# Dredging Protocols/Safeguard

Prior to Design

# Note

- This material on dredging protocols is preliminary
- The funding and contracting mechanism for constructing the CAD cell exists.  The design is proceeding
- There is no funding in place at this time for the dredging of contaminated sediment and no design work on this has commenced.

# Equipment

- Similar to that used in navigational dredging
- Sediment placed in scow for transport
- Placed in the CAD cell by either opening the bottom of split-hull scow or using excavator or cable suspended bucket.

# Safeguards

- Silt curtain and oil boom around the perimeter of the Lower Harbor CAD Cell.
- Best management practices
- Water and air monitoring
- Performance Standards
  - For example, dredge turbidity standards
- Use of ‘environmental bucket’

# Dredging Protocols -ESD

- Benthic marine habitat expected to re-establish after completion of capping
- Evaluation of the need for carbon or supplements to the CAD cell to further limit the mobility of the contaminants.

# 2009 Plume Tracking and Toxicity Testing

- EPA conducted monitoring of navigational CAD disposal during 2009
- Water Quality and Toxicity Testing was performed
- Summary of results
  - Monitoring did not detect any acute or sub-lethal toxicity inside or outside the CAD cell during placement
  - Silt curtain effective in containing plumes of turbidity during placement activities.

# 2009 Plume Tracking and Toxicity Testing

- Summary of Results (continued)
  - Plumes inside the CAD cell were found to dissipate to near background levels within 1-1 ½ hours.

# ESD Summary

- The evaluation of the short and long term impacts from an LHCC was supportive of the change.
  - 2009 monitoring of navigation dredging
  - Computer modeling of long and short term impacts
  - Computer modeling of air quality impacts
  - Performance standards will ensure protectiveness
- The siting, construction and long term Operation & Maintenance of the LHCC can be performed protectively

# ESD Summary (Continued)

- The disposal into an LHCC is estimated to significantly reduce the time and cost to complete the harbor cleanup.
- The collaboration with navigational dredging may reduce environmental impacts and increase cost-effectiveness.
- The CAD cell construction provides the potential for beneficial use of clean CAD cell sand.