to the profit-sharing formula that the other three chapters have followed in the past (the host keeps half the profits and the other half is shared equally among the remaining Pacific Northwest chapters).



SWANA CONFERENCE COMES TO PORTLAND

Mark your 2009 calendars – SWANA’s “Thinking Outside the Blue Box” Conference will be in Portland in February 2009

The annual SWANA recycling conference will be coming to Portland February 9–10, 2009. The conference is focused on SWANA’s new initiative, “Thinking Outside the Blue Box.”

One of the largest portions of the U.S. waste stream comes from the commercial and industrial sectors. This waste is usually collected by private companies, rather than by local governments and municipalities. SWANA wants to work toward a more comprehensive market-oriented and forward-thinking approach to increase recycling in these sectors.

This initiative will work in concurrence with several policy recommendations from a 2003 report, “Pushing the Envelope on Waste Reduction and Recovery,” by SWANA Executive Director and CEO, John Skinner, PhD. Recommendations in the report include:

- Encourage more extensive product stewardship by product designers, manufacturers, retailers and consumers.
- Expand efforts by Federal, State and Provincial governments to develop markets for recycled materials and recovered energy.
- Provide financial incentives for investments in recycling, composting and the use of recycled materials.
- Support technology transfer and research and development efforts that have the potential to significantly increase waste recovery rates, as well as work to reduce barriers to their implementation.

Oregon Beaver Chapter will be contributing to the agenda by providing a session on Product Stewardship Framework Legislation. For more information, contact Kory Mahaffy.

For more information about the conference, go to <http://thinkingoutsidethebluebox.org>.



UPCOMING TOUR: SANTOSH LANDFILL, SCAPPOOSE, OREGON ON OCTOBER 15

Tour guides are Bob Schwarz and Tim Spencer of Oregon DEQ

The Santosh Landfill is an old 16-acre municipal and industrial waste landfill that operated under a DEQ permit and closed in 1983. The landfill is located in a sensitive wetland environment adjacent to Scappoose Creek. In the 1990s DEQ ranked the site low priority for further investigation and cleanup. However, the landfill's neighbors and Columbia County officials expressed concerns to DEQ about contaminated seepage and other environmental issues. DEQ determined that the site did not have an economically viable owner and gave the landfill official Orphan Site status. This step allowed DEQ to access funds in the State Solid Waste Orphan Site Account to pay for extensive investigation and potential remediation of the site. DEQ's investigations did not find extensive off-site contamination but found on-site contamination a threat to wildlife, grazing cattle and other domestic animals. Cyanide is one of the contaminants of concern found at the site. This month DEQ's contractors are completing the construction of a low permeability engineered cap and associated improvements at the landfill. DEQ will be spending about \$3.7 million on the remediation project.

To attend, RSVP to Jan O'Dell at jan@odellcommunications.com or call Jan at 503-952-6028.

Meet at The Coffee Bar at 33444 Havlick Dr. in Scappoose at 9:45 am. This is on the south end of Scappoose in a shopping center near Fred Meyer.

We will depart from there for the landfill at 10:00 am.



CALENDAR OF EVENTS

SUN - WED, SEPTEMBER 21-24

National Recycling Coalition's 27th Annual Congress and Expo,
Pittsburgh, Pennsylvania

A national education and networking event for recycling and sustainability professionals. More information at <http://events.jspargo.com/nrc08/public/enter.aspx>.

TUE - WED, OCTOBER 7 - 9

American Public Works Association Pump Station Design Seminar
Portland

The seminar offers the latest in wastewater pump station engineering knowledge as well as an opportunity for networking with fellow professionals. Cost: \$350 before Sept. 30, and \$380 after. More information at www.oregonapwa.org/training, or call 541-994-3201.

WED, OCTOBER 15

Members' tour of Santosh Landfill
Scappoose

See details page 12.

TUE - THUR, OCTOBER 21 - 23

9:00 A.M. - NOON

WASTECON 2008
Tampa, Florida

SWANA's 46th Annual Solid Waste Exhibition continues to be the only international solid waste tradeshow for solid waste professionals by solid waste professionals. This year's event focuses on energy and climate issues. Information at <http://wastecon.swana.org>.



UPCOMING MEETINGS

WED, NOVEMBER 19
9:00 AM

Monthly member meeting
Location to be determined

WED, DECEMBER 17
9:00 AM

Monthly member meeting
Location to be determined

