



Proven Soil, Sediment, and Groundwater Remediation Biotechnologies

February 5, 2008

Kelsey Helton
Florida DEP – Bureau of Waste Cleanup
Hazardous Waste Cleanup Section
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

RE: Adventus Americas Variance Petition OGC# 07-1825

Dear Ms. Helton;

On November 6, 2007 Adventus received comments from the Florida Department of Environmental Protection (DEP) related to the site-specific Variance Petition (OGC# 07-1825) filed on October 8, 2007. On November 27, 2007 Adventus submitted a response to these comments along with a revised Variance Petition dated November 19, 2007. A Final Order Granting a Variance from Rule 62-522.300(3) was filed on January 16, 2008. This Variance was specific to the field-scale pilot testing of the RemOx EC *in situ* stabilization technology at the Koppers Superfund Site in Gainesville, Florida.

On January 12, 2008 we received your email presenting comments and recommendations from HWCS's review of the proposed field work/remedial design for the field-scale pilot test and the UIC Memo Summary. The HWCS review was meant to assure consistency and compliance with substantive regulatory requirements associated with the pilot test. To demonstrate compliance with UIC rule and Variance requirements, the HWCS review focused on:

- i) Location of proposed monitoring points;
- ii) Frequency of sampling; and
- iii) Scope of sampling and analysis.

Based on this review, DEP requested that the following requirements be specifically incorporated into the previously submitted (September 27, 2007) Field Plan including Table 3 and figures and the previously submitted (October 2, 2007) UIC Summary Memo:

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- 1) 150' radius temporary Zone of Discharge (ZOD) extending downgradient from the injection area(s) where temporary exceedances of Primary and/or Secondary groundwater standards are allowed by UIC Variance or Rule.
- 2) For this proposed remedial pilot, (10) Primary standard analytes must include sodium, antimony, arsenic, beryllium, cadmium, chromium, lead, mercury, selenium and thallium.
- 3) For this proposed remedial pilot, (7) Secondary standard analytes must include aluminum, chloride, color, iron, manganese, pH and total dissolved solids (TDS).
- 4) Pre-Injection background and baseline sampling of groundwater monitoring wells prior to ISBS injection with analysis for the above 10 Primary and 7 Secondary standard analytes. Monitoring wells should include MW-14 (upgradient background), the two proposed monitoring wells (ISBS-1 and ISBS-2) recently installed in the ISBS test areas, existing MW-1 (located approximately 250' downgradient of the pilot test area) and a newly installed surficial aquifer monitoring well (ZOD-1) to be installed and located within the ZOD point of compliance, which is approximately 150' downgradient of the test areas, per the variance application. It was noted that the existing monitoring well HG-10S is not sufficient as a compliance well since it is not screened in the surficial aquifer where the temporary ZOD applies. However, we DEP was not opposed to inclusion of HG-10S in the monitoring program if it may provide some information as to potential vertical communication into the Hawthorn Group.
- 5) Post-Injection Monitoring- UIC compliance monitoring should include sampling of the above monitoring wells (excluding MW-14) approximately 16 weeks after injections (approximately 3 months) as proposed in the Field Plan as well as Quarterly thereafter (3 events), corresponding to the 1 year post- injection duration of the temporary ZOD proposed in the variance application. The monitoring frequency may be adjusted if subsequent injections are proposed. Please correct Section 3.3.4 of Field Plan to reflect above monitoring wells and that groundwater sample analyses will include the Primary and Secondary standard analytes identified above and monitoring will continue until those standards or background are met.
- 6) Please note that in the UIC memo, there is incorrect reference to an ISBS pilot test in the Upper Hawthorn Group, rather than the surficial aquifer at the site. This should be corrected.
- 7) Note- on Table 3 of Field Plan, soil/water analytical method is identified as EPA Method 8270 while in the text Section 3.3.4, post treatment monitoring, Method 8260 is referenced.

Accordingly, please find herewith FINAL revised versions of the FINAL (Revision 3) Field Activity Plan (dated February 5, 2008) and the FINAL UIC Summary Memo (dated February 5, 2008). Each of these documents reflect Beazer's adherence to the recommendations presented above.

Please note that the field work was completed during the period January 22-27, 2008. As part of this effort a temporary ZOD monitoring well (ZOD-1) was installed within the 150 ft downgradient ZOD point of compliance and all sampling was done in accordance with the recommendations summarized above. We are in the process of preparing a field activity report describing these efforts and summarizing the baseline data. Weekly field monitoring is in progress and post-treatment soil coring to evaluate remedial performance is currently planned for the week of March 17, 2008 (*e.g.*, 8 weeks post RemOx EC application).

Thank you very much for you time, extra efforts and assistance.

ADVENTUS AMERICAS, INC.

Jim Mueller, Ph.D.

Director – Remedial Solutions & Strategies

Cc: Mr. M. Brouman – Beazer East, Inc.
Mr. G. Council – GeoTrans, Inc.
Mr. R. Duerling – FDEP
Mr. S. Miller – US EPA Region IV
Mr. N. Misquitta – KEY Environmental
Mr. J. Mousa – ACEPD
Ms. L. Paul – KI
Ms. P. Salisbury – KI
Mr. M. Slenska – Beazer East, Inc.
Mr. J. Valkenburg – Adventus