



In a letter to EPD dated December 7, 2010, a 6-month extension was requested for the submittal of a completed VRP Application in order to conduct the additional investigation described above. In a letter dated January 20, 2011, EPD requested that the completed VRP Application be submitted on March 16, 2011.

Since the initial Application submittal (March 18, 2010), additional activities have been conducted to provide supplemental data for the VRP Application and to respond to EPD comments. These activities are summarized as follows and the data provided in the appendices listed below.

- Groundwater samples were collected in the BFEL property monitoring wells in July 2010 and analyzed for known and established site constituents organochlorine pesticides, arsenic and lead.
- Based on EPD's July 23, 2010 letter requesting additional constituents, additional groundwater samples were collected in the BFEL and CSX property wells and analyzed for the known site constituents organochlorine pesticides, arsenic and lead and the additional constituents of copper, zinc, nitrate, sulfate, 1,2,3-trichlorobenzene, and 1,2,4-trichlorobenzene.
- Water levels were measured in the site's 21 monitoring wells in September 2010 and potentiometric surface map was prepared from this data (Figure 4.7).
- Also at the request of EPD to investigate if the upgradient site M&J Solvents was impacting downgradient properties, monitoring wells MW-22, MW-104A, and MW-104D were sampled and analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) associated with the M&J Solvents site. The analytical results indicated that the same constituents found in the M&J Solvents site groundwater were also present in groundwater samples in monitoring wells MW-104A and MW-104 D located on the CSX property. Appendix G of this Addendum provides the data for this sampling and analyses.
- A seepage study was conducted on the un-named stream located on the CSX railroad property that is the discharge boundary for the site groundwater. The seepage study consisted of a dye-trace study to assess the dry-weather base stream flow, travel time, and groundwater seepage inflows to the stream segment. Surface water samples were collected for the analysis of total organochlorine pesticides, total and dissolved metals (arsenic, copper, lead, and zinc), 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, total sulfate, and total nitrate. The resulting stream flow and chemical constituent concentrations were used to determine the instream mass flow of BHC-pesticides, arsenic, lead, copper, and zinc. The results of the seepage study are provided in Appendix E of this Addendum.
- The ecological risk screening tables were also updated with the 2010 surface water data.
- The Risk Reduction Standards were revised based EPD's July 23, 2010 letter and are included in Appendix B and discussed in Appendix D.
- The fate and transport model was updated with the 2010 groundwater and surface water data (Appendix C).

- A Conceptual Exposure Model was prepared to identify the complete or potentially complete exposure pathways for humans and ecological receptors. Upper Confidence Limits (UCLs) were calculated for use as the representative exposure point concentration (EPC) for the site's detected constituents per the Georgia VRP Act of 2009. This data is presented in Appendix D.

The attached Revised Voluntary Assessment and Remediation Plan present the approach for the further investigation of soil and groundwater and for the conceptual remediation plan for the site. The cost estimate and schedule for the further investigation and remediation are presented in the attached Plan. The documents listed below are included in this transmittal to document the above 2010 activities and to provide supporting documentation of the Plan and to complete the Voluntary Remediation Plan and Application.

#### **APPENDIX A**

- Updated VRP Checklist
- List of Abutting Property Owners with Tax Maps
- Proposed Uniform Environmental Covenant with Deeds, BFEL Title Report and Plats
- CSX Permission to Conduct Proposed Corrective Action on CSX property

#### **APPENDIX B**

- Response to EPD's July 23, 2010 Comment Letter
- Tables Updated with 2010 Data – see list below
- Figures Updated with 2010 Data – see list below
- Updated Risk Reduction Standards

