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October 27, 2016

Rob:

You asked I provide you with a letter covering points raised during our phone conversation last Thursday.

There were a number of points raised in our phone conference.

WSDOT/KGM provided Kenmore, and other local governments/agencies incomplete or misleading information that led to incorrect conclusions or actions.

On or about May 10th, 2016, the City of Kenmore was engaged in settlement of litigation with KGM related to the use of the Kenmore Yard¹, and requested KGM provide data on arsenic contamination said to be present in the old SR 520 bridge structure. On or about May 12th, KGM supplied the City of Kenmore with a number of sample results for TCLP analysis of concrete from six composite samples, reporting on eight metals². These samples were taken from the section of the old bridge referred to as the pontoon superstructure. An additional four composite samples were taken from the approach area of the structure not contaminated with elevated levels of arsenic³. Based on this information, though they expressed multiple reservations about sampling methodology including how samples were composited, and why more contaminants weren't tested for, Anchor QEA opined what information was provided was below Resource Conservation Recovery Act levels referred to as MCL's (Maximum Contaminant Levels) for toxicity characteristic⁴.

The problem with the Anchor QEA report is that it was based on cherry picked data clearly designed to only allow for a conclusion that there was no problem with the concrete scheduled for demolition and transport through the Kenmore Yard, operated by KMG and their contractors.

¹ Email communications from Kenmore Public Records request response provided to Elizabeth Mooney.

² Anchor QEA Memo, May 20, 2016 to Nancy Ousley page 1.

³ ibid

⁴ ibid

KGM had known since on or about July of 2015, that total metals analysis of the bridge pontoon superstructure concrete contained arsenic contamination at a level of 55 to 66 parts per million⁵. The TCLP test method only tells you how much of a contaminant comes primarily off the exposed surface area of a solid sample, not how much of a contaminant is actually in a sample. That is why TCLP results for solid samples are reported in mg/L (milligrams per liter), rather than the usual form of reporting contaminants in solids, which is in mg/Kg (milligrams per kilogram).

There is an attempt by KGM and others to pretend that exposure (human or environmental end points) to fine particulates containing 55-66 mg/Kg of arsenic (total metals) can be addressed, or is better addressed by results of a testing method designed to determine how much leachate a particular solid will generate if placed in a landfill. This shows either a basic ignorance of what a TCLP test is designed for, or is a deliberate attempt to mislead the public who likely won't know what a TCLP test is. That is why for example the Model Toxics Control Act unrestricted land use limit for arsenic (20mg/Kg or ppm), is based on total metals, not TCLP. Unlike the TCLP test method, the total metals based limit for arsenic contained in MTCA is specifically designed to be protective of human health, in part based on the human exposure pathways for ingestion, dermal and ingestion for both carcinogenic and non-carcinogenic effects⁶. TCLP does not consider these factors at all, but rather just provides one method of determining whether a material designates as a hazardous waste for purposes of deciding (in part) what type of landfill to send it to.

No reputable, knowledgeable person would try to represent that a TCLP test can be used to determine if people in Kenmore are at risk from exposure to cement dust contaminated with arsenic, and high pH. While your consultant Anchor QEA did not go into quite this detail (and as they were denied access to the total metals data had no reason to do so), they did provide you with a technically sound and reasonable explanation of what the purpose of the TCLP method is⁷. EPA's statement on the purpose of the TCLP test is short and clear, "The following document provides information on the Toxicity Characteristic Leaching Procedure (TCLP), **which is designed to determine the mobility of both organic and inorganic analytes present in liquid, solid and multiphasic wastes.**"⁸ It is simply absurd to assert that a TCLP test can be used to determine risks related to inhalation, ingestion or dermal exposure, which were among the key concerns of Kenmore residents, and the City of Kenmore in opposing processing SR 520 concrete by further pulverizing it at the Kenmore Yard.

⁵ NVL Labs report, July 6, 2015, samples labeled KGM-1 through 4, showing arsenic at 55 to 66 mg/Kg (also ppm)

⁶ Calculations for Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses, Pete Kmet, Senior Environmental Engineer Toxic Cleanup Program, Ecology November 23, 2004 revision, see Tables 1, and 2 for arsenic.

