



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 6, 2016

Irwin Kishner  
Herman Kishner Trust  
252 Convention Center Drive, Ste 12A  
Las Vegas, NV 89109

Neil Beller  
7408 West Sahara  
Las Vegas, Nevada 89117

Maryland Square, LLC  
c/o Franklin H. Levy  
Lawson & Weitzen, LLP  
88 Black Falcon Avenue  
Boston, MA 02210

**Subject: Draft Groundwater Monitoring Plan**

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

Dear Messrs. Kishner, Levy and Beller:

The Nevada Division of Environmental Protection (NDEP) has reviewed the ***Draft Groundwater Monitoring Plan (GMP)*** prepared by Arcadis on behalf of the Herman Kishner Trust (Trust) and Maryland Square Shopping Center, LLC (MSSC LLC), dated June 3, 2016 and received via e-mail on June 3, 2016.

### **GMP Overview**

The GMP lists four objectives and proposes several changes to the groundwater monitoring routine currently followed at the Maryland Square Tetrachloroethylene (PCE) Site. The proposed changes include the following:

1. Replacing the previously used method of low-flow sampling with a no-purge method using HydraSleeve™ samplers (HydraSleeves), and using a statistically based method to evaluate the data.
2. Proposing a list of wells for monitoring and sampling, including modifying the list of wells sampled to remove MW-40CMT from the quarterly groundwater sampling. MW-40CMT is a multi-channel well that consists of small-diameter tubing that allows samples to be collected from seven separate screened intervals, but some tubes are blocked. Propose to sample instead nearby wells, MW-20D1 (25 to 45-foot screen) and MW-20D2 (55 to 65-foot screen).
3. Ceasing analysis of groundwater samples for arsenic, chromium, hexavalent chromium and manganese. Analysis of these metals was required as part of the underground injection control (UIC) permit that was obtained in 2012. The UIC permit was terminated in September 2013.

**HydraSleeve Samplers.** The GMP describes the HydraSleeve as a thin plastic tube, with a length of 30 inches (for 2-inch diameter wells) or 38 inches (for 4-inch diameter wells) and a one-way reed valve at the top. Arcadis proposes to place the sampler in the well 10 days prior to sampling to allow time for the groundwater in the well to re-equilibrate to a completely natural state. The *top* of the tube sampler would be placed from 15 to 19 inches (i.e., one-half the length of the sampling tube) below the targeted sampling depth.

**Data Comparability.** In addition to the above proposed changes to the monitoring program, Arcadis proposes to evaluate the comparability of data collected using the low-flow sampling method with data collected using the HydraSleeves. Comparisons will be made using prediction intervals. As noted in Section 3.4.2, *“The prediction interval will be calculated, at a 90% confidence level, to predict the range of potential PCE concentrations expected on the target sampling date, for comparison with the actual concentration collected via no-purge sampling.”* Figure D-1 in the draft GMP provides an example graph showing prediction limits, trend line and concentration data over time.

## **NDEP Comments**

1. Table 1 shows the proposed sampling program by quarter and by well. Other than the elimination of well MW-40CMT, it is not immediately obvious how the program has changed from the previously approved program. Please consider highlighting such changes with a different color font or shading.
2. Table 2 provides information on well construction and sampling depths, along with the anticipated deployment depth for the HydraSleeve samplers. Please state that HydraSleeve depths listed on this table indicate the depth of the *top* of the sampling tube. (Also note “top” in text to avoid confusion).
3. Section 3.3.2 of the GMP states that certain parameters (temperature, pH, specific conductance, dissolved oxygen [DO], oxidation-reduction potential [ORP], and total dissolved solids) will be measured in the field (i.e., *“after groundwater samples have been collected for laboratory analyses, the water from the HydraSleeves will be analyzed in the field...”*). However, it is unclear from this description exactly how and in what container the field measurements will be made. Will the water from the HydraSleeve be poured into a separate container and be measured? Will any probes be placed into the sample that is to be shipped to the laboratory? (The NDEP notes that probes should never be placed into the sample container that is to be sent to the laboratory, and water into which a probe has been inserted should not be poured into a sampling container that will be sent to the laboratory for analysis.) Please provide specific information.
4. Figure 1. The “approximate location” of the source seems too far south and the label (“Approximate Site Location”) obscures important information on the figure. Please relocate this label and accurately locate the “Source Area.” Also note that the “Site” is technically everywhere the plume has come to be located, not just the source area (which is what Figure 1 indicates as the “Site”). Clearly distinguish between “source area” and the “site” as a whole; both in the text and in figures.
5. The example of a statistical graph uses data from monitoring well MW-38. PCE concentrations are quite low in this well. Consider using a well with higher concentrations as a second example graph. That would help demonstrate the amount of intrawell variability when concentrations of PCE are high.

