



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Governor

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September 22, 2010

EHS Dept.

SEP 28 2010

Received

Mr. Jamieson M. Schiff
Textron, Inc.
40 Westminster Street
Providence, RI 02903

Re: **Further Site Investigation Report 2**
Former Textron Facility
4366 North Old US Route 31
Rochester, Fulton County
State Cleanup Site #7100149

Dear Mr. Schiff:

Staff at the Indiana Department of Environmental Management (IDEM) have evaluated the *Further Site Investigation 2* (FSI2) submitted by MACTEC in July 2010 for the former Textron (aka Former TORX Facility) site in Rochester, Indiana. The report was evaluated in accordance with the IDEM Risk Integrated System for Closure (RISC) guidance February 2001.

Site Background Information

A chlorinated plume from the former TORX Products facility (also known as Textron, CAMCAR or Acument Global Technologies) site extends approximately 4,000 feet off-site in a generally southern direction into a rural area of residential homes and agricultural property. Contaminants of concern (COCs) include trichloroethene, cis-1,2-dichloroethene and vinyl chloride.

As a remedial response action, Textron will be providing municipal water to the affected properties as agreed through negotiations with the US Environmental Protection Agency (EPA). IDEM concurred with the agreement.

Activities conducted during the current further site investigation (FSI2) included: soil and ground water sampling associated with delineation of the source area and ground water contaminant plume (24 borings, 17 monitoring wells); residential treatment system monitoring and water sampling; falling-head tests on seven (7) monitoring wells to determine hydraulic conductivity values in the down-gradient contaminant plume area; paired sub-slab/indoor air sampling (seven locations) in the plant building and collection of one ambient background air sample; and quarterly ground water sampling of the monitoring network.

MACTEC contends that delineation of the extent of contamination is complete, and requests approval to perform a "site-specific risk assessment and a feasibility study to evaluate remedial alternatives for the VOC plume." MACTEC proposed quarterly sampling of a reduced number of monitoring wells for a year, followed by semi-annual sampling for an unspecified period of time. The consultant recommends the collection of paired sub-slab/indoor air samples from the plant building under seasonal worst-case conditions, continued efforts to perform a vapor intrusion evaluation at 4163 North Old US Highway 31, continued maintenance and monitoring of the residential water treatment systems, and abandonment of the residential well at 4377 North Old US Highway 31.

GENERAL COMMENTS

Previous investigations resulted in uncertainty of the horizontal and vertical extents of ground water contamination to the east and south. Monitoring wells MW-35, 36, 50 and 51 were installed to define the extent of contamination in these directions. IDEM agrees that the horizontal and vertical extents of contamination in soil and ground water are sufficiently delineated for the evaluation of remedial alternatives.

Additional investigation of the former degreaser pit resulted in numerous detections of chlorinated hydrocarbons. Ground water samples from 11 borings yielded analytical results in excess of the RISC industrial default closure levels (IDCLs) and 12 samples in excess of the RISC residential default closure levels (RDCLs). The former degreaser pit has been confirmed as a likely source of contamination.

Section 7.4, Page 7-3, Paragraph 4: MACTEC states "However, the vertical and horizontal migration is limited by discontinuous layers of fine-grained sediment (silts and clays)." IDEM noted that the discontinuous silt and clay deposits do not "limit" the migration of contaminants, so much as influence the direction and depth of migration. Due to the size of the area of investigation and the nature of the depositional environment, the thickness and distribution of the fine-grained sediments that influence contaminant migration cannot be determined in absolute terms. Thus, the distribution of site COCs within the defined plume extent may vary from the conceptual model shown on the cross-sections. MACTEC needs to consider this when evaluating the remedial alternatives.

IDEM agrees that additional investigation of the shallow bedrock for the presence of contamination is not necessary at this time. However, due to the known vertical extent of ground water contamination and the fractured nature of the shallow limestone bedrock, the potential need for future investigation cannot be eliminated.

