

5. **In response to question 10 in MDE's May 7 letter, AES states, "Testing of the PDM can be conducted prior to shipment to the proposed beneficial use/upland disposal site(s) if required by the end use." Testing should be conducted for quality control of the processing operation, and to ensure that the resulting material is suitable for its designated beneficial/innovative use. Also, the potential for leachate production may vary as well depending upon the proposed use. How will dredged material processing prevent leachate formation for each of the envisioned end uses?**

Response:

The majority of the proposed dredged material disposal/upland beneficial use sites already have regulatory requirements for characterization of inbound materials prior to acceptance. The characterization requirements are intended to ensure that the material is suitable for use at those sites. These requirements would be met and utilized as quality control ("QC") testing on processed material prior to shipment for disposal/upland beneficial use. In situations where no characterization requirements exist, AES may perform its own QC to ensure that the material meets the specifications agreed upon by the end user(s) or may require that the end user(s) perform appropriate testing. The selection as to which party would implement the QC practices in this latter situation would be decided on a case-by-case basis.

Dredged material processing with the addition of select additives, including Portland cement, creates a matrix that binds contaminants and significantly reduces or eliminates the potential for leaching of the contaminants to the environment. Use of cement for solidification/stabilization is recognized by the ACOE as a decontamination technology "because it enhances the immobilization of contaminants in the material. Contaminants generally become more tightly bound to the matrix, preventing significant levels from leaching into aquifers and water bodies or otherwise becoming biologically available. The high alkalinity found in commonly used binders (i.e., cement) further aids in reducing the leaching potential of toxic metals" (Source: Implementation Strategy of the Dredged Material Management Plan for the Port of New York and New Jersey, ACOE Draft September 1999).

The above has been demonstrated over recent years through leachate testing by the Multiple Extraction Procedure ("MEP"), which provides a conservative test of the potential for contaminants to leach from the engineered soil (a 7-step sequential leaching process). As a result, in the New York/New Jersey Harbor area, DMRFs, such as the one described in Response 3.c, have processed over 6 million cubic yards of dredged material for beneficial use at over 20 locations in New York, New Jersey and Pennsylvania within the past seven years. None of those locations have reported any problems with leachate formation.