6. The source area could be more clearly shown on Figures 2 to 6 (see examples below, with source as star).



7. Figures 4, 5, 6 are a good addition to the report and may be helpful to include in the quarterly groundwater monitoring reports as well.
8. Section 3.4.2, which discusses the statistical evaluations planned to assess comparability of the low-flow and HydraSleeve sampling method, states that “*Some historical variability may be correlated with a change in sampling method...*” The NDEP notes that the amount of variability in intrawell concentrations of PCE may be *related to* the sampling method used, but there is no proposal to perform a point-biserial correlation (i.e., correlation between a dichotomous variable [sampling method] and a continuous variable [concentration variability]) in this draft GMP. The NDEP notes that it is probably best to avoid colloquial use of a statistical term (“correlation”) in a report section that is discussing statistical methods to be used.

### Editorial Notes (Minor Comments)

Acronyms and Abbreviations. “COC” is typically used for “chemical of concern” rather than “chain of custody.” Please spell out “chain of custody” in the text so there is no confusion. Defining “ft” as “foot/feet” creates confusion because the reader reads the definition “foot/feet” as “foot per feet.” For “PCE” and “TCE,” please use the same form for both; either “tetrachloroethylene” and “trichloroethylene” *or* “tetrachloroethene” and “trichloroethene.” Some readers are confused by the multiple names for PCE and TCE, especially the use of the “ethylene” and “ethene” as interchangeable forms (both spellings indicate a carbon-carbon double bond in the chemical compound), so consistency in nomenclature is preferable.

### NDEP Requirements

The proposed sampling schedule and well networks for each quarter are presented in Table 1 and are shown on Figures 4 through 6. The NDEP **concurs** with the wells proposed for monitoring and sampling each quarter. Section 3.2.2 of the draft GMP proposes to discontinue sampling from multi-port well MW-40CMT and to sample MW-20D1 and MW-20D2 instead; the NDEP **concurs**.

The NDEP **concurs** with the use of HydraSleeve samplers for collection of groundwater samples, following the protocol described in Section 3.3.1 of the draft GMP.

The NDEP **concur**s with the analytical suite (Method 8260B) proposed in Section 3.3.2 of the draft GMP.

The NDEP **requires** more-specific information on how certain parameters (ORP, DO, TDS, etc.) will be measured in the field during groundwater sampling. It is unclear into which containers probes will be placed.

The NDEP **concur**s with the termination of sampling and analysis of metals, as formerly performed for the UIC permit, as discussed in Section 3.3.2 of the draft GMP.

Section 3.4.2 of the draft GMP states that “*If a result obtained using no-purge methods lie [sic] between the upper and lower prediction limits for the forecasted value, based on historical trends, it will be deemed consistent with historical trends and variability.*” The NDEP **concur**s with the proposed statistical method (i.e., intrawell prediction intervals constructed from data collected using low-flow sampling) to assess data from the old (low-flow) and new (HydraSleeve) sampling methods.

Section 3.5 of the draft GMP proposes some sampling and quality control (QC) protocols and procedures. The NDEP **concur**s with these proposals.

The NDEP **concur**s with the quarterly reporting schedule provided in Section 4 of the draft GMP.

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](mailto:msiders@ndep.nv.gov)

Sincerely,



Mary A. Siders, Ph.D.  
Bureau of Corrective Actions

cc: Scott Smale, BCA, NDEP, Carson City, NV  
Todd Croft, BCA, NDEP, Las Vegas, NV  
Jeff Collins, Bureau Chief, BCA, NDEP, Carson City, NV  
Michele Fairbank, State of Nevada, Office of the Attorney General, 100 N. Carson Street, Carson City, NV  
[mfairbank@ag.nv.gov](mailto:mfairbank@ag.nv.gov)  
Jasmine Mehta, State of Nevada, Office of the Attorney General, [jmehta@ag.nv.gov](mailto:jmehta@ag.nv.gov)  
Tina Pierson, Planner, Water Quality, Clark County Water Quality Reclamation District [tpierson@cleanwaterteam.com](mailto:tpierson@cleanwaterteam.com)  
Ebrahim Juma, Assistant Planning Manager, CCWQRD [ejuma@cleanwaterteam.com](mailto:ejuma@cleanwaterteam.com)  
Joseph R. Leedy, Principal Planner, CCWQRD [jleedy@cleanwaterteam.com](mailto:jleedy@cleanwaterteam.com)  
Paul Klouse, Environmental Health Manager, Environmental Compliance Section, Southern Nevada Health District, 330 S Valley View Blvd, Las Vegas, NV 89107 [klouse@snhdmail.org](mailto:klouse@snhdmail.org)