The vapor intrusion sample results did not report any contamination in the on-site Acument building in excess of the 25-year Commercial Indoor Air Action Levels. Sub-slab air and ground water samples were above screening levels. As discussed by MACTEC, the samples were not collected under the worst-case scenario. MACTEC's recommendation of further sampling during worst-case scenario conditions is acceptable to IDEM. Since additional investigation will be conducted, IDEM did not validate the indoor air data for quality assurance and quality control (QA/QC). Full QA/QC data validation will be conducted on the next round of indoor air samples.

IDEM also agrees that indoor air testing of the residence at 4163 North Old U.S. Highway 31 is needed to evaluate the risk posed by a potential vapor intrusion pathway. If difficulty in obtaining access persists, MACTEC might consider enlisting aid from the IDEM project manager, and as a last resort, EPA assistance.

IDEM agrees that reducing the number of wells to be sampled is reasonable. IDEM recommends the retention of the bedrock well MW-45 (closest bedrock well down-gradient of the source area) and the two (2) deeper wells of the MW-20 nest, MW-20(124) and MW-20(155) to document contaminant concentration trends near the source area.

MACTEC states in Section 3.9, Page 3-3, Paragraph 1, that abandonment of the former residential well at 4377 North Old U.S. Highway 31 has been postponed due to consultant/client use of the residence as a field office, pending provision of an alternate water supply. This well needs to be abandoned to prevent potential cross-contamination of the bedrock ground water, as proposed and justified in the FSI work plan. Until this well is abandoned, MACTEC needs to include it in the sampling program.

SPECIFIC COMMENTS

Page 7-2; Section 7.3: "The following analytes were detected in the media samples collected during the Initial and Phase 2 Further Site Investigations." MACTEC needs to clarify the table presented in the text; specifically there are no column headings for the information presented. Appendix J "Monitoring Well Network": The justification for removing monitoring well MW-6B reads "Close to MW-22". This appears to be a typo. As discussed via e-mail, it should read, "Close to MW-20." MACTEC needs to correct the text for future submissions.

Results of residential water sampling are consistent with previous sample results. There are detections of vinyl chloride in excess of the RISC IDCL in the raw water at some of the residential locations. However, the post-filtration unit water sample results for vinyl chloride were all non-detect, demonstrating that the filtration systems are adequately removing the contamination from the water before human consumption can occur.

Documentation for various sampling events was provided on the compact disc (CD) titled Appendix D. The results of the quality assurance/quality control (QA/QC) validation indicate that the contamination is defined, but the standards used for the initial calibration were not provided for confirmation, so the response factors (RFs) could not be calculated. Therefore, the initial calibration could not be verified. Once the RF factors are calculated and the initial calibration is verified, the data can be accepted, and the nature and extent of the ground water contamination can be considered complete. IDEM requires submittal of the omitted information for the initial calibration standards to complete the QA/QC validation. This information may be sent via e-mail to accelerate the process.

CONCLUSION

IDEM agrees that delineation of the extent of contamination appears to be sufficient for the development of a remediation work plan. The omitted information for the QA/QC calibration standards must be submitted to be certain.

IDEM considers the fine grained sedimentary deposits as influential, but not limiting the depth and direction of contaminant migration in the subsurface. Sample results near the former degreaser pit have confirmed it to be a source area for chlorinated hydrocarbon contamination. The proposed reduction in the number of wells to be sampled is acceptable, with the addition of monitoring wells MW-45, MW-20 (124), and MW-20 (155) in the sampling plan. Until abandonment, the residential well at 4377 North Old US Highway 31 also needs to be included in sampling events.

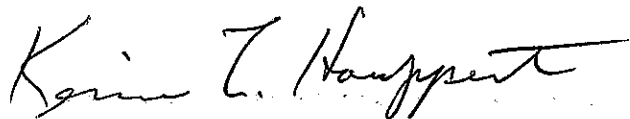
IDEM recommends continuation of the residential sampling at least until the raw water at the residences is no longer above residential closure levels, or until the residences are placed on a municipal water supply.

