Responsiveness Summary for Public Comment

November 12 – December 17, 2012

Maury Island Open Space Agreed Order #DE-8439

Ms. C. Yarkin Comment:

Transcription from hand written letter received by Ecology on November 26, 2012.

Dear Ron Timm,

We have a couple of questions and concerns regarding study and cleanup of the Maury Island Open Space.

1. My understanding is that the majority of contamination can be found in undisturbed soils, which in this case is in the forested areas. How the heck are you going to remove the top soil without removing the trees? If I am wrong, and it is more of the brushy areas that need remediation, how much of the park's vegitation are you considering removing? how much will it cost? and how will you remediate and revegitate?

Response: Since we are still investigating the full extent of contamination at the Maury Island Open Space site, it is difficult to say for certain how we will perform cleanup in more forested areas. Ecology looks carefully at the current and proposed use of a property when considering possible cleanup options and how best to protect those who might come into contact with contamination.

In that regard, Ecology is requiring that King County provide a Park Use Plan for consideration before any cleanup decisions will be made. Ecology will use that plan to determine the best cleanup alternatives for different areas based on possible human exposure.

For larger forested areas, there is less chance for human exposure to contamination due to lower use, so active cleanup (soil and vegetation removal, etc) is less likely to be required for that reason. Also, for areas that are largely inaccessible or when contaminant removal is not practicable (such as under an existing building or a steep slope), Ecology can use institutional controls. Institutional controls (defined in the Washington State Administrative Code WAC 173-340-440) protect people from potential exposure when contamination is left in place by limiting or prohibiting access. Institutional controls can be administrative restrictions, e.g., signs, or

engineered solutions that physically restrict contact by covering areas of contamination (i.e., "capping") with clean material or by maintaining fences and barriers.

Once we finish the investigation, we will conduct a Feasibility Study to evaluate all of these institutional control options, along with the other potential remedial actions and their associated costs. Multiple and sometimes unique cleanup options will be considered for each land use area in the park. For example, different cleanup options would likely be used for children's play area than a heavily forested area. The final investigation report and draft Feasibility Study will be made available for public review and comment before a cleanup plan is selected. Following that, a draft Cleanup Action Plan will also be made available for public comment.

2. Is there any data that proves that any one in the plume area has become sick from contaminated soil? Do we know for a fact that people can and are being contaminated? Do we know what levels of lead and arsenic are dangerous in soils, or do we only have data for drinking water levels? In other words, do we know that people are at risk, and that this project is justified?

Response: No studies to date have linked cancer to the Tacoma Smelter plume contamination. One study on Vashon Island looked at patterns of certain cancers, but did not find a link to the Asarco smelter. This doesn't mean that there isn't a link between arsenic and cancer. The study was probably too limited to detect the impact of smelter contamination.

While arsenic can pose a health risk, people will only experience health impacts if they have exposure to arsenic contaminated soil at the site. Exposure happens when people swallow soil because arsenic is not readily absorbed through the skin.

Arsenic has long been known and proven to cause health effects from long-term exposure, such as heart disease, diabetes, and cancer of the bladder, lung, skin, kidney, liver, and prostate. Ingesting very high levels of arsenic can result in death.

Ecology and Department of Health recommend that people using the site for recreational or other activities take some simple steps to reduce their exposure. These steps will reduce the amount of soil that you bring into your home and your body. These steps include:

- Washing your hands after you work or play in the soil.
- After visiting the area, leaving dirty boots outside or at the door when you get home.
- Wiping your pets paws before they come in the house and bathing them often.
- Washing any blackberries or other fruits picked at the site before eating them.

More on these soil safety actions can be found on the Tacoma Smelter Plume website here: http://www.ecy.wa.gov/programs/tcp/sites_brochure/dirt_alert/2011/healthy-actions.html

Ecology sets soil and groundwater cleanup levels based on state law—the Model Toxics Control Act (MTCA), WAC 173-340. For cancer causing contaminants, we set cleanup levels in parts per million (ppm) to protect people against an increased lifetime cancer risk at one in a million. For arsenic, the risk-based cleanup number in soil would be 0.67 ppm. However, arsenic occurs naturally in soils at levels as high as 20 ppm throughout Washington, so that is where we set the cleanup level in the Tacoma Smelter plume areas.

We estimate that being exposed to 20 ppm arsenic in soils may increase the cancer risk to 30 in one million. In other words, there are 30 more cases of cancer predicted than if there were no arsenic in the soil.