Andy Chaney, Environmental Health Supervisor, Environmental Compliance Section, SNHD [chaney@snhdmail.org](mailto:chaney@snhdmail.org)  
Donna Houston, Sr. Environmental Health Specialist, Environmental Compliance Section, SNHD [houston@snhdmail.org](mailto:houston@snhdmail.org)  
Jacqueline Reszetar, Director of Environmental Health, SNHD [reszetar@snhdmail.org](mailto:reszetar@snhdmail.org)  
Ric Jimenez, Chair, Maryland Pkwy Coalition [ric.jimenez@rouseproperties.com](mailto:ric.jimenez@rouseproperties.com)  
Roland Sansone, Boulevard Mall, [Roland@sansonecompanies.com](mailto:Roland@sansonecompanies.com)  
Timo Kuusela, General Manager - Boulevard Mall, 3528 S Maryland Pkwy, Las Vegas, NV 89169  
[Timo@sansonecompanies.com](mailto:Timo@sansonecompanies.com)  
Jeffrey R. Diver, P.C., 2S741 Crimson King Lane, Glen Ellyn, IL 60137 [JeffDiver@comcast.net](mailto:JeffDiver@comcast.net)  
David B. Kuhlman, Procopio, Cory, Hargreaves & Savitch LLP, [david.kuhlman@procopio.com](mailto:david.kuhlman@procopio.com)  
Robert G. Russell, Procopio, Cory, Hargreaves & Savitch LLP, 525 B Street, Suite 2200, San Diego, CA 92101  
[bob.russell@procopio.com](mailto:bob.russell@procopio.com)  
Steven J. Parsons, Law Offices of Steven J. Parsons, 7201 W. Lake Mead Blvd., Suite 108, Las Vegas, Nevada 89128-8354  
[steve@sjplawyer.com](mailto:steve@sjplawyer.com)  
Drew Flynn, P.G., President, MMA Environmental, [drew.flynn@MMA-ENV.com](mailto:drew.flynn@MMA-ENV.com)  
Paul G. Roberts, Vice President and General Counsel, The Interface Group [proberts@tigmass.com](mailto:proberts@tigmass.com)  
Jerry Tidball, Key Golf Management, Las Vegas National Golf Club [kgmjerry@yahoo.com](mailto:kgmjerry@yahoo.com)  
Coy Wood, General Manager, Las Vegas National Golf Course [coy@lasvegasnational.com](mailto:coy@lasvegasnational.com)  
Chris Giunchigliani, County Commissioner [CHRISG@ClarkCountyNV.gov](mailto:CHRISG@ClarkCountyNV.gov)  
Senator Ruben Kihuen, Nevada State Legislature [Ruben.Kihuen@sen.state.nv.us](mailto:Ruben.Kihuen@sen.state.nv.us)  
Assemblywoman Heidi Swank, Nevada State Legislature [Heidi.Swank@asm.state.nv.us](mailto:Heidi.Swank@asm.state.nv.us)  
Tamara Williams, Clark County Community Liaison, 3900 Cambridge Suite #111, Las Vegas, NV 89119  
[TGW@ClarkCountyNV.gov](mailto:TGW@ClarkCountyNV.gov)  
Peter Krasnoff, P.E., WEST, Inc., 711 Grand Avenue, Suite 220, San Rafael, CA 94901 [peterk@westenvironmental.com](mailto:peterk@westenvironmental.com)  
James Jimenez, CEM, ATC Group Services LLC (ATC) [James.Jimenez@atcassociates.com](mailto:James.Jimenez@atcassociates.com)  
Andrew Stuart, CEM, National Program Director, ATC [Andrew.Stuart@atcassociates.com](mailto:Andrew.Stuart@atcassociates.com)  
Adam Katlein, Project Manager, ATC [Adam.Katlein@atcassociates.com](mailto:Adam.Katlein@atcassociates.com)

cc: Joe Blagg, Project Manager, Diversified Real Estate Group, 4255 Dean Martin Rd, Ste J, Las Vegas, NV 89103  
Jan Greben, 125 E. De La Guerra St, Ste 203, Santa Barbara, CA 93101-7204  
Alexander Robertson, 32121 Lindero Canyon Rd, Ste 200, Westlake Village, CA 91361  
Glenn D. Phillips, The Travelers Companies, Inc., SLCU-Suite 160, 4650 Westway Park Blvd., Houston Texas 77041  
Clark County Emergency Management, 500 S. Grand Central Parkway 6th Floor, P.O. Box 551713, Las Vegas, NV 89155