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July 30, 2024

SENT VIA EMAIL

Ms. Pamela J. Langston Scully, P.E.
Remedial Project Manager
Superfund Remedial Branch
United States Environmental Protection Agency
Sam Nunn Federal Center
61 Forsyth Street, S.W.
Atlanta, GA 30303

RE: Comments from Pharmacia LLC/Solutia Inc. on the Proposed Plan for the Operable Unit 4 Portion of the Anniston PCB Site
Anniston PCB Site (Docket No. 1 :02-CV-0749-RDP)

Dear Ms. Langston Scully:

Attached please find comments from Pharmacia LLC/Solutia Inc. (P/S) on the Proposed Plan for the Operable Unit 4 portion of the Anniston PCB Site. These comments were developed by P/S to provide the United States Environmental Protection Agency (USEPA) with input as the remedies presented in the Proposed Plan are finalized by USEPA in the OU-4 Record of Decision. P/S appreciate the opportunity to comment on USEPA's Proposed Plan and are available to discuss the attached comments should you have any questions.

Please contact me directly with any questions.

Sincerely,

E. Gayle Pittman Macolly
Principal Remediation Manager, Major Projects
Solutia Inc.

cc:
Mr. Randall Chaffins
Mr. Austin Pierce
Mr. Thomas Dahl

Solutia Inc./Pharmacia LLC (P/S) Comments on USEPA's Proposed Plan for Operable Unit 4 of the Anniston PCB Site

The United States Environmental Protection Agency (USEPA) released the Proposed Plan for the Operable Unit 4 (OU-4) portion of the Anniston PCB Site (the Site) for review and public comment on June 1, 2024. The comments below are being submitted by Pharmacia LLC/Solutia Inc. (P/S) for USEPA's consideration in selecting the final remedy for OU-4 in the forthcoming Record of Decision (ROD).

1. *Proposed Remedy for Residential Soils:* P/S support the remedial alternative that USEPA is proposing for residential soil as described on page 99 of the Proposed Plan.

2. *Proposed Remedy for Interim Measure (IM) Areas:* P/S support the remedial alternative that USEPA is proposing for the IM areas in OU-4 as described on page 99 of the Proposed Plan.

3. *Proposed Approach for Soil Management:* P/S support the soil management approach for all of the proposed remedial alternatives as summarized on page 100 of the Proposed Plan.

4. *Preliminary Remediation Goals – Nonresidential Soil (pg. 57 and Table 8):* The Proposed Plan to address nonresidential floodplain soil includes removal of the upper 6 inches of soil based on a surface area weighted 95% upper confidence limit (UCL) concentration of 6 mg/kg over newly-proposed 5-acre exposure units (EUs). This is mentioned in multiple locations in the Proposed Plan (page 57 and Table 8) and the OU-4 Feasibility Study Addendum (OU-4 FS Addendum) prepared by USEPA dated May 29, 2024, and included with the OU-4 Administrative Record. In Section 4 of the OU-4 FS Addendum, USEPA notes "…EPA is proposing that the floodplain PRG be applied over a 5 acres area representing a home range for small mammals in contact with contaminated soil."

   The unilateral adoption of 5-acre EUs in the OU-4 FS Addendum is a significant and arbitrary change to the agreed upon EUs used in the OU-4 Baseline Ecological Risk Assessment (OU-4 BERA) that was prepared by P/S and the OU-4 BERA Addendum prepared by USEPA. The EUs evaluated in the OU-4 BERA and OU-4 BERA Addendum are identical in location and size and were developed through collaborative discussions between P/S and USEPA. As presented on page 17 of the Proposed Plan, "this approach was designed to provide sufficient data to characterize exposure point concentrations (EPCs) for PCBs for human and ecological receptors using reasonable exposure assumptions". For the remainder of this comment, the OU-4 BERA Addendum is identified as the controlling ecological risk assessment document for OU-4 as USEPA identified it as such.

   A 5-acre EU is significantly smaller than any area that would encompass a local bird or mammal receptor population and is inconsistent with Principle No. 1 of the USEPA's Office of Solid Waste and Emergency Response Directive Ecological Risk Assessment and Risk Management Principles for Superfund Sites (USEPA 1999), which states that "Superfund's goal is to reduce ecological risks to levels that will result in the recovery and maintenance of healthy local populations and communities of biota." While the EUs developed to support the

OU-4 BERA Addendum are in most cases also much smaller than an area likely to encompass an ecological receptor population, they were considered to be reasonable and conservative estimates of areas that could warrant potential action based on ecological population-level exposure. For context, the EUs used by USEPA in preparing the OU-4 BERA Addendum appropriately ranged from 30 to 690 acres with an average size of 270 acres.

