

## Danielle R. Taber

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**From:** Dennis H. Shirley <dennis.shirley@syn-env.com>  
**Sent:** Wednesday, January 14, 2015 3:20 PM  
**To:** Scott R. Green; Danielle R. Taber  
**Cc:** Donovan L Neese; David Kimball; Lawrence Moore  
**Subject:** Response to Univar comments

Scott and Danielle:

On behalf of Roosevelt Irrigation District (RID), Synergy Environmental is providing these preliminary responses to Univar comments pertaining to RID's July 2014 Draft Feasibility Study Report. The Univar comments are dated January 12, 2015 and were posted on the ADEQ website yesterday.

### **General Comment #1:**

Univar states that RID incorrectly modifies ADEQ-identified plume maps associated with the West Central Phoenix (WCP) WQARF sites to indicate that all five plumes coming into one plume that merges with the WVBA WQARF Site. Univar indicates such a representation is devoid of any technical analysis or justification.

### **RID Response:**

This comment is untrue. RID provided a thorough review of the occurrence and extent of groundwater contamination at the West Osborn Complex (WOC) WQARF Site and other WCP sites on pages 46 to 50 of the Draft RID FS Report. In this review, RID specifically noted deficiencies in the Remedial Investigation and Feasibility Study (RI/FS) reports prepared by consultants on behalf of PRPs at the WOC Site as it concerns the delineation of contamination in this region. For example on page 49 it states,

*With respect to the WOC Site, the RI/FS reports do not highlight critical data gaps and uncertainties that are important to understand the extent of dissolved phase contamination and contaminant fate and transport, particularly as it relates to the SGWS plume. In this regard, the report and graphical representations of the SGWS plume convey the impression that the lateral extent of the plume is known and delineated, when in reality there are no outlying monitor wells to delineate the extent of the SGWS plume to the south, east, and west. This point takes on particular significance regarding the extent of downgradient migration to the south given the reported southwesterly groundwater flow in the SGWS.*

On page 56 of the RID FS Report, it further states,

*With respect to groundwater contamination entering the WVBA Site from the north, the WOC Site Final FS Report (GeoTrans, 2012a) confirms a relatively large geographic area has been impacted by plume migration to the south of the WOC Site. Conservative contaminant concentrations derived from the central portion of the SGWS include TCE at 180 mg/L, PCE at 5 mg/L, and 1,1-DCE at 25 mg/L. Based on observed water quality data from the monitor well network in this area, as shown in **Figure 12**, the COC concentrations in the shallow groundwater plume extending south toward the WVBA Site have remained relatively constant over time and suggest persistent COC mass is migrating from the WOC Site to the WVBA Site.*

Contrary to Univar comments, RID carefully evaluated data from the WCP sites and provided strong foundation for its interpretation of the extent of contamination. In fact, we strongly assert that RID's interpretation of contamination to the area north of the WVBA is much more credible and technically-supported than the current plume maps presented for the WCP area that depict the SGWS plume as if it ends at McDowell Road, the southern boundary of the WOC Site.

Lastly, RID did not state that VOC contamination that extends to the WVBA Site originates from all 5 of the WCP WQARF sites. Rather RID indicated on page 56 that *"other sources such as releases of COCs at the North Canal Plume and East Grand Avenue WQARF Sites may be contributing to the contaminant loading observed to the south of the WOC Site"* and cited the Final FS Report for the SGWS at the WOC Site that was prepared by GeoTrans as the basis for this statement.

#### **General Comment #2:**

Univar states that comprehensive groundwater monitoring at the East Grand Avenue (EGA) WQARF Site demonstrates that the extent of the EGA plume is well defined and decreasing in size and magnitude. Univar asserts that no current or historical data indicate that VOCs originating from the EGA Site have extended into the WOC WQARF Site.

#### **RID Response:**

RID references regarding possible contamination from the EGA WQARF Site were based on information obtained from the Final FS Report for the SGWS at the WOC WQARF Site prepared by GeoTrans and dated January 2012. In this regard, it was stated on page 50:

*GeoTrans (2012a) also noted that anomalous TCE concentrations within the SGWS plume extending south of the WOC Site are likely from another source to the northeast. TCE concentrations at MW-204S, located over a half mile south of the WOC Site, are not consistent with the observed distribution of TCE in the WOC Site. GeoTrans believes the substantial TCE concentration in this area originates from sources in the West and East Grand Avenue WQARF Sites. The WOC Site FS Report notes in particular that high TCE concentrations have been observed at the East Grand Avenue source area and that because monitor wells have not been sampled in this upgradient area since 2002, the migration of contamination through the existing monitoring network may have been missed. The ADEQ Registry Report for the East Grand Avenue WQARF Site indicates that groundwater underlying the Van Waters and Rogers facility in this area had TCE, PCE, and 1,1-DCE concentrations as high as 2,700, 1,800, and 290 mg/L, respectively.*

In preparing the plume map contained in the RID FS Report and reviewing groundwater data from the WOC WQARF Site that is shown on Figure 12, Synergy is in agreement with GeoTrans comments that TCE concentrations in MW-204S are anomalous and point to a source of contamination other than the WOC Facility that is northeast of this well location.

According to the ADEQ website for the WOC WQARF Site, ADEQ approved the Final FS Report for the SGWS prepared by GeoTrans later that year. Although Univar submitted comments on this report to ADEQ dated October 8, 2012 challenging what they viewed as erroneous statements regarding the downgradient extent of contamination from the VW&R facility in the EGA WQARF Site, it is our understanding ADEQ approved the Final FS Report without requiring any changes in response to the Univar comments.

**Specific Comments:**

RID has addressed many of the specific, but repetitive Univar comments in the preceding general responses. However, the following response is given to clarify the specific Univar comment indicating there is no explanation of the data sources, the date of sampling or the quality of data used to develop the plume map in Figure 2:

**Response:** The legend for Figure 2 indicates “water quality data reported for monitor wells in the WVBA and West Osborn Complex WQARF Sites are from March 2013 and October 2012, respectively”.

Thank you for consideration of these comments.

Very truly yours,

Dennis H. Shirley, PG

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