



Wyckoff Generational Remedy Community Meeting Summary

Wednesday, January 13, 2010

7:00 p.m. – 9:00 p.m.

IslandWood

4450 Blakely Avenue NE, Bainbridge Island, WA

As part of a three-day expert panel workshop held to consider generational remedy options for the Wyckoff Site on Bainbridge Island, a community meeting was held on January 13, 2010. This document summarizes the meeting discussions and captures input received from the public.

Introduction

Tim Nord, Washington State Department of Ecology, welcomed participants to the meeting and thanked them for coming. Tim explained that Ecology invested in a process that solicited input from national level experts to explore long-term, multi-generational remedy options for the Wyckoff site at Eagle Harbor. Tim explained the three-day expert panel workshop and objectives for the community meeting:

- Provide interested community members information on the generational remedy evaluation process, objectives, and timeline;
- Share ideas generated during the expert panel workshop, answer questions, and obtain input;
- Build interest in following the process through review of draft alternatives and cost estimates in March 2010.

Tim elaborated that the contamination at the Wyckoff “point” could pose significant environmental risks and enormous management obligations over the long-term, for multiple future generations. Ecology and the community have decided to consider ideas for reducing and/or stabilizing the contamination slated to remain at the site under EPA’s planned containment remedy. Tim said members of the Bainbridge Island community are serving on a Steering Committee that is working with Ecology to consider generational remedy options. Tim noted that additional detail regarding the objectives of the project are available on Ecology’s web site (www.WyckoffGenerationalRemedy.org).

Ecology introduced participants in the Generational Remedy Evaluation Workshop, including the members of the Expert Panel; Steering Committee; Ecology staff and project consultants from Floyd|Snider, EnviroIssues and Aspect.

Steering Committee

Perry Barrett, Bainbridge Island Parks Department and member of the Steering Committee, explained that the site was purchased by the city through various funding sources in 2006, and will become a public open space (Pritchard Park) upon completion of cleanup.

Rich Brooks, Suquamish Tribe, is another Steering Committee member. Rich stated that the Tribe looks at Wyckoff Site challenges with a multi-generational lens and considers how today’s actions will affect our children’s children. He said he was impressed by the dialogue among the steering committee, expert panel and Ecology.

Pat Serie, EnviroIssues, reviewed the evening’s agenda and explained her role as facilitator and helping ensure that the public is involved in the process. She said Ecology will be returning in the spring for another community meeting on remedy options. She noted that the presentations and materials from the expert panel workshop, and from this community meeting are available on Ecology’s web site (www.WyckoffGenerationalRemedy.org) and they were “tweeting” live from the meeting.

Generational Remedy Options Developed During the Workshop

Kate Snider, Floyd Snider, introduced eight expert panelists and explained they were selected based on their technical experience with similar sites. Kate said each expert panelist was asked to come to the workshop with a presentation explaining how they would approach cleanup and what technology they would use (presentations on Ecology website). The first day of the workshop was dedicated to the panelists presenting their ideas and the second day the experts and Ecology team began working together in groups to form alternatives. Kate said they developed three alternatives they would like to present, but reminded participants that the experts only began discussions the previous day so these may not be the only alternatives for the site. She elaborated that this will give participants an idea of the types of technologies that are being considered.

Containment plus Dig, Treat and Reclaim

Mike Kavanaugh, Malcolm Pirnie, presented the first alternative which would consist of containment, excavation, treatment and reclamation.

Containment Plus Dig, Treat and Reclaim	
Major elements	Soil excavation (50 feet average below surface over 9 acres) On-site soil treatment, medium temperature thermal desorption Hydraulic containment <ul style="list-style-type: none"> • Up-gradient barrier wall • Grout underlying aquitard to reduce leakage Enhanced perimeter wall - cut down to stepped edge Stormwater management to reduce recharge Timeframe of about six years
Benefits	Removes over 80 percent of soils containing creosote Virtually eliminates long-term risks Facilitates shutdown of pump-and-treat system
Challenges	Soils and fluids managed on-site Hydraulic containment to eliminate inflowing water
Community issues identified	Transport of fuel for thermal treatment Emissions from equipment Construction noise, lights Duration of operations

Whole Site In-Ground Thermal Treatment

Michael Basel, Haley & Aldrich, presented the next alternative which would consist of in-ground thermal treatment throughout the entire site.

Whole Site In-Ground Thermal Treatment	
Major elements	Thermal system (steam injection and electrical heating) <ul style="list-style-type: none">• Heater/injection/extraction wells• Power delivery system• Steam boiler Fluids extraction and treatment Up-gradient barrier Low-permeability cap Re-grade and restore Timeframe of 10 to 20 years
Benefits	Robust creosote removal; eliminates mobile creosote Flexible operation Facilitates shutdown of pump and treat after thermal treatment
Challenges	Requires 2-3 megawatts of power Significant above-ground treatment equipment needs
Community issues identified	Energy demand Low noise expected Low-profile method Duration of operation with access restricted

Containment Plus Focused Treatment and/or Stabilization

Kent Udell, University of Utah, presented the final alternative which would consist of containment, as well as targeted treatment and stabilization.