Arbitrarily implementing the nonresidential floodplain soil remedy using significantly smaller EUs (5 acres) would likely result in large habitat losses within the riparian buffer zone adjacent to Choccolocco Creek. In many cases, these riparian habitat areas are also in legally defined conservation easements specifically designated for habitat preservation and enhancement. In contrast, the EUs included in the OU-4 BERA Addendum are protective of the environment in a manner consistent with USEPA guidance and would preserve quality habitat that might otherwise be impacted using proposed 5-acre EUs. Accordingly, P/S request USEPA retain the EUs identified in the OU-4 BERA Addendum for the nonresidential soil remedy in OU-4 rather than adopting a remedy that requires the development of arbitrary 5-acre EUs as identified in the Proposed Plan. The use of such small EUs is not consistent with actions taken in other riverine environment PCB sites. For example, the size of floodplain areas used by USEPA in their reach-based approach to assess ecological risks for the Housatonic River floodplain were significantly larger than the 5-acre areas proposed by USEPA for the OU-4 floodplain (ECOLOGICAL RISK ASSESSMENT (ERA), REST OF RIVER, VOLUME 1 AND 2 OF 6, SECTIONS 1 - 12 (fdlp.gov)).

From the perspectives of implementability and community impacts, an enormous number of individual samples would need to be collected in the 5-acre EUs. Based on the size of the OU-4 floodplain (over 6,000 acres), the number of individual sample locations could easily exceed 10,000. In the event USEPA selects 5-acre EUs, only EUs upstream of Silver Run Road should be evaluated during the pre-design investigation and subject to the implementation of the non-residential soil remedy. None of the EUs downstream of Silver Run Road were found to contain PCBs in excess of 6 mg/kg on a 95% UCL as presented in the OU-4 BERA Addendum. Use of the 5-acre EUs would also delay implementation of the remedy based on the extensive outreach process with local landowners. This includes an initial outreach process to obtain legal access to collect thousands of floodplain samples followed by a second outreach effort that may be necessary to obtain legal access to conduct remediation activities.

Based on these concerns, it would be more appropriate to develop the specific sampling approaches during the PDI that will be conducted for the OU-4 floodplain. This would include specifics of the EUs including location, size and configuration; and the specific method(s) that will provide a robust statistical characterization of the areas to be remediated and post-remediation PCB concentrations. Consistent with the findings of the OU-4 BERA Addendum, the PDI for floodplain soil should be focused on the upper reaches (i.e., upstream of Silver Run Road). Reserving these details to the PDI Work Plan stage of the project is consistent with the remedial design (RD) for a large complex remedy such as OU-4.

5. *Statistically Robust Methods for Characterizing Floodplain Soils for Remediation*: The information presented on page 57 and Table 8 of the Proposed Plan indicates that the floodplain soil remedy for OU-4 will be implemented "…through the 95% Upper Confidence Level (UCL) of the surface weighted average concentrations (SWAC) in each 5-acre exposure unit." P/S request that selection of "a statistically robust method or methods" be included in OU-4 ROD and that the specific statistical method or methods be developed as part of the PDIs that will be completed as part of the OU-4 RD.

6. *Statistically Robust Methods for Characterizing Sediment for Long-term Monitoring Purposes*: The information presented on pages 58, 75, 81 and Tables 8 and 9 of the Proposed Plan indicates the statistically robust method to evaluate sediment concentrations over the long-term in Snow and Choccolocco Creeks is the 95% UCL. P/S request that the specific "statistically robust" method for evaluating the long-term performance of the sediment remedy be selected during the PDI as part of the RD process consistent with the process proposed for floodplain soil presented in Comment 5.

7. *Potential Change in the Remedial Volume and Costs for Floodplain Soil Associated with PDI Results May Invalidate the Proposed Plan:* The statement included on page 7 of the OU-4 FS Addendum "….PRG implementation requirements may affect volume and cost of the floodplain alternatives. There is not sufficient data to provide more accuracy to the volume and cost. Data will be collected during the preliminary remedial design (PDI) to provide a better estimate. FS estimates are order-of-magnitude estimates, which are expected to be accurate within the range of +50 to -30 percent."

