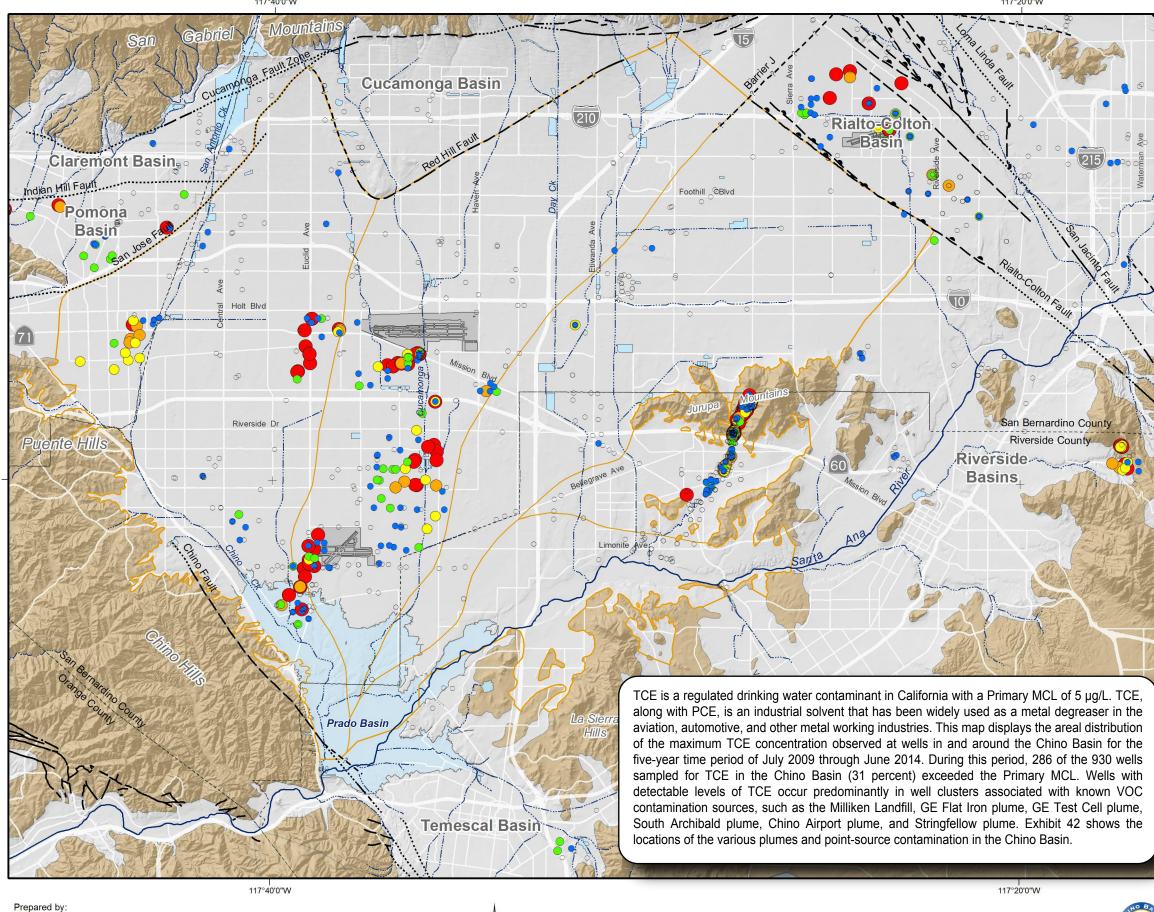
117°40'0"W

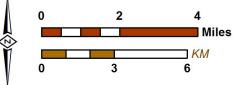
117°20'0"W





Author: JMS Date: 6/23/2015

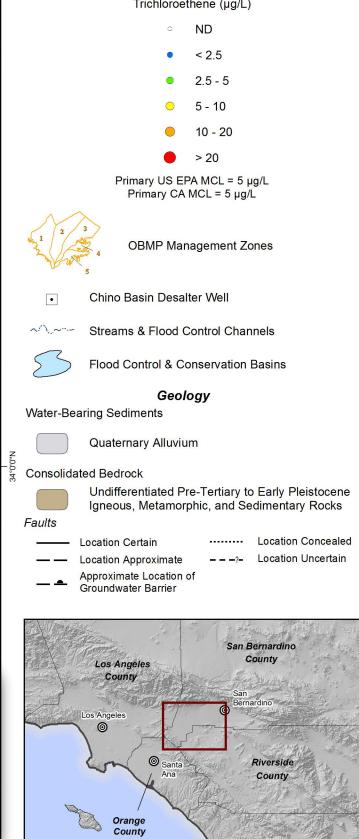
Document Name: Exhibit 36 TCE





2014 State of the Basin Groundwater Quality

Trichloroethene (µg/L)



