UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

Reply To
Attn Of: ECL-115

October 23, 2006

Keith Johnson, Manager
Lower Willamette Section
DEQ Northwest Region
2020 SW Fourth Ave., Suite 400
Portland, Oregon 97201

RE: EPA Comments on DEQ's Draft Presentation "Stormwater in Portland Harbor: What is DEQ Doing About It?" for October 26, 2006

Dear Mr. Johnson: Keith

EPA has a shared interest in DEQ's identification and control of upland sources to the Portland Harbor Superfund Site in the lower Willamette River. As lead for the in-water response work, EPA is concerned about contaminants in storm water that have the potential to recontaminate the Site after remedies (e.g., dredging and capping) have been implemented. EPA believes that it is important to characterize what contaminants are being released to the Superfund Site in storm water, and identify facilities that are sources of those contaminants. Since early actions are underway and remedies will be initiated in the near future, it is critical to begin storm water characterization soon to allow DEQ time to work with facility owners or operators in controlling storm water that may have the potential to recontaminate the river. From our experience at other Superfund sediment sites, the EPA provides the following comments to the presentation referenced above:

Slide # 2, second bullet, third subbullet

Joining forces with whom?

Slide #2 Notes

I don't see how DEQ will be able to separate storm water from the other sources in conducting an evaluation and focusing efforts. The best you will get is areas where the source load is a problem and then you're going to have to start collecting data to figure out where the contamination is coming from. You may want to look at what is already known because it may account for the majority of the load and you can just account the remainder to storm water.

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Slide #3, first bullet

Reach agreement with whom?

Slide #4

The two main objectives for source control are 1) to prevent recontamination and 2) reduce risk to receptors. I don't see the second objective on this slide.

Slide #4, last bullet

This presentation does not describe the process for doing this. I think it is key to present the process. The process, as I understand it, is:

-Use the DEQ (Bruce) model with current sediment concentrations to estimate total load from upland sources

-Rerun the model using Round 2 PRGs to determine areas where recontamination and risk are **greatest** (Prioritize work and Focus future work).

-Determine what is known about sources in that area and identify data gaps and how to fill them.

-Identify significant sources and possible source control measures.

-Implement source control measures.

-Evaluate – continue to monitor. Cycle back and do more if necessary.

Slide #6

This is not the process I understood DEQ was going to do. My understanding was that both catch basin solids and whole water samples. If the DEQ process is to first screen catch basin samples and not proceed with source control if the catch basin samples are below SLVs, then EPA will have to flag the storm water pathway for source control as being incomplete for these sites. While sampling solids may give some insight to the recontamination issue, it does not provide enough information for reduction of risk to receptors. This is based on EPA Guidance for source control at CERCLA sites. Additionally, many of the chemicals in Table 3-1 of the JSCS do not have SLVs for all media – How will DEQ screen for those chemicals?

It seems that DEQ's process is out of order. Normally, EPA would do a loading analysis to determine if there is a problem (i.e., potential to recontaminate or risk to receptors) and then would trace sources to find problem and control if possible. DEQ is jumping right to source tracing without determination of whether or not there is a problem. How is DEQ going to determine if there is a problem? We are hopeful that it will be using the process described in our comments for Slide #4, above. However, there will be some sites that DEQ is now requiring to do source tracing that may not be a problem and we are concerned that DEQ is not focusing its resources where there is the biggest problem.

Slide #7, second bullet

It should be noted in the presentation that this bullet refers to infiltration and inflow (I/I) of groundwater to the storm water conveyance system.

Slide #8, second statement

BMPs should focus on “source elimination” rather than “source reduction.”

Slide #8 Notes

BMPs should also include “spill containment and control” and “ongoing monitoring of both phases (solids & whole water)”.

Slide #9, first bullet

There is an extra period after “about”.

Slides #9 through #15

While this is good work, there is a lot of information provided in this presentation about work with City of Portland – what about work with others (e.g., Port of Portland, DOT, other industries)?

Slide #14, last bullet

What kind of pilot study? What is the purpose? What is the expected outcome?

Slide #15, second bullet

What does “WOE” stand for?

Slide #15, third bullet

What does this statement mean? Are you trying to say that for the City of Portland RI phase that sources do not need to be complete, but it needs to identify where source control needs to take place in the FS phase?

Slide #16, last bullet

What timeline – the City of Portland RI? What are the goals (source identification, source characterization, source control) for this timeline?

Slide #16, third bullet

Remedial objectives for the Portland Harbor Superfund site have been established (see EPA memo to LWG on Round 3 Data Gaps, 11/28/05); I think you mean that PRGs or cleanup goals have not been established.

Slide #16, fourth bullet

While this statement is true, there are proven methods for providing good estimates of storm water loadings to receiving waters. One year of data is not good enough; this requires multiple years of data and data from multiple storm events. That is why upland sites need to start gathering this information now.

Slide #16, last bullet & Notes

There will never be certainty (e.g., water quality criteria changes (ARARs), cleanup numbers can change, etc.) which can all change source control requirements. What is good enough today may not be good enough tomorrow; thus, you can’t say to an upland site that this is all they’ll have to do ever. The best you can say at this point is this is

what is necessary for now and instill that the better they manage their storm water on their own (i.e., keep contaminants out of the storm water conveyance system) the less likely they will be required to do it. Remember that discharging is a privilege, not a right – that is why there are permits.

Slide #17, Goal

The goal is really to identify potential sources, characterize them (sample thoroughly), evaluate for potential to recontaminate and pose risk to receptors and control significant sources. The goal identified in the presentation is the same as the last objective.

