

Hazardous Waste Section  
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September 25, 2014

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Jamie VanBuskirk  
DuPont Engineering  
6324 Fairview Road  
Charlotte, North Carolina 28210

Re: **Conditional Approval – Phase IV RFI Workplan Received August 5, 2014**  
Former DuPont Brevard Facility  
EPA ID No. NCD 003 152 329

Dear Mr. VanBuskirk,

The North Carolina Hazardous Waste Section (HWS) hereby approves the Phase IV RFI Workplan with the enclosed comments. DuPont should incorporate these comments into subsequent investigation activities at the Facility.

Please contact me at (919) 707-8207 or at [mark.wilkins@ncdenr.gov](mailto:mark.wilkins@ncdenr.gov) if you have any questions.

Sincerely,

Mark Wilkins, Hydrogeologist, Hazardous Waste Section  
Division of Waste Management, NCDENR

**Enclosure**

cc: Jon D. Johnston, US EPA, Region 4  
Gwen Gleaton, US EPA, Region 4  
John Johnston, US EPA, Region 4  
Keith Larick, NCDA&CS  
Spring Allen  
Bud McCarty  
Mark Wilkins



**Comments on Phase IV RFI Workplan  
Former DuPont-Brevard  
NCD 003 152 329**

1. Section 1.0, Introduction – DuPont states the “... Workplan presents the goals and objectives of the final remedial investigation that will be conducted at the site...”. By approving this Workplan, the HWS does not necessarily agree with DuPont’s statement that no further remedial investigation activities will be required.
2. Section 1.2.3., Remaining Investigation Data Gaps – DuPont states the purpose of the field investigation is to “Fill surface soil data gaps to support future proposed land uses...”. N.C.G.S. 130a-310.68(b) states remediation goals shall be “...based upon the present or currently planned future use of the property comprising the site.” If the NCDA&CS is considering that the site could be used for other than recreational purposes, DuPont should account for other potential land uses when developing site specific remediation goals.
3. Section 2.1.3., SWMU 11 and SWMU 14 Interim Measure Activities – as part of the original goal - to consolidate contaminated soil and/or wastes into the smallest footprint possible - DuPont constructed a Corrective Action Management Unit (CAMU), which is the only mechanism available under State or Federal laws to legally allow placement of excavated waste on site without obtaining a Permit for a Solid Waste Landfill.
4. Section 2.2.3., Local Physical Setting: Site Hydrogeology, Surficial Aquifer – In this Section, DuPont states “Surficial groundwater also appears to flow radially from the bedrock mound beneath the SWMU 17 area.” DuPont should investigate the potential for radial flow of contamination away from SWMU 17 and determine the extent of this contamination.
5. Section 4.1., Objective 1 – Fill Surface Soil Data Gaps – DuPont should consider the following while utilizing Incremental Sampling Methodology (ISM) during assessment activities:
  - a. Sample results obtained by ISM are appropriate to use when determining human health exposure scenarios but may not be appropriate when calculating an allowable soil contamination leachable to groundwater concentration;
  - b. Soils consisting of smaller soil particles have a propensity to retain many contaminants; therefore, DuPont should, at a minimum, provide a field description of the type of soil collected (for example, clay, coarse sand, etc.) in the field log when collecting soil by ISM; and,
  - c. If during ISM sampling, “obvious” contamination is discovered at a sample location, DuPont should note this location on the field log for future reference in case additional investigation might be required.
6. Section 4.3., Objective 3 – Ensure the Presence of Adequate Surface Cover – In addition to the data collected during the Phase IV RFI, DuPont should use previously collected data in determining whether adequate surface cover exists at a SWMU or AOC. For example, the bore log for SB-67 at SWMU 13 indicates there is less than one foot of soil cover over waste

materials. Other bore logs at this SWMU and other SWMUs and AOCs should be considered during this determination.