Lead can cause learning difficulties and behavioral problems in infants and children. The level of lead in blood helps predict the potential for harm. Levels are in micrograms of lead per one-tenth liter of blood (ug/dL). In 1991, Ecology set a soil cleanup level for lead of 250 ppm. This level should keep blood lead levels under the toxic level (15 ug/dL) for at least 99 percent of children when soil is the main way they are exposed.

Using the soil cleanup levels of 20 ppm for arsenic and 250 ppm for lead, sampling data from this site exceeds those state standards for acceptable risk. Since MTCA has provisions for considering potential risk and a mandate to prevent possible exposure, the state does not need documentation of human affects before preventive action is required to clean up the soil.

For more information:

Ecology fact sheet: http://www.ecy.wa.gov/programs/tcp/sites_brochure/dirt_alert/2011/health-effects.html

Department of Health report:

http://www.doh.wa.gov/Portals/1/Documents/Pubs/334-284.pdf

Are you taking into consideration lose soils verses soil that is held down by grass and plants? Are you distinguishing between areas that are heavily trafficked verses areas that are off the paths where no one goes? If you remediate in the park, are you going to be surgical in youre approach?

Response: We are considering all factors that determine the nature and extent of contamination. Ecology always considers the current and future land use when planning for cleanup and setting cleanup levels for a site. We are careful to consider cleanup options that do not cause further environmental harm or require unnecessary restoration. We are not sure what the final cleanup plan looks like yet. Ecology will provide the results of the draft Feasibility Study, as well as the

draft Cleanup Action Plan, to the public for review and comment before the cleanup actions are finalized and implemented.

My husband and I are concerned about lead and arsenic levels in our soils as we live on Maury Island and are raising three children. We have had our soil and our children tested repeatedly. Our children have never tested positive for either lead or arsenic, and it appears to us that the risk is now much different than when lead and arsenic were raining down on people, and plant leaves etc.

If the danger is real, then we want to know. If the risk is insignificant, then we want you to stop scaring us, and stop spending precious resources on a problem that is not real.

Response: There is a potential health risk because of the contaminated soil. That risk level depends on the amount of exposure and individual factors (overall health, length of exposure, and many others). Exposure happens when you swallow soil. If you follow the safe soil actions, you can reduce the exposure risk for you and your family to the contamination. Ecology's mission is to protect human health and the environment. We want to provide you with information about the risks and how you can protect yourself.

More information about health risks are posted on our website here:
http://www.ecy.wa.gov/programs/tcp/sites_brochure/tacoma_smelter/2011/ts-hp.htm

Thank you. I would very much appreciate a reply which answers my questions quantitatively.

Celina Yarkin

Mr. M. Meyer Comment:

Copied from Email received by Ecology on November 21, 2012.

Mr. Timm,

I have the following comments on the Agreed Order for Remedial Investigation, Feasibility Study, and Draft Cleanup Action Plan for the Maury Island Open Space:

1. Findings of Fact, paragraph F. The contaminants associated with the historical private skeet shooting range in the northern portion of the site are listed only as "metals." Historical skeet targets were manufactured with a high percentage of coal tar and therefore cPAH contamination is also typically associated with historical skeet ranges. Note that paragraph G mentions PAH exceedances in sediment adjoining the site. The RI should consider both potential historical over-land and over-water shooting of clay pigeon targets, and the associated cPAH contamination of both soil and sediment.

Response: The Agreed Order (AO) states facts that were known at the time the agreement was negotiated. New information about contamination is still being gathered. Ecology is requiring further investigation to be conducted at this site before the Remedial Investigation (RI) is complete. You are correct about the skeet targets and sampling for polynuclear aromatic hydrocarbons (PAHs)/carcinogenic PAHs (cPAHs), and additional sampling will be conducted at various locations throughout the Open Space site. More samples for arsenic and lead will also be collected where data gaps currently exist.

The Agreed Order should obligate Ecology to promptly post the monthly progress reports prepared by King County to a web site accessible to the public.

Response: Ecology maintains a website that is routinely updated and provides information specific to this site: https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=1532

We will post reports and milestones on our website as they are completed and as time allows. If you have questions on the progress of the site activities, feel free to contact the Ecology Site Manager, Ron Timm, at Ronald.Timm@ecy.wa.gov or 425-392-3095.

King County also has a website that contains site information:
http://www.kingcounty.gov/recreation/parks/naturalresources/naturallands/mauryislandsite.aspx

In addition, we have developed a Public Participation Plan that describes how Ecology will provide information to the community and stakeholders during the cleanup process. This document is available on Ecology's website.

2. As in most Agreed Orders, the dispute resolution process is difficult to follow. Typically this causes confusion for the technical professionals attempting to perform work under the AO. The AO should be clear how Ecology's comments on work products (work plans, reports, etc.) will be addressed.