Slide #17, first bullet

DEQ needs to be careful about the scale in which they propose to use Bruce's fate & transport model. Even Bruce stated that the model is extremely simple and works best at a larger scale. I don't think that DEQ will be able to adequately apply it at much smaller of a scale than the ISA. I also do not believe that DEQ will be able to adequately address storm water impacts to the ISA without some information about loading rates, especially from key problem areas of the site. I do think that the model would be sufficient to assist DEQ in prioritizing their work to focus on where there are the biggest impacts from all sources and then look at what "overall" source reduction needs to occur. DEQ can then look at the information they know about sources in those areas (do the numbers add up?) and identify data gaps.

Slide #17, second bullet

This objective is difficult to achieve without data and has not been clearly identified in this presentation (see EPA comments for Slide #4, above).

Slide #17, last bullet

If the last bullet is DEQ's main objective, then it should be listed first.

Slide #18

The information in this slide is about "Receiving Environments" around the Region, not Storm Water. If this is the information DEQ wants to present, then the information for Thea Foss and Lower Duwamish are incorrect. EPA (i.e., Kris Flint) is not able to provide the adequate information at this time, so DEQ should be careful in presenting inaccurate information.

Thea Foss is a dredged relict of braded tidal channels. Storm water is not the only influent; there are base flows from old river regime and groundwater as well. Man-made vs. not is not important – wide riverine with high flow vs. narrow with low flow, depths, and salinity are more important for the receiving environment.

Lower Duwamish hydraulics is the low end of one of the "twins."

If DEQ wants to present "Storm Water" from around the Region, then they should be comparing storm events, drainage source areas (how much highway, residential,

industrial/commercial, mixed), how may industries with storm water adjacent, CSO or MS4s.

Slide #18 Notes

EPA agrees that the Willamette has great flushing potential; that is why we are concerned about the contamination levels in the sediments and what the sources of those contaminants are. If the Willamette has such great flushing potential and there are no current sources, then MNR would fix the problem – not sure we agree with that.

Slide #19

This slide does not present how many shared conveyance systems there are in the ISA, how many are Port of Portland outfalls, how much is DOT, how much is industrial/commercial vs. residential, etc.

Slide #20, second bullet (& Notes)

This data collection is only useful for source tracing and does not answer the question of whether storm water is a "problem" or not.

Slide #20, third bullet

Are you going to say which sites? I only know of OSM and T4.

Slide #21

Need to "Identify storm water sources" before doing anything else. Did you intent to pose this in the form of questions or as steps in the storm water evaluation process? The second question posed "What happens to it once it reaches the river?" is a difficult question that even experts cant accurately answer, but can only predict (sometimes using models) & monitor to see if prediction is accurate and change the strategy if not. The third question posed should be to explain how this relates to the water & sediment conceptual model. Again, we know the RAOs – did you mean PRGs? The RAOs for source control are to prevent recontamination of the selected remedy(ies) and prevent risk to receptors. The recontamination evaluation is key to this step. The answer to the question "How much source control is enough?" is enough to reduce the potential for recontamination of the remedy and reduce risk to receptors. Again, the recontamination evaluation and risk evaluations are key to answering this question. The answer to "What's "good enough" for the ROD?" is following a process that meets the needs of EPA guidance and CERCLA, which includes documenting all the while to establish what is "controllable" or not, and following the mantra of "clean up & keep clean."

Slide #22, second and third bullets

EPA does not believe that either of these objectives can be obtained without loading data.

Slide #22, last bullet

Since data will be needed before design of next data runs, the two subbullets should be switched.

Slide #23, first bullet

I thought the City's Grid model was only going to be used to estimate the storm water runoff from the ISA. Why are you using the City's Grid model to estimate the volume of river flow – this information should be available from USGS.

Slide #23, second bullet

I'm still not clear on how literature values pertain to Portland Harbor. While literature values provide "typical" numbers for sites, they do not give information specific to a "Superfund" site nor do they represent what is happening at this site. I suppose you could use these numbers in an evaluation of a source area of concern to see if the #'s add up for all sources and if not, then you would need to get site specific numbers – is that what you were thinking?

Slide #24, first bullet

Where would you get a "typical" concentration? In EPA's opinion, there is no "typical" number for storm water – it is highly variable based on many factors (e.g., storm event, type of land use, site-specific BMPs used, etc.).

Slide #24, second bullet

Storm water source control (or source control in general) is not about concentration, but all about mass loading. Concentration data can be used with flow data to obtain mass loading, but with a highly variable, batch-type discharge grab samples won't get you there.

Slide #24, third bullet

I don't understand the difference between "pulsed" inputs or daily inputs or seasonal inputs. Did you mean the difference between "pulsed" or batch inputs versus continuous?

Slide #24, last bullet

If you mean concentration in fish, then we agree with this bullet. But if you mean concentration in storm water, then we disagree with this statement because it is the loading not the concentration that poses the risk.

Slide #25, first bullet

While this would be nice to know, I don't think we'll be there for a long time. Much data is needed to get this type of insight accurately for a specific area. I think a shorter-term insight would be "where to focus resources" and "where are source areas that pose the most risk"

Slide #25, second bullet

Data is needed to achieve this insight, too.

Slide #25, third bullet

I don't think you'll be able to get a single number for concentration in storm water. It is going to be load dependent and AOPC dependent.

Slide #26

What about implementation of source control measures?

Thank you for the opportunity to comment on this presentation. If you have any questions or would like to discuss these comments, please contact me at (206) 553-6705 or koch.kristine@epa.gov. Please note that I will be in Portland attending meetings from October 24th through October 26th, but I will be checking my voice messages. I will be available to meet in-between meetings on those dates.

Sincerely,

Kristine Koch
Remedial Project Manager