



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
David Emme, Administrator

June 17, 2015

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Herman Kushner Trust
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Las Vegas, NV 89109

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Maryland Square Shopping Center, LLC
c/o Thomas E. Vandenburg
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Los Angeles, CA 90017

Neil Beller
7408 West Sahara
Las Vegas, Nevada 89117

Subject: First Quarter 2015 Groundwater Monitoring and Sampling Report

Facility: Al Phillips the Cleaner (former)
3661 S. Maryland Parkway
Las Vegas, Nevada
Facility ID: **H-000086**

Dear Messrs. Kushner, Swickard, Levy and Beller:

The Nevada Division of Environmental Protection (NDEP) has reviewed the *First Quarter 2015 Groundwater Monitoring and Sampling Letter Report* prepared by Cardno ATC Associates, Inc. (Cardno ATC) on behalf of the Herman Kushner Trust (Trust) and Maryland Square Shopping Center, LLC (MSSC LLC), dated April 27, 2015 and received in hard copy on May 7, 2015.

NDEP Comments

The report includes responses to some questions posed in NDEP's **March 6, 2015** letter. These included a request to develop a sampling procedure that established a consistent sampling depth for the pump in each well. The previous sampling method was a "constant depth," but not from a fixed elevation. Instead, the depth was measured from the top of a fluctuating water table (i.e., the depth was not constant relative to the formation). In the first quarter 2015 report, Cardno ATC provides a revised method wherein the depth of the pump remains within the screened interval, but at a constant depth from the ground surface rather than from the top of a fluctuating water table. This modified sampling approach is in response to inconsistent results in tetrachloroethylene (PCE) concentrations in certain wells during certain quarters (when there may have been significant increases or decreases in water levels).

The NDEP had also requested that a full suite of analytes be obtained for certain wells that had exhibited a decrease in PCE concentrations and a simultaneous increase in water levels, which was anomalous relative to other wells. The analysis was used to show whether increased concentrations of disinfectant by-products were present, indicative of tap water. The results for samples from wells MW-5, MW-6, MW-19 and MW-20, showed chloroform detected at concentrations ranging at 1.1 to 6.5 micrograms per liter ($\mu\text{g/L}$); these concentrations are consistent with data for chloroform reported for these wells in 2011. Cardno ATC speculates that the earlier inconsistent results in PCE concentrations are most likely due to changes in the sampling depth relative to the formation. This seems a likely explanation. Based on these results, Cardno ATC has requested that the full analytical suite be once again limited to the chemicals of concern for samples from these four wells.

The NDEP had noted in a previous letter (January 27, 2015) that mobilization of naturally occurring arsenic did not appear to be an issue following the pilot testing of in-situ chemical oxidation (ISCO) methods. Results for arsenic presented in the first quarter 2015 report are consistent with this assessment. However, the ISCO testing appears to have oxidized naturally occurring chromium from the less-mobile and less-toxic trivalent chromium to the mobile and toxic form (when ingested) of chromium, hexavalent chromium, Cr(VI). The first quarter 2015 report notes that the U.S. Environmental Protection Agency (USEPA) has not yet issued an MCL for Cr(VI), and turns to the screening number developed for the BMI complex in Henderson, Nevada. Studies for the BMI complex developed numbers known as "basic comparison levels" (BCLs) for chemicals of concern; however, the NDEP has not formally adopted BCLs as the standards for the State of Nevada. The NDEP notes that although the USEPA is still evaluating Cr(VI) toxicity, the State of California, on July 1, 2014 enacted a regulatory standard of 10 $\mu\text{g/L}$ for Cr(VI).

The first quarter report requests that "...metals testing be discontinued going forward at the site, except for MW-19I and MW-40 CMT-60," based on comparisons to MCLs and BCLs. The NDEP is not necessarily using BCLs for this site, but concurs in part. Because of the uncertainties related to Cr(VI) toxicity, please continue to monitor MW-19I, MW-40 CMT-55, and MW-40 CMT-60 for both total and hexavalent chromium.

The subject report also discusses the results of the statistical trend tests, noting that some wells have low concentrations, yet are indicated as having an increasing trend (e.g., MW-7, MW-41). The NDEP agrees that there is more uncertainty when the concentrations are low and when the number of samples is few. However, it is necessary to monitor vertical and lateral boundaries of the contaminant plume, and wells near the boundaries act as "sentinel wells." A trend or marked change in contaminant concentrations in such wells may indicate changes in hydraulic or chemical conditions within the plume.

The first quarter report notes the increasing trends seen in wells MW-5, MW-6, and MW-14I, all of which are near S. Maryland Pkwy, just downgradient of the source area. The report suggests that a source mass of PCE may have migrated offsite of the former dry cleaners and may currently reside beneath S. Maryland Pkwy and be contributing to the increasing concentrations of PCE seen in these wells. The NDEP acknowledges that this may be the case.

NDEP Requirements

Cardno ATC recommends continuing the monitoring and sampling of the site monitoring wells in accordance with the NDEP-approved 2014 schedule for 2015. The NDEP concurs.

Cardno ATC recommended discontinuing metals monitoring in all but wells MW-19I and MW-40 CMT-60. The NDEP concurs in part; requiring that MW-40 CMT-55 also continue to be monitored for total and hexavalent chromium.

The NDEP concurs with the revised sampling methodology, as discussed in Section 2 of the report. Please continue to follow this new methodology, and on-going monitoring should demonstrate whether this alleviates the extreme variability in contaminant concentrations in site monitoring wells.

Although it appears that anomalous results may have been related to inconsistent sampling depths, the NDEP requires that you continue to use the zip ties as a custody seal on wells until future quarters show more consistency in water-level changes and contaminant concentrations.

Cardno ATC requested that analyses for the full suite of volatile organic compounds (VOCs) in wells MW-5, MW-6, MW-19, and MW-20 be discontinued and that only tetrachloroethylene and its degradation products be analyzed during future monitoring events. The NDEP concurs.

The "Background" section (Section 1) for the site does not mention the campaign of indoor air sampling initiated by the NDEP in 2007. Because vapor intrusion is the process by which indoor air is contaminated and resident are exposed, it seems incomplete not to have at least a few sentences on the initial and follow-on indoor-air sampling and home-mitigation program.

If you have any questions or require additional information regarding this letter, contact me by telephone at (775) 687-9496 or e-mail at msiders@ndep.nv.gov

Sincerely,



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