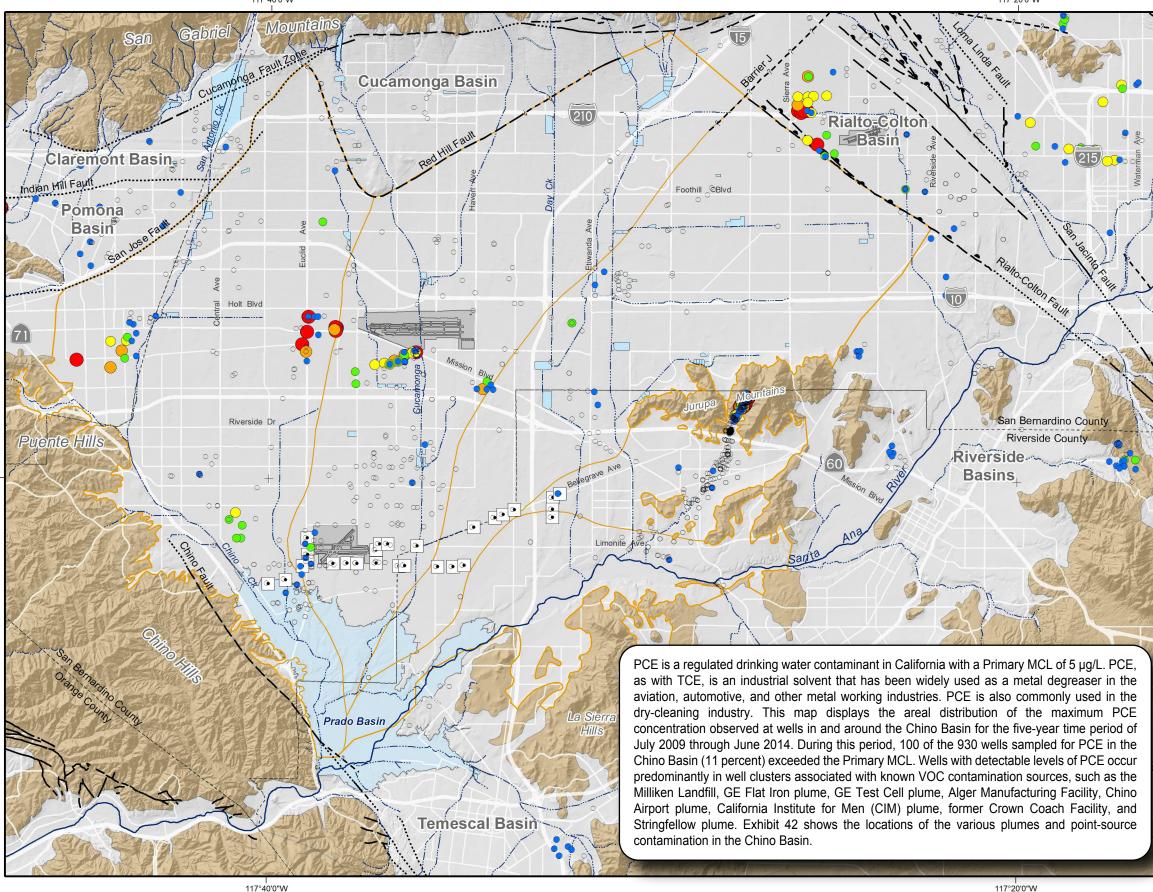


Trichloroethene (TCE) in Groundwater

Maximum Concentration (July 2009 to June 2014)

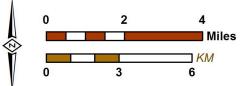
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Prepared by: **WEI** 23692 Birtcher Drive Lake Forest, CA 92630 949.420.3030 www.weiwater.com

