401 Inspection Form

Project Name: SR 520 Floating Bridge & Landing Site under active construction? **X Yes** ☐ No or ☐ Project completed	Date of Visit: July 7, 2016 Inspector: Penny Kelley

City: Medina County: King Location: SR 520/Lake Washington Site visit trigger: Follow up - Water Quality Violation

WSDOT Contacts: Contact information:

Stephen Sax – WSDOT 425-576-7133

Weather Conditions: overcast but no rain

Is a copy of the 401 Certification onsite: ☐ N/A **X Yes** ☐ No

Does this project have an additional area of mixing for in-water work? ☐ Yes **X No**

If yes,

Are turbidity standards being met at the boundary of the allowed mixing zone? ☐ Yes ☐ No

Were any WQ samples taken?	Yes **X No**
Were any photographs taken?	**X Yes** No

Is the project in compliance with 401 Certification Conditions:

All bridge demolition work was in compliance and no violations were observed. However, towards the end of the day, KGM reported that the containment system around a pair of pontoons failed, releasing some cured grout to the lake while being separated. WSDOT will send a follow up ECAP report containing more information regarding why the system failed.

Was Ecology notified of non-compliance? X Yes (occurred while on site inspecting the job) ☐ No ☐ N/A
Notified of all non-compliance events

Are there NPDES Construction Stormwater compliance concerns onsite? ☐ Yes ☐ No X N/A

I did not inspect any of the areas covered under the NPDES permit.

WQ Inspector Greg Stegman phone/e-mail 425-649-7019 gste461@ecy.wa.gov

I certify that I have received _____ pages of this Site Inspection Field Form.

***Signature*_____ ***Date*_____

On-site Observations:
The purpose of this inspection was to follow up on the violation that occurred during the June 28th inspection when concrete debris from demolition activities discharged to Lake Washington. WSDOT and KGM responded to this violation by stopping work and adjusting/adding BMPs to containment set up. The focus during the inspection was to observe the demolition work and see how the changes made to the BMPs/containment system were functioning. In attendance were Joe Burcar with Ecology, Robert Grumbach with City of Medina, Stephen Sax with WSDOT, Bryant Bullamore with WSDOT, Greg Meadows with WSDOT, Margaret Kucharski with WSDOT, Cody Bishop with KGM, Robert Brenner with KGM, Ben Tornberg with KGM and Jeff with KGM.

Bridge Demolition East Approach Topside/bridge deck: the crews are still working to remove the asbestos pipe. Sections of the pipe have already been removed, all of them encased in concrete with small sections at either end being removed and contained using appropriate abatement measures and plugging the ends of the encased pipe. For the areas where sections of pipe had already been removed, all sludge material from saw cutting activities had been cleaned up. KGM also covered this area with plastic because residue from the work may have remained on the grooved bridge deck which could be picked up during a rain event and discharged off the deck. I also discussed managing and containing any runoff in this area when barges are not stationed below (because they have to be unloaded at some point). The bridge deck does slope down to towards the water. For the area where active work was occurring to remove the pipe, I observed workers with a vacuum sucking up excess water and noted the berms just downslope on the deck, put in place to catch any water that escaped past the vacuum. While topside, the group also watched the hoe ram at work. From this vantage point, we could observe the individual manning the fire hose. A continuous spray was aimed directly at the tip of the hoe ram and the concrete when the operator was running the hoe ram. The individual would also start spraying an area just before the hoe ram would start on a new section of concrete to break off.

Bridge Demolition East Approach Shoreline:
Long netting suspended from the bridge deck hung down on three sides of the containment barge on the shoreward side of the set up. This location would be the flexi float barge with the extended vertical plywood walls. There was no netting surrounding the water ward catchment barge that I had viewed on previous inspections. As seen in the photos sent by WSDOT/KGM, the plywood walls were stiffened with additional wooden supports and horizontal strips of wood nailed across the back. An additional measure being implemented at the time of the inspection was to add foam sealant along the bottom of the plywood wall. Ben Tornberg also clarified plastic was being used around the columns as another additional BMP along with additional plywood sheets that helped protect the plastic. It was noted that demolition debris still pretty much falls straight down to the containment barges. Material is not flying outwards from the area of impact by the hoe ram. No concrete debris was seen to discharge from the containment barges through any kind of bouncing or rolling. The current set up appears to be sufficient to contain debris.

Bridge Demolition, East Approach water ward:
The group also observed the work from the vantage point of being in a boat on the water. At this angle, one could also see how the water from the fire hose was running down underneath the bridge deck pier cap and dripping below to the containment barges. Again, the individual manning the hose was very consistent in applying water to concrete being broken off. No concrete debris was seen to discharge from the containment barge on the water ward side. No concrete debris was seen discharging to the lake on the last inspection from the water ward barge – so far this barge has been sufficient to contain debris.

Bridge Demolition Pontoon & Superstructure Westside Staging visit & Meeting/Discussion:
The inspection also included a trip to the west side staging area where a section of pontoon with superstructure had been moored. The details of details of demolition and containment were reviewed as the group observed the pontoon in 3D. There was follow up meeting in the KGM offices after the inspection to further discuss these details using 2D drawings. As described in the WQMPP and the June 8th inspection report, KGM will stage containment barges on either side of the pontoon that has the superstructure. The pontoon itself was being outfitted with curbing. The gaps between the barges and pontoon will be covered with a series of crane mats, plywood, plastic and steel plates. Up to 90 feet of a section of pontoon will be worked on at one time – 60 feet will undergo demolition on the superstructure with 30 feet as a buffer between the active demolition with crane mat/steel plate set up and areas with no mats or plates. This work/set up will move down the length of the pontoon until all superstructure has been removed. All the debris is expected to collect on the pontoon and that material will then be transferred by an excavator to the adjacent barges. At no time will this excavator transfer a load of debris over areas that do not have crane mats and steel plates covering the

gap between pontoon and barge. An additional piece of equipment will sit on the containment barge in order to move the deposited material around and ensure that these do not list to one side. The pontoon will also be ballasted during this operation, using water from the lake. KGM will continue to follow the practice used during construction of the new bridge and test/treat ballast water before returning it to the lake. Dust control measures will be implemented utilizing two tanks, one with fresh water and the second one empty for storing process water. Dust control will be focused above and below (breaking up concrete and moving concrete around). It was noted that the outermost columns are right at the edge of the pontoon. The portion of these columns that rise above the mats/plates will be contained but there is small portion below the mats. This section of column will either be saw cut or removed with small hand equipment as the columns must be taken down to 5" (a change from previous discussions with KGM). The final method for removal has not been determined but a containment system will be installed on the outside of wall of pontoon just below the work to contain the debris and any slurry/process water. Final details will be forthcoming as well as a drawings. The piece of equipment used for demolition work will be the processor, sometimes referred to as the muncher.

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Suggested Site Improvements:

None at this time.

Initials of recipient_____