

Reasons for Recommending Alternative NW-1 for the Northwest Corner Area at Harbor at Hastings OU-2

Point #1: The primary contaminant of concern is PCBs. Sediment PCB mass resides exclusively in the Northwest Corner Area and much of the PCB mass is contained within shallow Northwest Corner Area sediment consistent with the land side distribution of PCBs as this site.

- a. 99 percent of sediment PCB mass in OU-2 is in the Northwest Corner Area.
- b. 95 percent of the sediment PCB mass in the Northwest Corner Area is within 50 ft of shore.
- c. Alternative NW-1 would remove an estimated 61 percent of sediment PCB mass in OU-2 based on available investigation data.
- d. Other contaminants at concentrations of potential concern are co-located with PCBs.

Point #2: Not all of the sediment PCB mass can be removed, so a protective cap in conjunction with a berm is essential to protecting human health and the environment over the long term.

- a. Some PCBs exist nearly 40 ft below the mudline that can not be removed at all under any of the alternatives due to shoreline stability constraints.
- b. Based on results from other dredged sites, dredging always leads to resuspension and sloughing of undredged sediment so that not all of the PCBs can be removed from sediment targeted for dredging.
- c. Significant debris, piling remnants, and other obstructions within the sediment targeted for dredging in addition to high river water velocities and a 4-foot tidal range at this site further reduce the available extent of PCB removal.
- d. A cap can be protective at this site over the long term for any residual PCB concentrations by providing chemical isolation, erosion protection and suitable aquatic habitat with sufficient water depth (minimum 4 ft at mean tidal elevation). River hydrodynamics have been modeled for this portion of the lower Hudson River based on extensive analyses as parts of other projects which provide basis for assessing what is needed for the cap to provide erosion protection. PCBs are not readily mobile which helps to isolate them beneath a cap thereby protecting human health and the environment.

Point #3: Shallow Northwest Corner Area sediments contain most of the PCBs, and shallow sediment can be removed more safely with less environmental impact compared to removing deeper sediment. Additional dredging below elevation -7 ft is therefore not warranted.

- a. Removing PCB mass does not further protect human health and the environment or better meet standards, criteria, and guidelines. Even uncapped sediment below the top few inches is already isolated from human and aquatic receptors. An underwater cap in conjunction with a berm protects site users from any adverse impacts.
- b. Short-term concerns with deeper dredging include less shoreline stability, additional worker risks, additional resuspension of contaminated sediment, additional noise, and additional transport of dredged sediment offsite.
- c. Additional dredging could delay remediation and redevelopment of OU-1 by 2 to 3 years if OU-1 can not be excavated and filled to its final elevation within approximately 100 to 150 ft of the shoreline due to the depth of dredging and capping within OU-2.

Point #4: Alternative NW-1 and the remedy recommended for the other areas of OU-2 make up a substantial remedy that Atlantic Richfield is ready to implement.

- a. The estimated total cost (net present worth) to implement this remedy totals \$23 million for Alternative NW-1 and a total of \$44 million to remediate all of the OU-2 areas. These estimated costs include capital costs to dredge and to place the berm and cap and also costs for long term maintenance and monitoring of the berm and cap.
- b. Atlantic Richfield is ready to implement this remedy in a timely manner in conjunction with its efforts to remediate OU-1.

Point #5: The remedy recommended for OU-2 by Atlantic Richfield will remove most of the PCBs, control short-term adverse impacts of dredging, effectively contain residual PCBs that are not removed, and allow the former industrial plant site to be re-developed in a timely manner.

