**MEMORANDUM**

SUBJECT: Quality Assurance Project Plan (Revision 1) Washington County Lead District – Potosi, Old Mines and Richwood Sites – Reviewed

FROM: Diane Harris
Regional Quality Assurance Manager
ENST/IO

TO: Cody McLarty
EPA Remedial Project Manager
SUPR/SPEB

The review of the subject document prepared by Coast-Enviroworks Joint Venture and dated 04/20/2016 has been completed according to "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," EPA QA/R-5 March 2001.

Because the document was unsigned, it was reviewed as a draft and the comments are outlined below. Critical comments identify issues which need to be addressed before the document can be approved. General comments identify opportunities for strengthening the document but do not affect approval.

## Critical Comments

1. Signature Page. When the QAPP is ready for final approval, it will need to be submitted with the appropriate signatures.

2. § 2.1.2 Clean Backfill Material Sampling, page 34.

    a. This section states one grab sample will be collected for every 2,000 $yd^3$ of backfill material; however, the top of page 24 states samples will be collected for every 2,500 $yd^3$. Which is correct?

    b. Who is responsible for the nutrient testing referenced here and what procedures will be followed for collecting the samples and performing the test?

3. § 2.2 Sampling Methods Requirements, page 35. It appears this section only addresses the sampling procedure for samples collected from the site quadrants and the drip line, neither of which will be performed by Coastal-Enviroworks Joint Venture. What procedure will be followed for collecting samples from the backfill materials?

4. § 2.3 Sample Handling and Custody Requirements, page 35. How will samples be packaged and transported to the laboratory for analysis?

5. § 2.4 Quality Control Elements, page 35. How will the trip blank results be reviewed, who will be responsible, and what action might be taken if they are not acceptable?

6. Missing QAPP Element. The QAPP does not include a section for Analytical Methods Requirements which needs to address the following:

    a. The analytical methods to be followed
    b. The needed laboratory turnaround time if important to project schedule

7. § 4.4 Validation and Verification Methods, page 39. Because Coastal-Enviroworks Joint Venture is not responsible for the XRF sampling and measurements, it is not clear why this section focuses on the review of the XRF data and the split laboratory sample data rather than the review of the data generated by the backfill material sampling and nutrient testing.

8. Laboratory References. Laboratory references could not be verified at the time of the review including the capability to perform the analyses for the contaminants of concern at a detection and/or reporting limit adequate to meet the action levels defined for the project.

9. SOP References. SOP references could not be verified at the time of the review including sampling procedures, sample containers, preservation, holding times, and chain-of custody.

## General Comments

10. § 1.1 Distribution List, page 4. Information regarding EPA personnel is missing from the table in this section. See also § 1.2, page 5; § 1.3, page 6; and § 3.2, page 37.

11. § 1.8 Special Training Requirements/Certification, page 32. If there are any certifications or accreditation required of the laboratory they should be specified here.

12. § 1.9 Documentation and Records, page 32. Will the bi-monthly reports include any difficulties encountered in the field?

13. § 2.2 Sampling Methods Requirements, page 35. This section of a QAPP should also list the needed equipment or provide a reference to where this information can be found.

14. § 2.5 Instrument/Equipment Testing, Inspection, and Maintenance Requirements, page 36. It appears that for field equipment, this section may only apply to the scales (page 19) and if so, it would be helpful to note that here.

15. § 2.6 Instrument Calibration and Frequency, page 36. It appears that for field equipment, this section may only apply to the scales (page 19) and if so, it would be helpful to note that here.

16. § 2.7 Inspection/Acceptance Requirements for Supplies and Consumables, page 36. Although no special requirements may be needed, it is recommended that someone be responsible for checking sample containers before use to ensure none are broken, there are no missing or ill-fitted lids, and the appropriate containers were provided.

17. § 3.1 Assessment and Response Action, page 37. If a field audit identifies the need for corrective action, who will be responsible?



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18. § 4.5 Reconciliation with User Requirements, page 40. If there will be any statistical analysis of the data in addition to calculating the RPD between duplicate samples, it should be summarized here.

If you have any questions, please contact me at x7258.

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