Author: JMS Date: 6/23/2015 Document Name: Exhibit 37 PCE

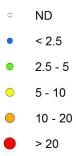


117°20'0"W



Groundwater Quality





Primary US EPA MCL = 5 µg/L Primary CA MCL = 5 µg/L



OBMP Management Zones



~: \ ~----Streams & Flood Control Channels



Flood Control & Conservation Basins

Geology

Water-Bearing Sediments



Quaternary Alluvium

Consolidated Bedrock



Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

Location Certain

and the

Orange County

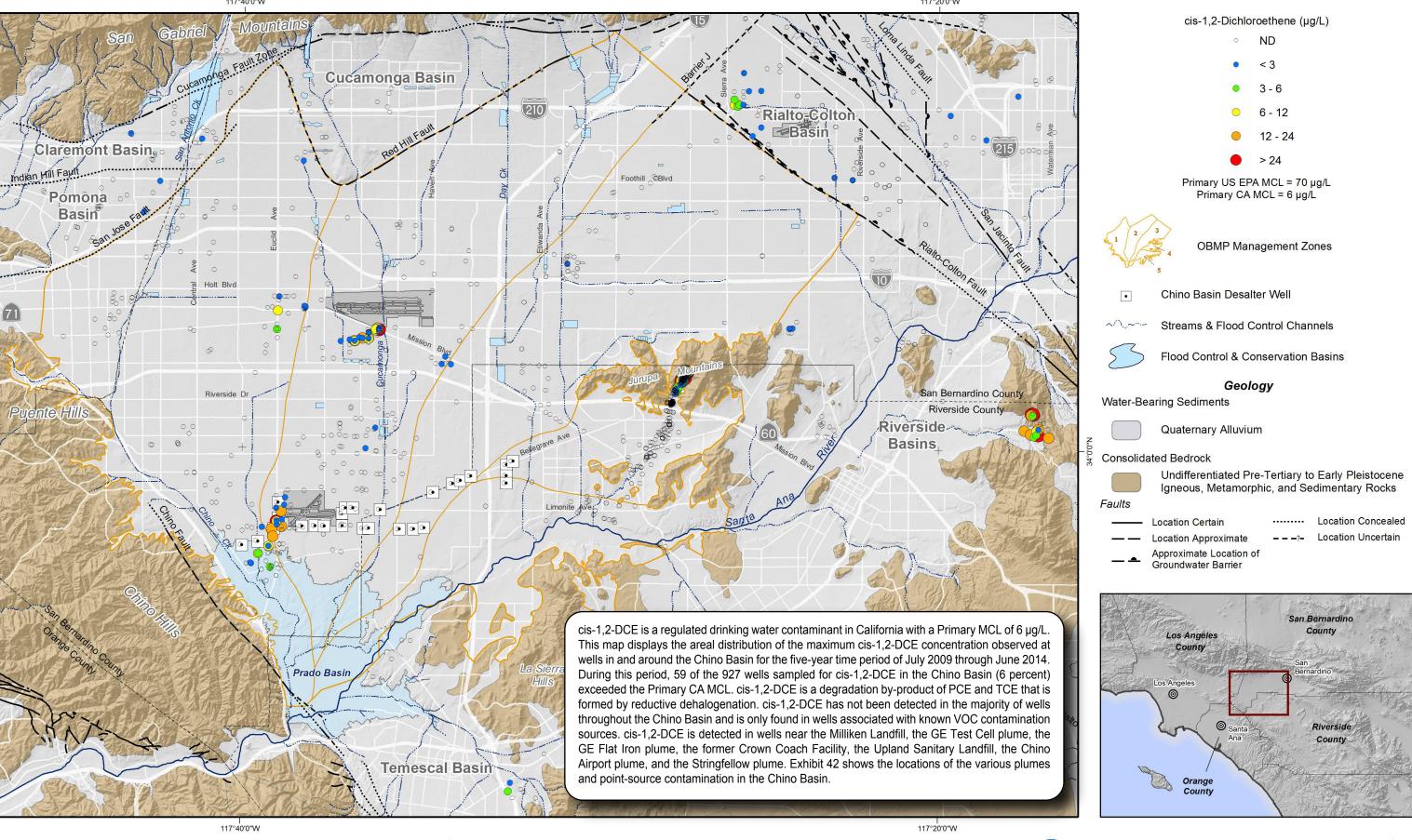
- Location Approximate
 - Approximate Location of Groundwater Barrier
- Location Concealed ------ Location Uncertain
- -
- San Bernardino County Los Angeles County os Angeles 0 0 Riverside County



Tetrachloroethene (PCE) in Groundwater

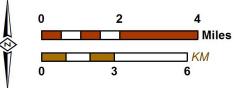
Maximum Concentration (July 2009 to June 2014)

