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August 16, 2011

Mr. Kenneth Bardo - LU-9J
U.S. EPA Region V
Corrective Action Section
77 West Jackson Boulevard
Chicago, IL 60604-3507

VIA E-MAIL and U.S. MAIL

Re: Supplemental Groundwater Monitoring Program
Solutia Inc., W. G. Krummrich Plant, Sauget, IL

Dear Mr. Bardo:

In response to US EPA's April 28, 2011, letter and pursuant to subsequent communications with Solutia, enclosed please find the subject program.

As noted in recent e-mails to US EPA, Solutia Inc. ("Solutia") acknowledges the Agency's expressed concern that the Illinois Department of Transportation (IDOT) highway dewatering wells, located over two miles to the north of the W. G. Krummrich Plant, may potentially affect groundwater flow in the vicinity of the W. G. Krummrich Plant. However, because those wells have been operating for nearly 50 years, we believe that the Agency's concern is unfounded and that the influence of the IDOT wells has already stabilized and is not causing the groundwater plume to extend northward.

US EPA's concern above was first posed to Solutia in late 2010, based in part on a 2009 groundwater model prepared for IDOT. Although neither US EPA nor Illinois EPA provided Solutia with the model at issue, last month Solutia independently obtained a copy of "Computer Simulation of Groundwater Flow - Illinois Department of Transportation Dewatering Wellfield, East St. Louis, Illinois," March 26, 2009, prepared by TBirdie Consulting, Inc., Lawrence, KS, for AECOM USA, Inc., in turn for IDOT. In our July 25, 2011, phone conversation, I pointed out the following from the TBirdie report which would appear to support Solutia's position above that the IDOT wells are not causing the groundwater plume to extend northward:

- Page 14: Even when "the cone of depression caused by the IDOT well network was deepest during November 1990," the W. G. Krummrich Plant was outside that cone to the south according to Figure 2.29 - Approximate Elevation of Potentiometric Surface, Nov. 1990.
- Page 16: "The study area [which Solutia is located outside to the south] coincides approximately with the zone of contribution to the IDOT dewatering well network."

- Page 17: "Groundwater flow is roughly parallel [i.e., east to west] to the northern and southern [study area] boundaries and therefore no-flow conditions were specified along these boundaries."

Without reiterating details, during our May 10, 2011, meeting in Chicago, Solutia reviewed with the Agency additional information that supports the conclusion that migration of contaminated groundwater from the W. G. Krummrich Plant is stable.

Notwithstanding all of the above, Solutia will proceed with the supplemental groundwater monitoring program described in the enclosure to better define the situation.

If you have any questions or comments regarding this submittal, please call me at (314) 674-3312.

Sincerely,

Gerald M. Rinaldi
Manager, Remediation Services

Enclosure

cc: C. Bumb - Solutia

Solutia Inc.
W.G. Krummrich Plant
Sauget, IL

Supplemental Groundwater Monitoring Program

August 2011

The Supplemental Groundwater Monitoring Program will be performed concurrently with the Long-Term Groundwater Monitoring Program.

1. The Supplemental Groundwater Monitoring Program includes:
   - nested piezometers GWE-1, GWE-2, GWE-3 (also known as PIEZ-1, PIEZ-2, and PIEZ-3), monitoring the Shallow, Middle, and Deep Hydrogeologic Units (SHU, MHU, and DHU, respectively);
   - nested piezometer GWE-4 (also known as TRA3-PZA), monitoring the MHU and DHU;
   - plume stability monitoring (PSM) wells PSMW-6 and PSMW-10, monitoring the DHU;
   - nested Sauget Area 2 (SA2) Sites monitoring well SA2-MW-1, monitoring the MHU and DHU; and
   - assuming Solutia obtains property access in a timely manner, a new nested monitoring well (to be designated GWE-5) to monitor the DHU and piezometers to monitor the SHU and MHU, to be located in the vicinity of Victory Avenue at Mississippi Avenue in East St. Louis.

2. Beginning with the August 2011 long-term groundwater sampling event and quarterly thereafter through the May 2012 sampling event, water levels will be taken at all then-existing nested piezometers and monitoring wells provided above. Water levels at the new nested GWE-5 monitoring well and piezometers will begin during the November 2011 long-term groundwater sampling event (assuming Solutia obtains property access in a timely manner, or if not, the next quarterly event after access is obtained and the GWE-5 well and piezometers are installed) and quarterly thereafter through the May 2012 sampling event.

3. Beginning with the August 2011 sampling event and quarterly thereafter through the May 2012 sampling event, groundwater samples will be obtained from the DHU at piezometers GWE-1, GWE-2, and GWE-3 and analyzed for volatile organic compounds (VOCs) (including dichlorobenzenes) and monitored natural attenuation (MNA) parameters. Groundwater samples will be obtained from the DHU at monitoring wells PSMW-6 and PSMW-10 and analyzed for VOCs and MNA parameters during the August 2011 sampling event. Groundwater samples will be obtained from the DHU at the new GWE-5 monitoring well and analyzed for VOCs and MNA parameters during the November 2011 sampling event (assuming Solutia obtains property access in a timely manner) and quarterly thereafter through the May 2012 sampling event.

3.1. Prior to obtaining and analyzing groundwater samples from the DHU, each piezometer and well will be properly developed to ensure a representative sample. All groundwater samples will be obtained and analyzed consistent with the procedures for the Long-Term Groundwater Monitoring Program. The new nested GWE-5monitoring well will be constructed in a manner consistent with DHU monitoring wells PSMW-6 and PSMW-10 (e.g., 2" stainless steel casing with a discrete 5-foot screen interval at the base of the DHU).

3.2. Quarterly chlorobenzene sample results from piezometers GWE-1, GWE-2, GWE-3, and the new DHU monitoring well GWE-5 will be compared to its groundwater cleanup level (i.e., maximum contaminant level (MCL)) of 100 ug/L (parts per billion). If chlorobenzene exceeds its groundwater cleanup level by ten times or more, i.e., 1,000 ug/L, Solutia will promptly notify EPA. Additional activities (such as new well installation to further define the plume) may be proposed based on such exceedances.

4. Within 90 days of receipt of all validated data from the May 2012 sampling event, Solutia will submit a "periodic technical review" that incorporates all data from the Supplemental Groundwater Monitoring Program and Long-Term Groundwater Monitoring Program. The periodic technical review will evaluate site conditions and the effectiveness of MNA, assess any potential unacceptable risk posed to on-site and off-site receptors, assess whether alternative technologies are necessary to expedite groundwater cleanup in the American Bottoms aquifer, and assess the impacts of off-site groundwater pumping activities on the ability to effectively operate the Sauget Area 2 Groundwater Migration Control System (GMCS) and on the groundwater gradient within the defined contaminant plume boundary.

5. After submittal of the periodic technical review, Solutia will work with USEPA to update the groundwater migration (CA 750) environmental indicator report, as appropriate.