STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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RCRA RECORDS CENTER
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Mr. Dan Bennewitz
Arch Chemicals, Inc.
1200 Lower River Road
Charleston, Tennessee 37310

RE: Ecological Risk Assessment Work Plan Addendum

Dear Mr. Bennewitz:

Thank you for having ENSR Corporation provide the July 2008 Ecological Risk Assessment Work Plan Addendum for the Arch Chemicals, Inc. facility ("Arch") located at 350 Knotter Drive, Cheshire, CT. The document amends an April 2007 Ecological Risk Assessment work plan based on EPA and CT DEP review comments provided by letter from CT DEP dated December 5, 2007 and discussions between EPA, CT DEP and ENSR held during a March 20, 2008 conference call. The purpose of this letter is to provide EPA and CT DEP's comments based on review of the July 2008 Work Plan Addendum, as follows:

1. One action item identified in the December 2007 CTDEP/EPA comment letter and discussed during the March 20, 2008, conference call, was to obtain more data on the chemicals used at the facility, both before and after it was acquired by Arch in 1983. The facility was occupied by Siemens, a medical equipment manufacturing company, from its construction in 1975 until 1983. Arch did not find any information on specific manufacturing activities or chemical usage at the facility before 1983. The Work Plan Addendum reported that Contaminants of Potential Ecological Concern (COPECs) associated with the presumed medical manufacturing activities include Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), metals, and petroleum hydrocarbons. Arch noted that these COPECs were analyzed during the Transfer Act investigation, and will be included as part of the proposed surface soil sampling program.

   The lack of specific information on manufacturing processes and chemical usage before 1983 makes it a challenge to identify specific contaminant classes. However, the proposed suite of soil analyses seems appropriate to support the Screening Level Ecological Risk Assessment (SLERA). Please develop a Quality Assurance Project Plan

(QAPP) prior to data collection. In the QAPP, please compare reporting limits to conservative eco risk-based screening values for each constituent to ensure that reporting limits are below screening values. Any contaminant with a reporting limit above the appropriate screening level would have to be retained as a Contaminant of Potential Environmental Concern (COPEC) for evaluation in a Baseline Ecological Risk Assessment (BERA).

As eco risk-based screening values are not available for petroleum hydrocarbons, it is recommended to focus the analyses on Polycyclic Aromatic Hydrocarbons (PAHs) instead, for which some soil benchmarks are available.

2. The Work Plan Addendum includes portions of the facility's Stormwater Management Plan (SMP), dated November 1, 2000, in Attachment 3. The information is also discussed in Section 2.3 of the Work Plan Addendum. The SMP provided the following information of potential relevance to the future SLERA:

- The SMP states that Arch has never used the undeveloped portion of the property for industrial, waste storage, or waste disposal purposes.

- Certain driveway areas at the Site are subject to the General Permit because trucks access the facility along this driveway to deliver hazardous materials and remove wastes from the Site.

- The remaining driveways, parking lots, and other paved areas are curbed. Stormwater runoff from these surfaces is directed via the curbing to three catch basins which discharge to an unnamed stream flowing along the northern edge of the property.

- All chemical storage is indoors. Loading and unloading of chemicals occurs within an enclosed loading dock. Trucks back up to the dock and unload directly into the building. The potential for these chemicals to come in contact with stormwater is low.

- Stacks on the roof of the facility vent various pieces of laboratory equipment. The SMP deems it unlikely that fumes from these stacks would impact stormwater runoff from the roof because of the small amounts of materials released by these structures.

- Waste is not disposed at the facility. All chemical wastes generated in the individual laboratories is double-packed in drums and stored outside in the hazardous waste storage building. Existing waste handling procedures virtually eliminate the possibility of contact between hazardous wastes and stormwater. The SMP indicates (in 2000) that the hazardous waste storage building is slated for closure.

- No spills or leaks of hazardous substances have occurred in quantities above five gallons at Olin or Arch since October 1, 1993.

- The SMP determined that there are no known non-stormwater discharges from the facility. In addition, all floor drains and sinks in the facility discharge to the sanitary sewer system.

- The stormwater runoff from the property is collected at least once per year during a storm event and analyzed for a number of parameters, of which the following may be of interest to risk management decision making:

    - Total copper, lead, and zinc
    - 48 hr LC_{50} (aquatic toxicity) [species not specified]

The available information suggests that there is little chance of finding spill- or disposal-related chemicals associated with the facility in Site surface water. Surface water sampling may be needed if EPA or CT DEP determines that the existence of a stormwater permit does not preclude the need to ensure that surface water flowing from the facility is acceptable to downstream aquatic receptors. Please provide recent annual stormwater monitoring reports, including results of aquatic toxicity evaluations and the concentrations of select heavy metals in runoff from the facility. This information may be helpful for assessing the need to collect surface water samples.

3. Section 3 of the Work Plan Addendum describes the proposed surface (0-2 ft deep) soil sampling and evaluation program for the Site. Figure 2 in the Addendum shows the approximate sampling locations. The proposed soil sampling program to the east of the facility building will generate three new soil samples. This number appears small given the number and type of potential release areas in this part of the property. Please double the number of soil samples collected to the east of the facility building to cover potential release areas better or justify the number and location of samples proposed based on the potential for releases to surface soil in these areas. As a third alternative, any previously collected surface soil samples (0-2 ft deep) from this area could be considered in the SLERA, provided analyses were performed for the appropriate suites of constituents and reporting limits were below eco risk-based soil screening values.

4. Page 3-2, Section 3.2 of the Work Plan Addendum notes that The Ecological Receptor Exposure Pathway Scoping Checklist (included as Attachment 5 to the Work Plan Addendum) will be completed as part of the Screening Level Ecological Risk Assessment (SLERA) in order to document potentially relevant ecological exposure pathways at the site. While it is not a requirement that Arch complete the scoping checklist, it is strongly recommended. The checklist can be a useful tool to determine whether the potential

exists for complete exposure pathways between RCRA facility contaminants and ecological receptors and to focus the ecological risk assessment on any potential exposure pathways identified. For that reason, if the scoping checklist is used, it should be completed and provided to EPA and CT DEP before development of the SLERA to focus future discussions between the agencies and Arch on the scope of the SLERA.

5. During our March 20, 2008 conference call with ENSR, EPA and CT DEP agreed to consider surface soil data collected from potential Site release areas and information on historical activities and stormwater management at the Site in assessing the need for surface water and sediment sampling. In addition, EPA and CT DEP requested additional information on the nature of the outflows from the two detention basins on the Site to the Tenmile Brook (see General Comment 4 in December 5, 2007 letter from CT DEP). In its January 21, 2008 response, ENSR agreed to provide additional information on the hydrology and status of the two detention areas at the Site as part of the site ecological characterization. Addressing this general issue in the SLERA would be appropriate. However, it would expedite the process to provide the information in advance. Please include photographs of settings and habitats at the Site to help visualize these settings and support risk management decision making.

Thank you for your efforts to achieve RCRA Corrective Action and Connecticut Property Transfer Program goals at the Arch Chemical facility. Please do not hesitate to contact me if you have any questions on this letter.

Sincerely,

Sandra Brunelli

Sandra Brunelli
Environmental Analyst 3
Remediation Division
Bureau of Water Protection and Land Reuse

cc: Michelle Snyder Project Specialist, ENSR Westford, 2 Technology Park Drive, Westford, MA 01886
S. Carr, EPA