



State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Richard K. Smith
Viacom, Inc.
11 Stanwix Street, Room 383
Pittsburgh, PA 15222

Re: ISRA Case Name: North American Philips Lighting Company
Responsible Party/Property Owner: Viacom (formerly CBS Corporation)
1 Westinghouse Plaza
Bloomfield Township, Essex County
ISRA Case #E86070
Addendum 1.0 Groundwater Remedial Investigation Report dated November 14, 2000
Sensitive Receptor Evaluation Report dated January 10, 2001

MAY 1 2001

Dear Mr. Smith:

The New Jersey Department of Environmental Protection (NJDEP) has reviewed the above referenced documents. The groundwater Remedial Investigation Report (RIR) details the installation of 17 new monitoring wells and the analytical results from the sampling of 49 wells. The Sensitive Receptor Evaluation report details the nature of the contaminants detected at the above referenced site, identifies environmentally sensitive natural resources on or near the site as well as potential contaminant migration pathways to environmentally sensitive natural resources. The NJDEP's comments regarding these two documents are detailed below.

I. Addendum 1.0 Groundwater Remedial Investigation Report dated November 14, 2000

As stated above 17 new monitoring wells were installed and 49 wells were sampled. Twelve of these monitoring wells were installed from March 22, 1999 through April 28, 1999 and four of the wells were installed from November 15 through 25, 1999. The remaining well (MW-13) was installed from May 22 through 24, 2000. The groundwater samples were analyzed for VOCs, Metals, and radiological parameters in two sampling events during January and August of 2000. Water level measurements were also collected from the wells. The installation of 17 additional monitoring wells has provided additional information regarding site hydrogeology and has allowed for an updated interpretation of previously identified hydro-stratigraphic units. The following groundwater zones have been identified at the above referenced site:

<u>Zone</u>	<u>Depth</u>	<u>Groundwater Flow Direction</u>
Perched	0-25 feet (West Side of Site)	---
Shallow Bedrock	0-45 feet	Northwest
Intermediate Bedrock	45-145 feet	East
Deep Bedrock	145-355 feet	East-Southeast

Of the 49 wells that were sampled, 48 wells contained parameters that exceeded the Class II-A Ground Water Quality Standards (GWQS). Monitoring well MW-CC-5A, which is screened in the Shallow Bedrock Zone and may be a background well, had all parameters below the GWQS.

VOCs (primarily chlorinated solvents), metals and radionuclides were found in all four zones; with the exception of radionuclides in the Perched Zone.

Contaminant levels are high in the bedrock in the three major zones (Shallow, Intermediate and Deep Bedrock), showing that site related contamination in the fractured bedrock aquifer ranges from the water table to a depth of at least 355 feet.

Viacom states "*VOCs have been detected in each of the four groundwater zones. However, the data indicate that VOCs are present in areas upgradient and/or background wells, as well as locations downgradient of the site.*"

Viacom also states "*Radiological parameters have also been detected in each of the groundwater zones. Water samples collected from several monitoring wells in both the shallow and deep bedrock zones reported exceedances of radiological parameters. However, water samples from monitoring wells installed in the intermediate bedrock groundwater zone reported only two radiological exceedances (one during each sampling event) during this investigation.*"

NJDEP's Response: The NJDEP does not concur with Viacom's statement that "... the data indicate that VOCs are present in areas upgradient and/or background wells...". The NJDEP's May 11, 2000 letter (page 1, item 1) stated "*The maps show that there are presently no up-gradient or background monitoring wells in any of the zones. Therefore, all groundwater contamination must be considered site related. To determine whether any contamination is coming from an off-site source, background monitoring wells shall be installed to monitor each of the three zones.*" Delineation is still not complete since Viacom only installed one additional well (MW-13) since the issuance of the NJDEP's May 11, 2000 letter and the NJDEP does not consider MW-13 a background well. Viacom shall submit a proposal to complete groundwater delineation in all three bedrock zones.

Additionally, the NJDEP's May 11, 2000 letter (page 2, item 4) stated "*Additionally, CBS shall compare the radiological results with the Federal and New Jersey State Primary Drinking Water Standards available at the United States Environmental Protection Agency's web site at www.epa.gov/OGWDW/wot/appa.html#Rads. The Maximum Contaminant Level (MCL) is 15 pCi/l for gross alpha particle activity and 5 pCi/l for combined radium 226 and radium 228. The combined method detection limit (MDL) for radium 226 and radium 228 shall be less than the 5 pCi/l MCL. Some of the radium 226 and radium 228 MDLs, when combined, exceeded the 5 pCi/l MCL for the January 2000 event. CBS shall note that if a contaminant does not have a standard, the contaminant will be considered an exceedance if it is above natural background.*" Viacom did not address this issue.

Also VOCs were identified in the soil on the western portion of this site and a Soil Vapor Extraction (SVE) system was temporarily utilized which included the operation a groundwater pump and treat system. The SVE system has since been shutdown however the groundwater pump and treat system is currently still operational for the remediation of VOCs in the Intermediate Bedrock zone. Viacom shall submit a document that details the status of the groundwater pump and treat system. Documentation shall include the following: system start-up date, pumping rate(s), gallons of groundwater recovered to date, screened interval of pumping wells, etc.