Be advised that under the Comprehensive Environmental Response, Conservation, and Liability Act (CERCLA) and the Indiana's Hazardous Substances Response Trust Fund (HSRTF) law, an owner, operator or responsible person is liable for the costs of response or remediation incurred by the State. IC 13-25-4-8.

If you would like to provide feedback on our job performance, please go to www.in.gov/idem/5681.htm and complete our "Remediation Program Customer Satisfaction Survey". Your responses are anonymous and we appreciate the feedback on what we are doing well, and what we need to improve.

Upon receipt of acceptable QA/QC calibration standards, the investigation may be considered complete. At that time, IDEM will request a remediation work plan proposal. Please contact IDEM (Kevin Houppert, IDEM State Cleanup Section) at (317) 232-8552, if you have any questions or concerns for the comments contained in this letter.

Sincerely,



Kevin L. Houppert, LPG#1408
State Cleanup Section
Office of Land Quality

Office of Land Quality Document Submittal Guidelines

IDEM now has a Virtual File Cabinet (VFC) to capture, store, file, distribute, and securely access electronic documents. The VFC should streamline document management and increase service to the public by providing direct access to documents via the internet.

In order to realize the benefits of VFC, IDEM has had to learn what the system will efficiently handle, given the limitations common to web-based technologies. IDEM staff developed guidelines to minimize the number of staff hours that we must spend to upload and access files, and maximize the time available to review documents and interact with our customers.

Your cooperation with these guidelines will benefit your projects. All Office of Land Quality staff use VFC for reviewing documents and delays in uploading documents to VFC can disrupt their workload and unnecessarily extend project schedules as well as delay public access to the documents.

GUIDELINES

- For all documents larger than 10 pages or that have color text or graphics, submit 2 paper copies and 1 CD or DVD containing the complete report and associated data files.
 - Two paper copies are required to allow simultaneous review by both technical staff and project/ permit managers.
 - Label CD/DVDs with program name, site name, site/FID number, document title(s), data file name(s), and date.
- For all documents smaller than 10 pages and do not have color text or graphics a CD/DVD is not required.
- If you are submitting QA/QC documentation with a report, include 1 comprehensive paper copy with full QA/QC documentation of lab data and 1 CD or DVD containing the complete report (including QA/QC documentation). The second paper copy of your report does not need to include the QA/QC documentation.
- Paper documents should be duplex and printed on white bond paper.
- Binding paper documents is optional.
- The paper copies and CD/DVDs should be mailed to the appropriate project manager or permit manager at the following address:

100 North Senate Avenue
[Program Mail Code] [Room Number]
Indianapolis, IN 46204-2251

Electronic Documents

- Electronic document files should be no larger than 25MB.
 - When splitting larger files into 25MB sections, a document identification page should be included as the first page of each subsequent section.
 - The document identification page should include the document title, date, and section (i.e. Part X of Y).
 - You may compress the electronic document files using the Zip file format (.zip) to reduce the file size.
- File names for electronic documents must not include any symbols, (i.e. ! # \$ % & * " @ ' /).
- Reports should be submitted as Portable Document Format (.pdf) files, version 8.0 or lower. Acceptable file formats for images are .PDF and .TIF. Data files should be formatted according to OLQ Electronic Data File Submittal Guidelines.
- Embedded images or graphics must not be included in documents (Non-embedded images and graphics are acceptable).

Communication of any changes to document submittal guidelines will be:

- Presented at Consultants' Day
- Posted on the OLQ Program Websites
- Fliers will be enclosed with outgoing mail for three months after any changes to guidelines
- Emailed to anyone on the OLQDATA notification list. You may register for the list on the OLQ Electronic Data File Submittal Guidelines webpage.