   The remedial alternative proposed for nonresidential soil (NRS-2) is based on a soil volume of 57,475 cubic yards evaluated in the OU-4 FS and was based upon the maintenance of the EUs adopted in the OU-4 BERA. This soil volume removal has an estimated cost of $30.9 million. If the volume of floodplain soil following the PDI process increases to 108,000 cubic yards or more based upon EPA's unilateral and arbitrary adoption of 5-acre EUs, the resulting cost may exceed the +50% criteria used by USEPA during the remedy selection process (i.e., 1.5 * $30.9 million = $46.4 million). If this situation were to occur following the PDI (i.e., the volume of floodplain soil for remediation exceeded 108,000 cubic yards), the original basis for remedy selection would no longer be valid or consistent with USEPA policy and guidance and USEPA would need to reopen the OU-4 ROD for nonresidential soil. Reopening the ROD would then necessitate a revised proposed plan for public review and comment.

8. *Potential Change in the Remedial Volumes and Costs for Creek Bank Soil and Sediment Associated with PDI Results:* The statement on page 92 of the Proposed Plan indicates that the "…Cost estimates are expected to be accurate within a range of +50 to -30 percent." The removal volumes and costs for SED-6 reflect actions for both creek bank soil and sediment. However, an example scenario in which the removal volume of sediment is increased to approximately 128,000 cubic yards exceeds the 50% cost threshold. If the PDI program results significantly increased the removal volumes (i.e., greater than 128,000 cubic yards),

the USEPA, consistent with comment 7, would need to reopen the ROD and issue a revised proposed plan for public review and comment.

9. *Preserving Riparian Habitat Located Along Choccolocco Creek:* The proposed remedy for nonresidential floodplain soil identified on page 99 of the Proposed Plan does not include provisions to preserve quality habitat located in the riparian buffer zone bordering Choccolocco Creek. P/S request that a provision be included in the ROD preventing the removal of trees during remediation with a diameter at breasting height (DBH) greater than 6 inches. This will be an effective means of minimizing damage to this valuable portion of the floodplain ecosystem that also plays a large role in maintaining creek bank stability.

10. *Downstream Extent for Evaluating Creek Bank Soils:* The USEPA recommends in its Proposed Plan cleanup of all creek banks with minor, moderate or severe erosion with PCB concentrations exceeding 2.6 mg/kg. This is further clarified by USEPA on page 8 of the OU-4 FS Addendum "The Proposed Plan is proposing a PRG for creek bank soil equal to the not-to-exceed value in sediment for all creek banks with the erosive potential identified in the alternative." The resulting downstream extent of the creek bank remediation was thus changed by USEPA to Highway 77 in the OU-4 FS Addendum versus River Mile 29.5 (RM 29.5) in the OU-4 FS. The evaluation included with the OU-4 FS demonstrated that addressing creek banks located upstream of RM 29.5 would result in a 93% reduction in PCB creek bank inputs. Creek banks downstream of RM 29.5 were negligible as a potential source of PCB input to the creek. Conducting creek bank sampling downstream of RM 29.5 during the OU-4 PDI would be unnecessarily disruptive to the riparian corridor and the community and should be eliminated from the proposed plan.

11. *Remedy Optimization:* The Proposed Plan states that, for each of SED-2 through SED-7 (p. 84-92), "Optimization including performance of additional dredging (and in-place treatment or capping if included in the alternative) of areas within Snow Creek and Choccolocco Creek will be implemented if determined necessary to achieve RAOs." This additional remedy requirement is unnecessary and provides a means for USEPA to modify the selected remedy in a manner that is arbitrary and capricious and without the opportunity for formal public input.

    The National Contingency Plan (NCP) requires a formal review of the remedies selected for sites every 5 years where contamination remains (40 CFR Part 300.430(f)(4)(ii)). The requirement for Five Year Reviews (FYRs) is also identified in §121(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and applies to all OUs at the Site (including OU-4). The FYR process is conducted for sites to ensure that the selected remedies remain effective over time. The FYRs also provide an opportunity for modifying the remedy based on a process that includes a detailed evaluation of long-term monitoring results and public input. Including a separate and disconnected remedy optimization process controlled exclusively by EPA for OU-4 in addition to the FYR process is not consistent with the law and is not needed to supplement existing safeguards designed and authorized to ensure a protective remedy over time.

12. *Applicable or Relevant and Appropriate Requirements (ARARs) for Surface Water:* The Proposed Plan (pages 81 and 82) included two Federal ARARs for surface water identified in 40 C.F.R. § 131.36. These two ARARs are chronic ambient water quality criteria (AWQC) for PCBs (0.014 µg/L for wildlife and 0.000064 µg/L for human health). These two Federal ARARs are not legally enforceable and could be identified by USEPA as relevant and appropriate, or to be considered ARARs. The Proposed Plan also identifies parallel regulations under the State of Alabama's Administrative Code 335-6-10.