⁷ See foot note 2, at page 1, Floating Bridge Test Results

⁸ <https://www.epa.gov/hw-sw846/sw-846-test-method-1311-toxicity-characteristic-leaching-procedure>

Public Health Seattle King County, required KGM to provide sample data including TCLP for eight RCRA metals, and pH in order to receive approval to dispose of the known to be arsenic contaminated concrete (pontoon superstructure) at the Reserve Silica site⁹. That these are the same data set that was partially reported to Kenmore is confirmed by communication between KGM and PHSKC¹⁰, and the lab report dates from NVL Labs¹¹. The problem here is that KGM neglected to provide Kenmore with the rest of the data set that included the pH readings of the samples¹². The fact these are part of the same data set is demonstrated by the sample paperwork that shows the same lab, the same date received and the identical client sample numbers of WS 1-3 and ES 1-3, and the same project number as the data provided to Kenmore and Anchor QEA¹³.

This is important as the pH data, from the same samples collected and provided to NVL Labs on the same date as part of the identical project number show the pH levels were from 13.1 to 13.3, with four of the six samples being 13.3. Any solid waste with a pH of 12.5, or more is a designated Dangerous Waste¹⁴.

If the entire data set (or what we know of it to date), including the total metals arsenic results from July 2015, with 55 to 66 ppm arsenic, and pH data showing the material designated as Dangerous Waste had been provided to Anchor QEA, their report to Kenmore would likely have been of an entirely different character. It would have, for example, informed the City that KGM was planning on processing and transporting dangerous waste contaminated with elevated arsenic levels through Kenmore. KGM provided Kenmore with just the TCLP data, and withheld the total metals data showing the elevated arsenic contamination that they knew

⁹ Email from Ben Tornberg, KGM to Darshan Dhillon, PHSKC 12/29/2015, asking for confirmation there wouldn't be a problem disposing of concrete with 55 to 66 ppm arsenic at Reserve Silica, Email from David Christensen, PHSKC to Ben Tornberg, KGM 12/29/15, stating "Dangerous waste applies to all wastes...Concrete or anything else, and Email from David Christensen, PHSKC to Ben Tornberg 1/14/16, requiring testing for "TCLP RCRA 8 metals" and "The pH of the waste (using the Solid Waste pH test) must be within drinking water standards."

¹⁰ Email from Ben Tornberg, KGM to David Christensen PHSKC, 1/19/2016, "Our concrete samples are currently at the lab."

¹¹ Anchor QEA Memo, May 20, 2016, at page 5 of 17 "Date Received: 1/19/2016"

¹² NVL Labs report, January 20, 2016, showing pH results for six samples ranging from a pH of 13.1 to 13.3.

¹³ *ibid*, see client, date received, project number and sample number designations as compared to the Anchor QEA report NVL Labs data that are identical.

¹⁴ WAC 173-303-090 (6)(a)(iii) determines that a pH test performed using method 9045D resulting in a pH of less than or equal to 2 or greater than or equal to 12.5 results in waste that must be characterized as "Dangerous Waste." The test described in the results from NVL Labs used method 9045D.

existed in the pontoon superstructure cement since July 6, 2015¹⁵. They substituted total metals data from a different area of the bridge that wasn't contaminated with arsenic. Further, by providing different, later-created data from a different area of the bridge from that where they knew elevated arsenic levels were present, KGM was knowingly misleading the City of Kenmore¹⁶.

This is not an isolated incident, but rather consistent pattern of omission and deception. To be brief (in an already long letter), I will limit this to a couple of examples.

Once the settlement with Kenmore was completed, the activity that was once supposed to happen in Kenmore Yard became slated to occur in the construction zone of the bridge on barges in Lake Washington. The City of Medina then faced a similar circumstance of learning late in the game that WSDOT plans had changed. This resulted in revision to the Shoreline Conditional Use Permit (CUP) and a subsequent appeal of that City of Medina decision.