7. Section 4.5., Objective 5 - Objective 5 – Investigate Current Conditions in Lake DERA, DERA Creek, and Little River – DuPont should consider relocating one of the planned surface water/sediment samples in Lake DERA to the north-northeastern shoreline. A sample collected here may help with the determination of potential contaminant migration by groundwater from SWMU 17 toward the lake.
8. Section 4.5., Objective 5 - Objective 5 – Investigate Current Conditions in Lake DERA, DERA Creek, and Little River – Due to the presence in groundwater downgradient of SWMU 4, DuPont should add nitrate and nitrite to the list of analytes for the surface water and sediment samples collected adjacent to SWMU 4.
9. Section 5.3., Waste Management Plan – Any wastes generated during the RFI that are believed or known to be hazardous should be labeled as “Hazardous Wastes” and managed in accordance with the requirements in 40 CFR 262 as adopted in 15A NCAC 13A .0107 until a determination is made that they are non-hazardous.
10. Section 6.0., Data Evaluation – This Section states “...data collected during the RFI will be compared to site-specific RLs...”. DuPont should report analytical results compared to the method detection limit for each analyte according to the analytical method used. Future remedial decisions may be based on site-specific RLs once these have been mutually agreed upon by DuPont and the HWS but, the reporting limit shall be the method detection limit. In addition, DuPont should report the analytical result for each constituent that is detectable by each analytical method not just the constituents of potential concern.
11. Section 6.3.4., Surface Water – Surface water standards are contained in 15A NCAC 2B and EPA’s Water Quality Criteria guidance. Due to the classification of surface water at the Facility, DuPont shall use the most stringent of Freshwater Aquatic Life, Human Health, or Trout Waters as the standard for each constituent. A table containing the current standards is located at the following link:  
[http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=dfc89f23-a372-4782-b3b0-60e6884b1696&groupId=38364](http://portal.ncdenr.org/c/document_library/get_file?uuid=dfc89f23-a372-4782-b3b0-60e6884b1696&groupId=38364)
12. Table 2, Soil, Surface Water, Sediment, and Pore Water Sampling Plan – Due to the presence of high concentrations of PAHs previously detected at the site, the HWS recommends DuPont hold extracted sediment and surface water samples at the laboratory until receiving analytical results from this sampling. If PAHs are detected in any sediment samples, analysis of surface water for the presence of PAHs may be required in the future. If PCBs are detected in soil samples at the Facility, analysis of sediment samples for the presence of PCBs may be required in the future.
13. Appendix A - Sampling and Analysis Plan: Section 3.2., Groundwater Sampling – This section of the Workplan states that for wells sampled using a peristaltic or submersible pump “...sample containers will be filled directly from the pump discharge tubing.” DuPont should follow Section 4 of the February 2013 EPA Region IV Groundwater sampling guidance for collection of groundwater samples using peristaltic or submersible pumps when

collecting groundwater samples for VOC analysis. If a different sample collection method other than a pump is used, DuPont should follow the February 2013 Region IV Guidance manual for that method. <http://www.epa.gov/region4/sesd/fbqstp/Groundwater-Sampling.pdf>

14. Appendix A – Sampling and Analysis Plan: Section 3.3.1., Surface Water Sampling Methodology – This section of the Workplan states “...surface water samples will be pumped directly into the appropriate ... containers.” Section 6 of the February 2013 EPA Region IV Surface Water sampling guidance states “Samples for VOC analysis cannot be collected directly from the peristaltic pump discharge...”. DuPont should follow the guidance for collection of surface water samples using peristaltic pumps when collecting surface water samples for VOC analysis. If a different sample collection method other than a pump is used, DuPont should follow the February 2013 Region IV Guidance manual for that method. See: <http://www.epa.gov/region4/sesd/fbqstp/Surfacewater-Sampling.pdf>
15. Appendix A – Sampling and Analysis Plan: Section 6.2.1., Field Sampling Records –
  - a. Soils consisting of smaller soil particles have a propensity to retain many contaminants; therefore, DuPont should, at a minimum, provide a field description of the type of soil collected (for example, clay, coarse sand, etc.) in the field log when collecting soil by ISM; and,
  - b. If during ISM sampling, “obvious” contamination is discovered at a sample location, DuPont should note this location on the field log for future reference in case additional investigation might be required.
16. Appendix A, Table 1 and Table 2 in RFI Workplan - The numbers of sample locations in these tables do not agree with each other. For example, the number of samples for DU #9 listed in Appendix A is six (6) while Table 2 to the RFI Workplan states three (3) samples will be collected from DU #9. DuPont should make sure the number of samples and the proposed analyte list shown in the Tables, shown on Figures, and listed in the workplan Sections agree with each other.

### **Additional Investigation Comments**

17. In the Phase II RFI Report, DuPont submitted a log for boring SB-1 collected in the SWMU 2C area. The Phase II Report indicated the sample collected from the 1 to 5 foot interval was submitted for laboratory analysis and that no constituents were detected above standards. The HWS provided comments on the Phase II RFI Report including a comment that the log for SB-1 indicated that other sample intervals collected from this boring had higher OVA readings and were noted by the sampler to have a “strong odor”. Broken glass was noted in the 8 to 12 foot interval. In comments on the Phase II RFI Report, the HWS stated DuPont should conduct additional sampling in the SWMU 2C area to identify the source of the odor and to submit a potentially more contaminated sample for analysis. It does not appear that sampling proposed for the Phase IV RFI will collect a sample from the proper interval. DuPont should collect a sample at SWMU 2C from an interval that would identify the source of the odor and glass identified during the Phase II RFI. If the area of contamination is discovered, DuPont should determine the cause and extent of this contamination.
18. During the Phase II RFI, five soil borings were installed at SWMU 15. Evidence of waste or contamination was noted in each boring (see bore logs SWMU 15: SB-1 through SB-5). In each case, the evidence of contamination was noted to be greater than two feet in depth. No soil samples from SWMU 15 were submitted for analysis; however, in situ groundwater samples were submitted and analyzed. The Phase IV RFI Workplan states discrete samples will be collected in this area; however, the maximum sample depth is proposed to be 18 inches. Based on previous sampling and proposed Phase IV RFI sampling the concentration of wastes and/or contaminants, apparently present at SWMU 15, will not be determined. DuPont should describe how the waste at this SWMU will be characterized especially as it relates to the proposed risk based remediation decision. As part of the risk based determination, DuPont will need to demonstrate that contamination will not migrate to groundwater and surface water from areas of soil contamination based upon the concentration of contamination present, among other factors.