Data QA/QC

Regarding QA/QC of the analytical data, the data are generally acceptable. The laboratory utilized (Ratheon Environmental Services) is acceptable based on N.J.A.C. 7:26E requirements. The analytical data (Laboratory ID Numbers 234448 through 234467) are generally acceptable except for the following:

- VOCs: The chain of custody did not indicate any preservation. In addition, the Methylene Chloride results of 6 ppb or less is negated because the associated trip blank indicated 2 ppb of the analyte.
- Select PPM (As, Cd, Cr, Hg and Pb): Again preservation documentation was not indicated. In addition, As and Pb results indicated matrix effects. The As results are estimated and biased low because the matrix spike and spike duplicate recoveries for As were 61% and 56% respectively, which fell below the QC limits. For Pb, the positive results are highly qualified and biased low and the "non-detected" results are suspect because the matrix spike and spike duplicate recoveries for Pb were -29% and -20.50% respectively, which fell significantly below the QC limits.

NJDEP's Response: Preservation documentation for VOCs and select PPMs shall be submitted and Viacom shall inform their field personnel such that this information is provided with all future data packages.

II. Sensitive Receptor Evaluation Report dated January 10, 2001

Volatile organic compounds, metals and radionuclides have been detected in groundwater at concentrations that exceed the NJDEP's GWQS therefore the NJDEP requested that a Sensitive Receptor Evaluation (SRE) be conducted. Viacom's SRE states that there are no environmentally sensitive natural resources onsite. Viacom states that the nearest receptors are: (1) One active private domestic well located 3000 feet southeast of the site; (2) One active industrial well located 3,500 feet northwest of the site; (3) Two active public supply wells, one located 8,000 feet northwest of the site and one located 8,000 feet west of the site; (4) Watsessing Creek located 1,500 feet northwest of the site; (5) Second River located 2,200 feet north of the site; and (6) Passaic River located 12, 600 feet east of the site.

Viacom states that migration of groundwater contaminants in the bedrock formation is a potential pathway away from the site. The potential for onsite groundwater to adversely impact sensitive receptors is reduced by: (1) the distance to the nearest active wells; (2) water withdrawn by the closest public supply wells is monitored and treated prior to use; (3) the distance to the closest surface water bodies; and (4) there are no public water intakes on the Second River or the Passaic River near the site.

NJDEP's Response: The NJDEP acknowledges the sensitive receptors and migration pathways that Viacom has identified. Viacom does however have a NJPDES Discharge to Surface Water Permit (NJPDES/DSW permit) to discharge groundwater to a storm water outfall that discharges to the Second River, a tributary to the Passaic River. Viacom shall submit documentation demonstrating that the groundwater remediation system addresses all of the contaminants of concern at this site (VOCs, metals, radionuclides, etc.) otherwise this discharge will also be considered a potential pathway.

General Requirements

1. Viacom shall perform all actions as outlined in this letter. Viacom shall inform BEECRA in writing prior to implementation.
2. Viacom shall notify the Case Manager at least 14 calendar days prior to implementation of all field activities.
3. Viacom shall collect and analyze all samples in accordance with the protocol outlined in the most current edition of the NJDEP's "Field Sampling Procedures Manual" and the Technical Requirements for Site Remediation (TRSR), N.J.A.C. 7:26E.
4. Viacom shall submit all reports or additional workplans, in triplicate. Viacom shall submit a revised schedule. Please note that only one copy of the Quality Assurance/Quality Control deliverables is needed. All reports shall follow the requirements of the TRSR, N.J.A.C. 7:26E. Technically and administratively incomplete submissions not prepared pursuant to N.J.A.C. 7:26E may be rejected.
5. If contamination is determined to exist above a level found acceptable by NJDEP, Viacom may prepare and submit either a Remedial Investigation Workplan or a Remedial Action Workplan pursuant to N.J.A.C. 7:26E. However, in accordance with N.J.S.A. 13:1K-9, Viacom may elect to remediate the site without prior submission or approval from the NJDEP, except in cases involving a remedial action of ground water or surface water, or for the closure of an underground storage tank subject to N.J.S.A. 58:10A. **If contamination exists on-site, but has not been fully delineated pursuant to N.J.A.C. 7:26E-4, then such delineation shall be completed as a Remedial Investigation which meets the criteria of N.J.A.C. 7:26E.**
6. Any remedial action performed, or proposed in a Remedial Action Workplan, shall be in accordance with N.J.S.A. 58:10B-12.

7. Pursuant to the TRSR, N.J.A.C. 7:26E-3.13(c)3v, all analytical data shall be presented both as a hard copy and an electronic deliverable using the database format outlined in detail in the current HAZSITE application or appropriate spreadsheet format specified in the NJDEP's electronic data interchange manual.

For further information related to electronic data submissions, please refer to the Site Remediation Program's (SRP's) home page at the following Internet address: <http://www.state.nj.us/dep/srp>. The **Regulations and Guidance** page of this web site has a section dedicated to HazSite which includes downloadable files, an explanation of how to use these files to comply with the NJDEP's requirements, the SRP's Electronic Data Interchange (EDI) manual, and **Guidance for the Submission and Use of Data In GIS Compatible Formats Pursuant to "Technical Requirements for Site Remediation"**.

Viacom shall submit a response to this letter within 45 days of receipt of this letter. If you have any questions regarding this letter, please contact the Case Manager, Stephen Myers, at 609-633-1392 or smyers@dep.state.nj.us.

Sincerely,



Bryan Moore, Supervisor
Bureau of Environmental Evaluation,
Cleanup and Responsibility Assessment

c: Health Officer, Bloomfield Township Board of Health
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