In issuing the permit Medina like Kenmore relied on the data provided by KGM (on behalf of WSDOT). In the case of Medina, KGM provided even less data than what they provided to Kenmore. KGM only provided the six TCLP metals sample results, while withholding the total metals results from July 6, 2015, November 23, 2015 and the pH results of January 20, 2016¹⁷. The effect was to keep Medina and its concerned residents in the dark about issues related to contamination of the material and waste to be processed under consideration in the permit. It further suppressed the ability of Medina residents to fully participate in the consideration of the permit and denied any opportunity to comment on the issues raised by the data WSDOT and KGM had in hand but withheld. Like the outcome of the Anchor QEA report in the case of Kenmore, the Medina Shoreline CUP would likely have had a considerably different public comment period and outcome if KGM had actually provided the data they had been holding onto for months, instead of only providing the data they calculated would get them to the outcome they desired.

The even more egregious example though is the National Environmental Policy Act/State Environmental Policy Act Environmental Reevaluation done by WSDOT, and co-signed by the Federal Highway Administration¹⁸. A reevaluation is required whenever new information comes to light that may require a reassessment of either the threshold determination, or in the case an EIS (the highest level of review under

¹⁵ See footnote 5.

¹⁶ See Anchor QEA report May 20, 2016 at page 15 of 17.

¹⁷ See Exhibit 7 from City of Medina's Revision to Shoreline Conditional Use Permit file No. 277

¹⁸ http://wsdot.wa.gov/NR/rdonlyres/C52DB927-3FF3-4CB5-98F7-86C3591E300A/0/2016_04_20_I5toMedina_FBDemo_Reeval.pdf SR 520, I-5 to Median: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: Floating Bridge Demolition.

NEPA/SEPA), the EIS needs to be supplemented, or an addendum provided to address the new information/impacts. In the matter of the EIS for the SR 520 bridge demolition WSDOT faced a quandary. The EIS had provided very little consideration of the demolition aspects of the project. Thus any data collected or changes to where and how demolition was to be carried out, or new data on contamination levels in the bridge structural or other components would certainly meet the criteria for “new information.” WSDOT was very much aware that the demolition was controversial and being scrutinized by the public¹⁹. In spite of admitting to the activities (new information) at Kenmore Yard would illicit controversy, WSDOT took an interesting position on the “changed conditions” on how “the changed conditions affect the following differently than described in the original environmental document?”²⁰. In terms of any environmental impacts they claimed the new information would not result in any changes to any environmental parameter other than Threatened or Endangered Species. This includes changes to hazardous waste sites, section 4(f) lands, air quality, water quality, vegetation and wildlife, etc.

Then you come to the assumptions that WSDOT, and cosigner FHWA are relying on to make these assertions. There are a number of sections that apply to these assertions.

The fundamental flaw is apparent in the section headed Hazardous Materials²¹, which is parsed to omit the total metals data of July 6, 2015, and the pH data of January 20, 2016. The total metals data for arsenic invalidates the conclusion that the TCLP data proves that the levels in some of the concrete are below those that would be expected to pose an issue for human health²², as TCLP in the context of the eight RCRA metals data is provided for only determines if the waste designates as a hazardous waste in the context of selection of a disposal site, not determining whether the waste is a potential human health or environmental risk (as discussed above TCLP is used to determine the mobility of contaminants).

An accurate description of the purpose and limitation of the use of a TCLP test was provided to Kenmore by their own contractor²³, which you can see does not include human health, or environmental exposure impacts. In addition to failing to provide the total metals data, which even in the case of the most favorable data indicates the arsenic level is less than 8.1 mg/Kg, rather than 0.2 mg/L (results they reported as ppm, which avoids the question of why they were reporting arsenic levels in concrete as a concentration in liquid, rather than a solid). There is an additional

¹⁹ Ibid, see page 2 of 10, “WILL THESE CHANGES RESULT IN ANY CONTROVERSY”, with an answer of “YES”.

²⁰ Ibid, see page 1 and 2.