Response: The dispute resolution language in the Agreed Order is crafted with assistance from our legal counsel in the state's Attorney General Office (AGO). Though it is 'boilerplate' language that is generally not meant to be changed, it is occasionally revised by Ecology based upon recommendations from the AGO.

Your comment is acknowledged and will be considered for future revisions. Please note that each site is unique, as well are its' potential disputes, so the AO language is therefore meant to be more general and to provide some flexibility for Ecology to resolve the issues.

3. Must King County informally dispute every editorial comment made by Ecology on every document produced if King County does not agree with the change to the document? What role do the licensed professionals preparing the reports on behalf King County have in the document revision process? Are the licensed professionals required to stamp documents that contain Ecology's opinions, even if the professionals do not agree with the technical content of Ecology's opinions? These processes and roles should be better defined in the AO.

Response: Ecology and King County use licensed professionals to conduct the investigations, review data, and manage the cleanup process. The Agreed Order (AO), Part VIII. E. (Performance), describes the professional requirements of the persons conducting certain remedial action work to ensure quality and safety. State licensing regulations (Chapter 18.43 RCW, engineers; Chapter 18.220 RCW, geologists) require that certain technical documents prepared by professionals in the state of Washington be stamped, and Ecology requires that these regulations be complied with for remedial actions being conducted at cleanup sites. Both agencies may incorporate additional technical staff through contracts with other environmental consulting professionals.

The licensed professionals may make suggestions but the County will ultimately decide what goes into the documents. The AO directs the County to provide documents for final approval by Ecology.

The County does not need to informally dispute Ecology's comments that they do not agree with. If the County disagrees with an Ecology comment, however, they must first describe why they disagree. These technical or legal discussions and/or negotiations are typically conducted between parties. These discussions can be done through phone calls, emails, or technical memos. If disagreements cannot be worked out through technical discussion, then they can be elevated through the formal dispute process.

Thank you for the opportunity to review the AO.

Michael Meyer

Resident, Upper Gold Beach, Maury Island

Ms. A. Xaver Comment:

Copied from Email received by Ecology on December 14, 2012 (after a phone call on December 13, 2012).

Thank you for sending this link after my call to you. Please consider the following as my comments for the project:

The map, in the link you sent, doesn't seem all that far-reaching to cover 1,000 sq. mi.

I couldn't find anything beyond the "local" boundaries, which are quite concise and squared off. A plume would not look like that.

Response: Comment acknowledged. The plume maps are continually being refined as more data can be incorporated.

The study needs to be more comprehensive for an area that was continually contaminated from l890 to 1985 (95 years).

The park site certainly needs to be cleaned up, but what about the rest of the "plume area?"

Response: Comment acknowledged. Additional investigation of the Open Space site will be conducted, and the cleanup process will be as comprehensive as practicable. For information on the extensive amount of cleanup being conducted within the greater smelter plume area, beyond the Open Space site boundaries, please see Ecology's website for the Tacoma Smelter Plume (http://www.ecy.wa.gov/programs/tcp/sites_brochure/tacoma_smelter/2011/ts-hp.htm). If you have further questions, please contact the Ecology Project Manager, Marian Abbett, at (360) 407-6257 or Marian.Abbett@ecy.wa.gov.

The brochure (that was mailed) mentioned people can be protected from contamination by washing hands, food, pets, etc., and by removing shoes before coming indoors. But, where does the contamination go…into the water and waterways? Or, perhaps onto the ground, and then where?

Response: The contaminants likely will return back to the environment, e.g., yard soil or on-site sewage system, as cleanup proceeds throughout the smelter plume area. However, since the plume is so large, the cleanup processes will take a very long time to complete, if ever. In the meanwhile, the risk to human health will be reduced by following the safety procedures described in the brochure.

I live in Skagit County and have 3 small, organic (I hope) farms. Why did I get the mailed brochure? Are there contaminants here from the plume?

Add these concerns to the potential coal trains, and what have we got in our "pristine" Pacific Northwest? It seems there are a lot of "secrets" to be revealed. How many more? And, why should anything (i.e. coal trains – I'll send comments later to the appropriate offices) be added to further degrade this wondrous part of the west coast? We can barely handle, clean up, or protect what we have or will have.

Response: Comment noted. Skagit County is outside the Tacoma Smelter Plume boundary. We are not sure why your address was included in the mailing, but can certainly remove your name if you are not interested in receiving information about this project.

Thank you for the opportunity to comment.

Andrea Xaver