Containment Plus Focused Treatment and/or Stabilization	
Major elements	Creosote mass removal <ul style="list-style-type: none"> • Steam remediation in deep soils • Stabilization/thermal treatment in shallow soils Hydraulic containment <ul style="list-style-type: none"> • South side up-gradient barrier wall • Grout underlying aquitard to reduce leakage Enhanced perimeter wall with natural transition to soften beach <ul style="list-style-type: none"> • Move adjacent soils to central portion of site Low-permeability cap covered with clean soil Timeframe of approximately seven years
Benefits	Reduced mobility for chemicals Possible shut down of pump and treatment system
Challenges	Ensure integrity of aquitard grout Identify targets for focused treatment Mixing/binding of stabilized volume Energy needs
Community issues identified	Construction noise, light Emissions from boilers and construction equipment

Community Feedback and Questions

Tim Nord and the panelists took questions and answers from the audience and then participants were invited to visit four stations set up around the room, one concept station for each of the alternatives presented and the fourth on site background. Participants were invited to ask questions directly of the expert panelists, steering committee and Ecology team and give them their thoughts and feedback. Details of comments and questions are included in Appendix A; the issues raised fell primarily into these categories:

- Duration of the project
- Energy source for thermal treatment
- Bioremediation as an option
- Cost of cleanup and who will pay for it
- Seismic risk/proximity to Seattle Fault
- Contamination seepage through containment walls
- History of thermal treatment on site - how is it different now?
- How exact location of contamination will be determined

- Community impacts - noise, ability to walk dogs on beach, kayaking

Appendix A. The following notes reflect topics, comments and questions raised by participants during the meeting or recorded on flipcharts during visits at the information stations.

- What is it going to cost to clean up and who is going to pay for it?
- Can you define some of the problems that happened with steam in the past and how that is different from what you are proposing today?
- The treatment plant closed in the 1980's and EPA has been there since then. There were varying durations of years where government stepped away for a while. Is there any benefit to doing it quickly? Is one process relatively cleaner than the others?
- The EPA and Corps of Engineers have just completed a multi-million dollar plant on this facility. How does that factor into your plans?
- Have you looked at biological treatments?

Site Background Station:

- Earthquake concern w/leaving/relying on any containment wall
- Will redirecting groundwater cause up-gradient pressure problems to slop stability?
- Can we do partial digs and get a big chunk out?
- Divers have seen product- pools around the north side of the site
- Will east beach impact Milhauke Pier project?
- VHS 55- 250 images on creosote plant

Whole Site In-ground Thermal Treatment Concept Station

- Want natural slope
- What is being left behind?
- Need to better understand risk of release before can support/rationalize time and money for this
- Want soccer field/park but want to use soon
- Make sure to include multiple heating technologies
- Choose technology that keep remediation jobs local - trickle down - investment good for region
- Impact of an earthquake
- What happens with what comes out of ground
- See so much government overspending hard to determine where being spent effectiveness
- Power benefit for island
- Co-gen plant, propane, gas, biomass
- Where does power come from now?
- In ground thermal seems preferable because less impact than lots

- What happens to sheet pile wall - does it come completely out or partially out?
- Heating the sand?
- Vashon has researched power independence options - look to that
- Go there a lot and talk to people - want it clean and have patience to do it right - other land trust acquisition is good example - won't get until owner dies but willing to be patient
- What is greatest risk to community from the thermal treatment? Answer: greatest risk is it may not work
- People are skeptical that it can be done
- Do it right, get in clean, avoid risky approaches
- Thought the EPA has been doing thermal all this time
- People were disillusioned when EPA discarded thermal, very happy to see start again
- Propane burning co gen?
- Ample power to supply 3 out of 4 seasons but just a problem in winter cause everyone use electrical heat but not air conditioning
- No more than 5 years, if long this generation loses this park
- Did pilot, why will thermal work now if not then?

Contain plus Dig, Treat, Reclaim Concept Station

- Seattle fault - issue
- Kayaking and dog walking on beach
- Does barrier cause impacts to beach south of site?
- How do we find out exactly where packets of contamination are?
- Where does groundwater flow from uphill of site (up-gradient barrier)?
- Jet-grout? How does that work?
- Duration of project already - costs & political atmosphere, is quicker cleanup better?
- Which remedy over time is better?
- Electricity source=challenge
- Management of water diverted around site
- Community impact of noise during operations especially thermal treatment
- More verifiable re: permanence
- More certain than other remedies
- Noise issue
- If 83/93 statistic is correct, that is impressive
- Like idea of digging, cleaning, putting back clean soil
- Pier would be advantageous for equipment - would it be accepted by community after cleanup is completed?

Containment and Focused Treatment and/or Stabilization Concept Station

- Like restoration plan - will other alternatives restore natural beach?
- Consideration for Seattle fault
- Want wall removed - wave action
- Why did former steam pilot fail?
- What would you expect to use to stabilize creosote?
- Do you need more investigation to find hot spots?
- What is more reliable - steam or stabilization? Which has more commonly been used?
- If you seal the bottom and sides, why spend \$ removing what's inside?
- What are you doing about the seeps outside the wall?
- Can you steam sediments underwater?
- Build a wind farm/solar farm - offset need for power line currently proposed - make artistic
- Drain behind up-gradient wall to prevent head buildup/blowouts
- Add signs to beach warning about seeps

Other Issues Raised

- Concern about contaminant on east side of the wall
- People could understand the balancing problem of risk/cost/time
- Everyone uses electric heat - use a lot of electricity in winter, but available the other three season
- Annual demand 30 megawatts, varies 16-80 megawatts
- Bioremediation? Huge amount of mass- take centuries