



State of Ohio Environmental Protection Agency

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**CERTIFIED MAIL #91 7108 2133 3932 4449 5255 – Brad White**  
**#91 7108 2133 3932 4449 5262 – Dennis Balcer**  
**#91 7108 2133 3932 4449 5279 – John Glasso**

April 9, 2010

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ARCADIS  
284 Cramer Creek Court  
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Remediation Project Manager  
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600 Mountain Avenue  
Murray Hill, NJ 07974-0636

**Re: Notice of Violation of Operation and Maintenance Agreement, Lucent Columbus Works, 6200 East Broad Street, Columbus, Ohio**

Dear Mr. White, Mr. Balcer, and Mr. Glasso:

Based upon Ohio EPA's review of the 2009 Annual O&M Report, received March 26, 2010 and memoranda regarding boiler house doe-drain sump dated February 2, 2010, March 2, 2010, and March 2, 2010 the following violations of the Operation and Maintenance Agreement have been identified.

**Issue 1 ORC 3746.10(C) - Operation and Maintenance Agreement**  
**OAC 3745-300-15(F) - Implementation of the O&M Plan**

**Comment Conditions of the O&M Plan were not implemented per OAC 3745-300-15(F) and Condition 6 of the O&M Agreement as required by ORC 3746.10(C)(2) as follows:**

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

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- a. **According to the O&M report, the replacement well MW-32R (replacement for damaged well MW-32) was not installed in the location specified in Section 7.1 of the O&M Plan.**

Section 7.1 states: "A new well will be constructed near the original location of this well (approximately 5 to 15 feet south of the original location) before the next ground water sampling event." However, as depicted on the attached Figure 1, the well was installed over 150 feet west (side-gradient to downgradient) of the original location of MW-32.

Since MW-19 continues to exceed the UPUS of 5 ug/L for trichloroethene (TCE) and the Property boundary runs beneath Broad Street where wells cannot be installed, Ohio EPA agreed to off-Property point-of-compliance (POC) wells with trigger levels less than UPUS to demonstrate that compliance with UPUS will be maintained at the Property boundary. The original location of MW-32 was chosen to be the nearest off-Property POC well located downgradient of monitoring well MW-19. The relocation of replacement monitoring well MW-32R location over 150 feet further side-gradient to downgradient from the known source of COCs exceeding UPUS at MW-19 is inconsistent with the intended purpose of the well and the location specified in the O&M Plan. Therefore, replacement well MW-32R may not be appropriately located to serve as the required POC well.

This situation can be resolved by 1) providing documentation to Ohio EPA demonstrating that the map provided in the 2009 annual O&M report is incorrect and that the well location meets the criteria in the O&M Plan or 2) installing a monitoring well that meets the location criteria in the O&M Plan. Ohio EPA requests that this issue be resolved by June 11, 2010.

- b. **Lucent Technologies did not use the appropriate reporting limits during the analysis of the October 2009 ground water samples.**

- i. **The reporting limit for vinyl chloride used at well MW-19 was 2.9 ug/L, above the UPUS value and trigger level of 2.0 ug/L at that well.**

According to Table 2 of the O&M report, the vinyl chloride reporting limit used at MW-19 was 2.9 ug/L. Therefore, the data quality was not sufficient to determine whether trigger levels requiring a response per Section 9.2 of the O&M plan were exceeded for vinyl chloride during the October 2009 sampling event. All future ground water samples should be analyzed using reporting limits capable of quantifying detections of vinyl chloride to at least 2.0 ug/L at all on-Property monitoring locations.

- ii. **The reporting limit for vinyl chloride used at off-Property POC wells MW-26 and MW-32R\* was 2.0 ug/L, above the trigger level of 1.0 ug/L set for off-Property wells in Table 1 of the O&M Plan.**

Since MW-19 exceeds the UPUS of 5 ug/L for TCE and the Property line runs beneath Broad Street where wells cannot be installed, Ohio EPA agreed to off-Property POC wells with the trigger level of approximately ½ the UPUS value for TCE and degradation products. Table 1 of the O&M Plan explicitly states that the trigger level for vinyl chloride at off-Property wells is 1.0 ug/L. All future ground water samples need to be analyzed using reporting limits capable of quantifying detections of vinyl chloride to at least 1.0 ug/L at all off-Property monitoring locations.

\* As indicated above, the location of MW-32R has not yet been demonstrated to be appropriate to act as a POC well.

**Issue 2**      **ORC 3746.10(C) - Operation and Maintenance Agreement**  
**OAC 3745-300-15(F) - Implementation of the O&M Plan**

**Comment**    **Indoor air concentrations at the boiler house exceeding applicable standards**

**a. Background.**

ARCADIS has provided Ohio EPA with three memoranda during February and March 2010 with information regarding indoor air sampling results from the boiler house as summarized below. A February 2, 2010 memo that summarized the scheduled indoor air sampling results, reported exceedances of the risk-based applicable standards for two of the four samples, and communicated plans to perform confirmatory sampling. A March 2, 2010 memo summarized the confirmatory sampling results, reported exceedances of the risk-based applicable standard for one of the samples, and proposed to evaluate the engineering control for potential improvements providing Ohio EPA with results by March 31, 2010. The trichloroethene concentration was 5.5 ppb exceeding the 4 ppb standard and the cis-1,2-dichloroethene concentration was 17 ppb exceeding the 13 ppb standard. A March 30, 2010 memo reported results of a March 11, 2010 evaluation of the engineering control. The evaluation results identified gaps in the sump lid and recommended that they be sealed. The memo indicates that ARCADIS will provide Ohio EPA with a future memo describing improvements made to the engineering control and confirmatory air sampling results.

**b. Comments and requested response.**

i.      The February and March 2010 memoranda acknowledge exceedances of the risk-based standards but also indicated that the detected concentrations are below OSHA standards. The risk-based standards, as developed by ARCADIS, were submitted with the NFA letter and are the applicable standards as recognized by the August 13, 2009 covenant not to sue. Ohio EPA recognizes the indoor air concentrations detected in the boiler house as exceedances of applicable standards.

- ii. The O&M Plan did not anticipate exceedances of the indoor air standards in the boiler house and therefore did not list contingencies for this event. In the absence of specific O&M Plan contingencies, the responses implemented by the Volunteer and ARCADIS have been appropriate and timely.
- iii. The March 30, 2010 ARCADIS memo did not provide a date for completion of lid repair and confirmatory sampling. Ohio EPA requests that the repair work be complete and that confirmatory sampling results be submitted by June 11, 2010.

Please be aware that the time Ohio EPA staff have spent on addressing this violation of your OMA and any time that may be spent in the future by Ohio EPA, will be billed to your Voluntary Action Program OMA account.

Any questions concerning this matter should be addressed to Doug Crandall at 614-387-6181.

Sincerely,



Doug Crandall  
Site Coordinator  
Central District Office

ec: Tiffani Kavalec, Manger, ACRE  
Frank Robertson, Supervisor  
Debbie Strayton, Manager, DERR/CDO  
Ken Schultz, Supervisor, DERR/CDO  
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DERR/CO file