²¹ Ibid, see page 8 of 10, “WSDOT has surveyed the existing floating bridge for hazardous materials and has discovered some areas of concrete with very low levels (less the 0.2ppm) of arsenic present.”

²² Ibid, see page 8 of 10, *Hazardous Materials*

²³ Anchor QEA Memo, May 20, 2016, page 1, Floating Bridge Test Results

claim that the existing groundwater monitoring and erosion control BMP's would continue at Kenmore Yard, as well as continued screening of materials brought to the Kenmore Yard for hazardous materials, and if any are encountered they would be disposed of in accordance with all applicable Federal, local, and state regulations²⁴. This was obviously a false assertion as WSDOT and KGM were in possession of data that the pontoon superstructure concrete waste designated as Dangerous Waste, but did not continue to "screen" the material, in fact went on to dispose of it in a manner not "in accordance with all applicable Federal, local and state regulations."

In the Section 4(f) Resources, they state no such resources will be impacted by the proposed use of the Kenmore Yard, therefore no impacts are anticipated. Perhaps true as far as it goes, but the information on arsenic levels in the pontoon superstructure, and pH levels that designate as Dangerous Waste are clearly new information that directly impacts the Washington Park Arboretum, which surrounds SR-520 on all sides. Even if WSDOT was to assume that their Best Management Practices would mitigate impacts, they still have a duty to disclose the new information (all new data collected after the initial NEPA/SEPA demolition evaluation) to the public. Instead they deliberately withheld it in the NEPA/SEPA reevaluation, City of Kenmore litigation and settlement process, and City of Medina Shoreline CUP Revision.

In the NEPA/SEPA section *Air Quality*, there is no admission of elevated arsenic levels, or high pH²⁵. Even if the measures outlined are effective, it needs to be provided in the context of what it is effective in accomplishing.

The assumption in the air quality section is that dust control will be accomplished by application of water and resulting capture and disposal of those liquids in accordance with all applicable Federal, local, and state regulations. It is unclear how this is happening at the Kenmore Yard, as the apparent method is for any liquids to discharge to ground. There does not appear to be any systems for collecting or treating track out, or dust control water related to loading trucks at the Kenmore Yard site. So either the material is generating dust at the site (no dust suppression water), or the dust is being suppressed with water, and being discharged, along with the track out from the barges to the ground.

At this point with the facts and supporting records available it should be clear why the community has no trust in any assertions provided by the responsible agencies. WSDOT, Ecology and PHSKC all of have substantial incentive on the part of individual staff and as institutions to justify the evaluations, permissions, permits and actions they have allowed.

²⁴ See footnote 18.

²⁵ *ibid*

The situation based on the records show that sampling of bridge materials to protect human health and the environment was poorly thought out, badly designed, yielded inconsistent results. In addition WSDOT and its contractor only provided Kenmore (and others), with limited access to the data they had collected, while withholding data that raised any health, safety and compliance issues, including information that showed that the cement from the pontoon superstructure designated as Dangerous Waste.

For that reason citizens in Kenmore are requesting independent testing and analysis of materials transported through the Kenmore Yard, as well as areas of track out onto the Kenmore Yard. There is ample photographic and video evidence that operations at the Kenmore Yard are in violation of the Kenmore v. KGM settlement, in particular as it relates to the predominant use of a front end loader used to offload the concrete waste from barges onto the Kenmore Yard to load it onto trucks. Photographs and video show that this is resulting in substantial track out into the Kenmore Yard, without even standard Best Management Practices, such as a wheel wash to prevent such track out from being transported onto the public streets of Kenmore.

As per our phone conference the community is requesting that Kenmore exercise its authority to enforce the settlement agreement, as well as securing the safety and health of Kenmore residents, to independently sample concrete waste being transported by WSDOT/KGM/Northstar through Kenmore. In addition sampling of areas of track out from the barges into the Kenmore Yard to ascertain the level of contamination associated with track out from the barge unloading, and truck transport operations. Based on this information Kenmore should consult with its residents and determine what additional steps are necessary.

Source files, photographs and video clips consist of some large files. Those materials can be made available, but it will likely have to be via google drive, or usb device.

Regards,

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