

Hazardous Waste Section
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Your Name: Mary Siedlecki
EPA ID: N C D 0 0 3 1 8 5 2 3 8
Facility Name: Former Alcatel Facility
Document Group: Groundwater (GW)
Document Type: Groundwater Monitoring Report (GMR)
Description: DENR comments on October 2011 Interim Measures Progress Report
Date of Doc: 1/14/2013
Author of Doc: NC HWS

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Date Recieved by File Room:

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01	22	13
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January 14, 2013

Mr. Dikran Kabbendjian
Manager, Facilities Planning
Alcatel-Lucent USA, Inc.
2301 Sugar Bush Road
Raleigh, North Carolina 27612-3339

Re: *October 2011 Interim Measures Progress Report*
Former Alcatel Facility
2912 Wake Forest Road
Raleigh, North Carolina
EPA ID # 003 185 238

Dear Mr. Kabbendjian:

Thank you for submitting the above referenced progress report (dated July 13, 2012). This semi-annual groundwater monitoring report presents the first round of groundwater data collected following shut down of the pump-and-treat remediation system. Additionally, groundwater monitoring data collected in October 2011 represents the baseline data point to evaluate the performance of remedial actions implemented at the facility in the Spring of 2012.

I have reviewed the *October 2011 Interim Measures Progress Report* and do not have any comments on the report at this time. However, I do have two comments related to monitoring well integrity and the *Sampling and Analysis Plan*. These two comments can be found on page two of this correspondence.

Remediation System Background

An interim groundwater remediation system was designed and installed at the facility to treat contaminated groundwater and to create a hydraulic barrier to stop the downgradient migration of the contaminant plume. Operation began in September 1996 and continued until October 2004 when the remediation system was shut down to conduct a monitored natural attenuation pilot test.

Alcatel voluntarily resumed operation of the remediation system in May 2005. Groundwater extraction was performed using three recovery wells (RW-1 through RW-3). Due to mechanical failures, RW-1 was shut down in May 2005 and RW-2 was shut down in June 2008. RW-3 was the only well serving to control contaminant migration. Recovery well RW-3 was shut down on January 18, 2011, following approval of the Hazardous Waste Section.

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October 2011 Groundwater Monitoring Results

Groundwater samples were collected from 22 monitoring wells on October 24-26, 2011. The samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8260B and for 1,4-dioxane using EPA method 8260 SIMS. Twelve VOCs were measured in groundwater at concentrations exceeding their respective 15A NCAC 2L Groundwater Standards. This number exceeds the six VOCs that have historically characterized groundwater contaminant plumes at the facility, including 1,1,1-trichloroethane; 1,1-dichloroethane; 1,1-dichloroethene; trichloroethylene; perchloroethylene; and 1,4-dioxane.

Each of the six non-characteristic VOCs that were detected in October 2011 was only measured at elevated levels (exceeding 2L Groundwater Standards in one or two monitoring wells). An analysis of contaminant plume size and configuration does not indicate that the plume is increasing in dimension. Future groundwater monitoring events will continue to monitor and evaluate plume stability.

Since collection of the October 2011 groundwater monitoring samples, Alcatel has implemented *in situ* chemical oxidation of impacted groundwater in the source area using soil mixing techniques. The October 2011 results will be compared and contrasted to Spring 2012 groundwater monitoring event to evaluate remediation performance.

Follow Up Actions

Site conditions and groundwater monitoring protocols have changed following implementation of recent corrective measures performed at the facility. The *Sampling and Analysis Plan* should be updated and submitted to the Hazardous Waste Section no later than forty-five (45 days) following receipt of this letter. The updated *Sampling and Analysis Plan* should detail sampling frequency and scope of analyses to be performed subsequent to implementation of recent corrective measures.

Anomalous changes in groundwater elevation were noted in monitoring well MW-2D. This change in groundwater elevation may be attributed to well casing damage. Monitoring well integrity should be tested and repaired. If this work has already been completed, an email should be submitted to the Section within ten (10) days detailing the results of the repair.

If you have any questions or comments, please do not hesitate to contact me at (919) 707-8208 or via email at mary.siedlecki@ncdenr.gov.

Sincerely,



Mary Siedlecki
Hazardous Waste Section
Project Manager

ec: Bud McCarty – Hazardous Waste Section Head
Jenne Walker --- Hazardous Waste Section Inspector
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