USACE Baltimore Design Center Lessons Learned from Remedial Investigations

Debbie McKinley, CENAB Technical Reviewer

Julie Kaiser, CENAB Design Team Leader

Planning Documents – Work Plans, FSP, UFP-QAPP

- DQOs not fully developed
  - Problem not clearly stated
  - Study goals are vague
  - Information inputs incomplete
  - Incomplete or non-existent decision rules
  - Often fail to address geophysics, physical parameters
- Investigation approach often not tailored to the CSM
  - MC not based on expected MEC items
  - CENAB uses MC Memo approach for MC analytes
  - Incorrect use of VSP and UXO estimator for developing geophysical approach
  - Incorrect use and incomplete understanding of IS

Planning Documents – Work Plans, FSP, UFP-QAPP

- Sampling approach lacks rationale
  - UFP-QAPP Worksheet #17 merely a reiteration of the field program
  - Information presented does not present the decision process that resulted in the approach
  - Only the “how” is presented rather than the “why”

- Information to support the risk assessment and/or FS not always part of the RI scope
  - Background data set
  - Lead shot counts at skeet ranges
  - Physical soil parameters (Atterberg limits, % moisture, grain size distribution, etc)

RI Field Activities

- Independent QC not implemented in field
  - Lack of communication between USACE and contractor
  - Poorly defined QC roles and responsibilities
  - Field QC often not part of project planning discussions
  - Lack of QC oversight has resulted in poor quality data and/or low confidence data

RI Report

- Key information regarding data quality often "buried" in appendices (e.g., field notes, sample collection forms)
- Data merely presented, not evaluated or put into perspective
- Insufficient or non-existent data usability assessment
  - Not based on PARCC parameters
  - Does not include field activities
  - Does not discuss effect of data qualifiers on data quality/usability
  - Deviations from planning documents and effect on data quality/usability not discussed

RI Report

- If included, presentation of ARARs incomplete
- ARARs evaluation often presented as a laundry list of anything that remotely looks like an ARAR
- No critical evaluation of potential ARARs
- No differentiation between applicable, relevant and appropriate, and TBCs
- No basis presented for ARAR/TBC determination

MMRP RI Lessons Learned

- Baltimore Technical Reviewer Contact Info
  - Debbie McKinley (Environmental Engineer)
    - Phone: (410) 962-6730
    - E-mail: Deborah.K.McKinley@usace.army.mil

From the DTL/PM Perspective…

- Do not rely solely on SI and ASR/HRR for historic documentation of MRS footprints
  - Before writing PWS, assess completeness of record (going back to PA/INPR) and include additional research in scope of work, if necessary
  - Revisit areas that may not contain MEC/MC and talk to stakeholders about potential for NFA/NDAI during initial TPP
- Complete re-delineation of MRSs after RI fieldwork is okay
  - Clarify starting points (reported MRS acreages from SI) and new proposed boundaries in RI documents
  - Thoroughly explain rationale

From the DTL/PM Perspective…

- Do not let landowners/managers gain too much control over project
  - ►Tempting to allow Contractor to make whatever accommodations they agree to; these can creep up and wreak havoc on schedule and budget
- Provide a good example RI report to your Contractor (for guidance not boilerplate)
  - ►RI conclusions are particularly challenging
    - It is not sufficient to simply present the data (e.g., tables and figures summarizing what is present and where); the report needs to draw conclusions about revised MRS boundaries, if appliable

From the DTL/PM Perspective…

- Be clear on how intrusive investigation results will be used
  - If MD items are entered into UXO Estimator along with MEC items to determine density:
    - The answer to the hypothesis of “is MEC/MD present” is “yes”
    - MD items are considered indicative of MEC and are used to delineate MRS’s (conservative approach)

MMRP RI Lessons Learned

- Baltimore District Design Team Leader Contact Info
  - Julie Kaiser (Environmental Protection Specialist)
    - Phone: (410) 962-2227
    - E-mail: Julie.E.Kaiser@usace.army.mil