#### **APPENDIX B: LIST OF TABLES**

- 3.2 Summary of Soil and Ground-Water Samples Collected
- 3.3 Summary of Monitoring Well Construction Data
- 4.2 Summary of Ground-Water Elevations on September 14, 2010-
- 4.10 Summary of Regulated Substances Detected in Most Recent Ground-Water Samples
- 4.11 Summary of Regulated Substances Detected in Sediment Samples
- 4.12 Summary of Regulated Substances Detected in Surface Water Samples
- 6.1 Protected Animal and Plant Species Occurring within Fulton and Surrounding Counties, . Georgia
- 6.2 Surface Water Data Summary (2002, 2004, 2007, 2010)
- 6.3 Sediment Data Summary
- 6.4 Surface Soil Data Summary
- 6.5 Northern Bobwhite Toxicity Reference Values
- 6.6 Short-Tailed Shrew Toxicity Reference Values
- 6.7 Raccoon Toxicity Reference Values
- 6.8 Northern Bobwhite Exposure Parameters
- 6.9 Short-Tailed Shrew Exposure Parameters
- 6.10 Raccoon Exposure Parameters
- 6.11 Calculated Bioconcentration Factors
- 6.12 Risk Calculation for the Northern Bobwhite
- 6.13 Risk Calculation for the Northern Bobwhite (Surface Water Only)
- 6.14 Risk Calculation for the Short-Tailed Shrew
- 6.15 Risk Calculation for the Short-Tailed Shrew (Surface Water Only)
- 6.16 Risk Calculation for the Raccoon

- 6.17 Risk Calculation for the Raccoon (Surface Water and Sediment Only)
- 7.1a Risk Reduction Standards for Soil – Types 1 and 2
- 7.1b Risk Reduction Standards for Soil – Types 3 and 4
- 7.2 Risk Reduction Standards for Ground Water

**APPENDIX B: LIST OF FIGURES**

- 2.3 Site Sampling Locations
- 4.2 Hydrogeologic Profile A-A'
- 4.3 Hydrogeologic Profile B-B'
- 4.4 Hydrogeologic Profile C-C'
- 4.5 Hydrogeologic Profile D-D'
- 4.6 Hydrogeologic Profile E-E'
- 4.7 Potentiometric Surface Map on September 14, 2010
- 4.11A Distribution and Delineation of Pesticides Detected in Groundwater
- 4.11B Distribution and Delineation of Arsenic, Lead, Copper and Zinc Detected in Groundwater
- 4.11C Distribution and Delineation of Nitrate and Sulfate Detected in Ground
- 7.1 Risk Reduction Standards Compliance Map

**APPENDIX C: Groundwater Fate and Transport Model**

**APPENDIX D: Conceptual Exposure Model and Calculation of UCLs and EPCs and Groundwater and Surface Water Usage Map**

**APPENDIX E: Dye Tracer Stream Flow Study and Surface Water Sampling**

**APPENDIX F: Laboratory Reports for 2010 Groundwater and Surface Water Samples with Laboratory Certificates and Field Reports**

**APPENDIX G: Results of Sampling for M&J Solvents Site Constituents**

The following VRP elements have already been submitted to EPD in the March 18, 2010 Application document and did not change based on the 2010 activities and are not being re-submitted with this transmittal.

- Applicants and PE/PG Certifications were submitted in the March 18, 2010 Application.
- Table 2.1 Legal Descriptions of Properties Impacted by Regulated Substances
- Table 3.1 Summary of Soil Boring Data
- Table 4.1 Summary of Soil Physical Testing Data
- Table 4.3 Summary of Hydraulic Conductivity Testing
- Table 4.4 Summary of Soil Results from Off-Site Locations
- Table 4.5 Summary of Analytical Results for Soil to Water Partition Coefficient Study
- Table 4.6 Summary of Arsenic and Lead Soil to Water Partition Coefficient Values
- Table 4.7 Fertilizer Source Investigation – Soil and Ground Water Results
- Table 4.8 Summary of Regulated Substances Detected in Surface Soil Samples
- Table 4.9 Summary of Regulated Substances Detected in Subsurface Soil Samples

