### **APPENDIX S**

## PCE/FREON-12 RATIOS IN SELECT GROUNDWATER MONITORING WELLS BROADWAY SOUTH LANDFILL, BROADWAY-PANTANO WQARF SITE TUCSON, ARIZONA

## FIGURES

Figure S1 BSDP-1 PCE/Freon-12 Ratios in Select Groundwater Monitoring Wells, Broadway South Landfill

#### SUMMARY

In 2012, ADEQ's contractor Stantec updated and expanded (to include BSL) SECOR's 2001 Regulatory Agency and Historical Records Review for the Site. This expanded review of facilities which could have used (or are using) tetrachloroethene and trichloroethene was performed so that ADEQ could determine whether existing information justified field investigation of facilities other than the Broadway North and South Landfills as potential contributors to the Site groundwater contamination. As part of this review, ADEQ evaluated concentrations of tetrachloroethene (PCE) and dichlorodifluoromethane (Freon-12) at wells located at, and immediately downgradient of the Broadway South Landfill (BSL). These data are presented in Figure S1.

The following scenarios would indicate that a potential source may exist downgradient of BSL:

- An increase in the magnitude of PCE concentrations in wells immediately downgradient of BSL relative to PCE concentrations measured in wells located at BSL.
- An increase in the concentration of PCE in wells downgradient of BSL relative to the concentrations of other constituents emanating from the landfill, for example Freon-12. This can be evaluated by calculating the ratio of PCE to Freon-12.

Accounting for the time lag needed for groundwater to travel between wells, PCE concentrations appear to decrease between well WR-367 and BP-8. PCE/Freon-12 ratios also appear to generally decrease between these wells. Therefore, this analysis does not indicate that an additional source of PCE exists downgradient of BSL.

APPENDIX S FIGURES

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# Legend

Groundwater Monitoring Wells



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Approximate Landfill Operable Unit



1 inch = 1,417 feet

Notes: PCE - tetrachloroethene Freon - Dichlorodifluoromethane (Freon-12) ug/L - micrograms per liter ft. bwt - feet below water table Figure S1 - PCE/Freon-12 Ratios in Select Groundwater Monitoring Wells Broadway South Landfill

11/20/2007

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<5.0