    The Federal and State human health AWQC value (0.000064 µg/L) were included in the Proposed Plan by USEPA through the OU-4 FS Addendum (page 8). The State ARAR for wildlife (0.014 µg/L) is a State of Alabama law that is consistently enforced by the State, and thus an ARAR that is applicable to the remedy. The State of Alabama ARAR for human health (0.000064 µg/L) is not consistently enforced by the State and should be waived by the USEPA as part of the ROD process.

13. *Numerical Value of the AWQC Value Identified to be Protective of Human Health:* The AWQC value identified as a PRG on Table 8 of the Proposed Plan (0.000064 µg/L) was designed to be protective of human health (based on a cancer-based risk standard of $1*10^{-6}$) and consumption of surface water as a drinking water source. If USEPA identifies an AWQC to be protective of human health as an ARAR (see comment 12), the AWQC value should be modified to 0.00256 µg/L. This revised value reflects the human health risk standard used to set the PRG for the consumption of fish (i.e., a Hazard Quotient of 1) and elimination of surface water consumption.

14. *Error in the PRG for Fish Upstream of Jackson Shoals:* Page 9 of the OU-4 FS Addendum incorrectly identifies the fish tissue PRG value for locations upstream of Jackson Shoals as 0.04 mg/kg. This value should be revised to 0.08 mg/kg to be consistent with the value presented in Table 8 of the Proposed Plan and the exposure assumptions used to derive the value in the human health risk assessment.

15. *Timeframes for Monitored Natural Recovery (MNR):* USEPA states on page 75 of the Proposed Plan that "The timeframe for sediment PRG and RAO attainment is 20 years below Jackson Shoals and 30 years at and above Jackson Shoals." P/S agree that these goals will be achieved and believe that the timeframes presented in the OU-4 ROD should be revised to reflect a range of years as opposed to singular milestones. This approach is consistent with the uncertainty for MNR timeframes discussed by USEPA on page 12 of the OU-4 FS Addendum. Using the range of times based on the combination of projections included on Figures 10-1 and 10-2 from the OU-4 FS, a projection of 20 to 40 years for the entire reach of OU-4 would be appropriate based on the wide range of variables affecting MNR.

16. *Remedial Goals for PCBs in Sediment versus PCBs in Fish:* Table 8 of the Proposed Plan includes preliminary remedial goals (PRGs) for sediment and fish. The PRGs for sediment are based on highly uncertain calculations in terms of the specific sediment PCB concentration that will yield an expected PCB concentration in fish. These calculations and the associated uncertainties are described in Section 6.3.2 of the OU-4 FS. The PRGs for

fish were established through the risk assessment process and are fixed values. Except for two sediment concentration PRGs, the concentrations of PCBs in fish are the controlling indicators of whether the remedy is achieving its long-term goals.

The two PRGs directly applicable to sediment from the OU-4 FS include PCB concentrations exceeding 2.6 mg.kg to protect benthic organisms and 0.63 mg/kg to protect bats. This latter PRG value (0.63 mg/kg) was not in the Proposed Plan and should be included with the OU-4 ROD. Language should also be included in the OU-4 ROD highlighting the uncertainties associated with calculating fish concentrations based on sediment concentrations and noting that the FYR should focus on PCB concentrations in fish over the long-term and not sediment concentrations.

17. *PCB PRG for Sediment Located Upstream of Jackson Shoals:* The controlling sediment PRG for areas upstream of Jackson Shoals was unilaterally changed by USEPA in the OU-4 FS Addendum (pages 8 and 9). The sediment PRG selected by USEPA in the Proposed Plan (based on the OU-4 FS Addendum) was the lowest value for a range of PCB concentrations that are protective for ecological receptors including the most sensitive fish-eating species of mink and otter. P/S are requesting that the controlling PRG for sediment upstream of Jackson Shoals be set at 0.2 mg/kg consistent with the OU-4 FS as it will be protective for both human and ecological receptors.

    Consistent with the approach presented in Comment 16, the long-term PCB concentration for fish presented in Table 8 (1.3 mg/kg for mink and otter) and not the sediment PCB concentration of 0.1 mg/kg (or 0.2 mg/kg, if changed) should be used to evaluate the long-term protectiveness of the remedy from an ecological perspective along with the other two sediment PRGs (i.e., 2.6 mg/kg and 0.63 mg/kg).