117°40'0"W





Author: JMS Date: 6/23/2015 Document Name: Exhibit 38 cis12DCE





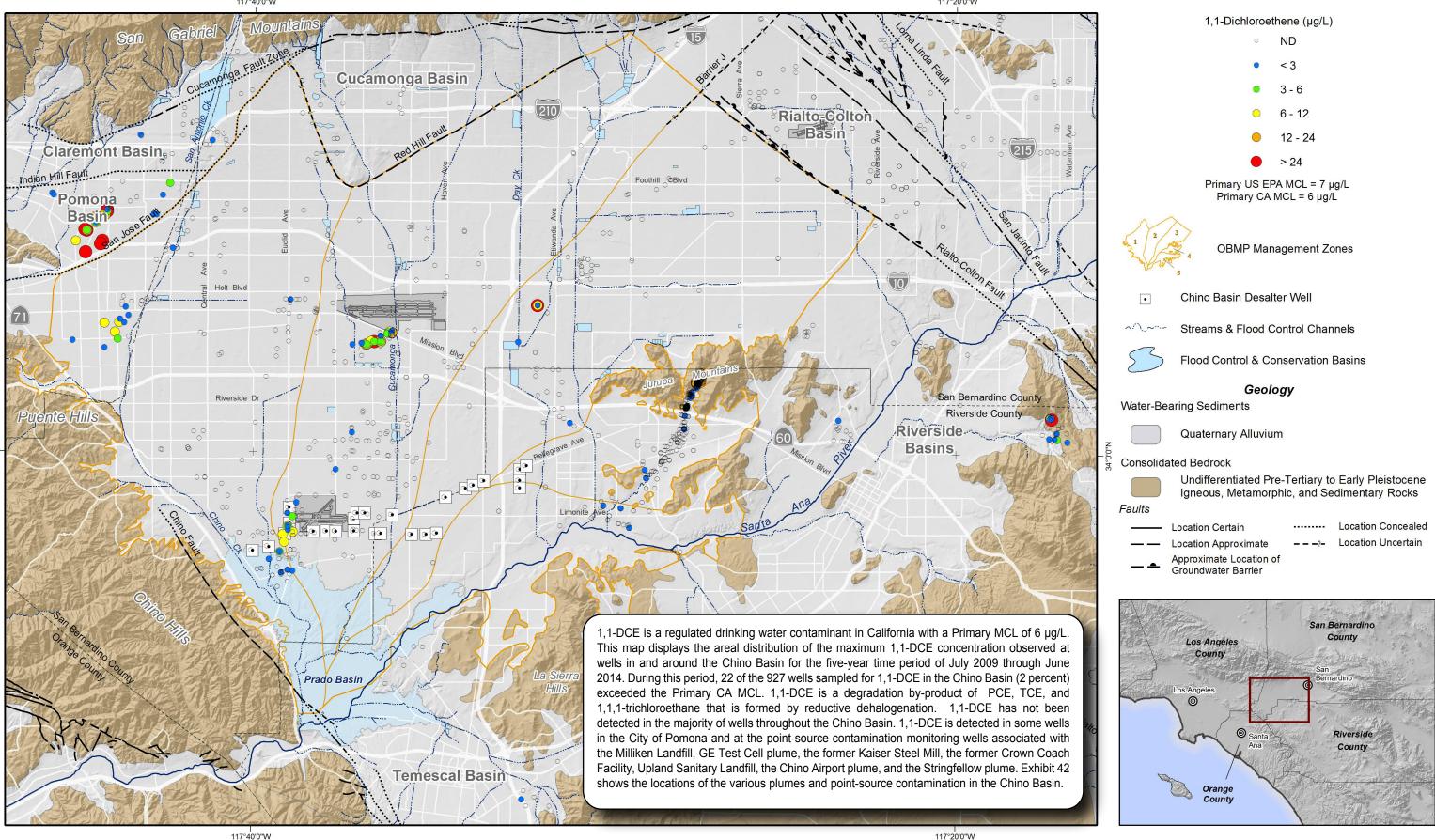
Groundwater Quality



cis-1,2-Dichloroethene (cis-1,2-DCE) in Groundwater Maximum Concentration (July 2009 to June 2014)

117°40'0"W

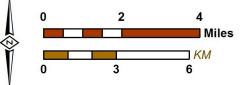
117°20'0"W





Author: JMS Date: 6/23/2015





117°20'0"W



Groundwater Quality

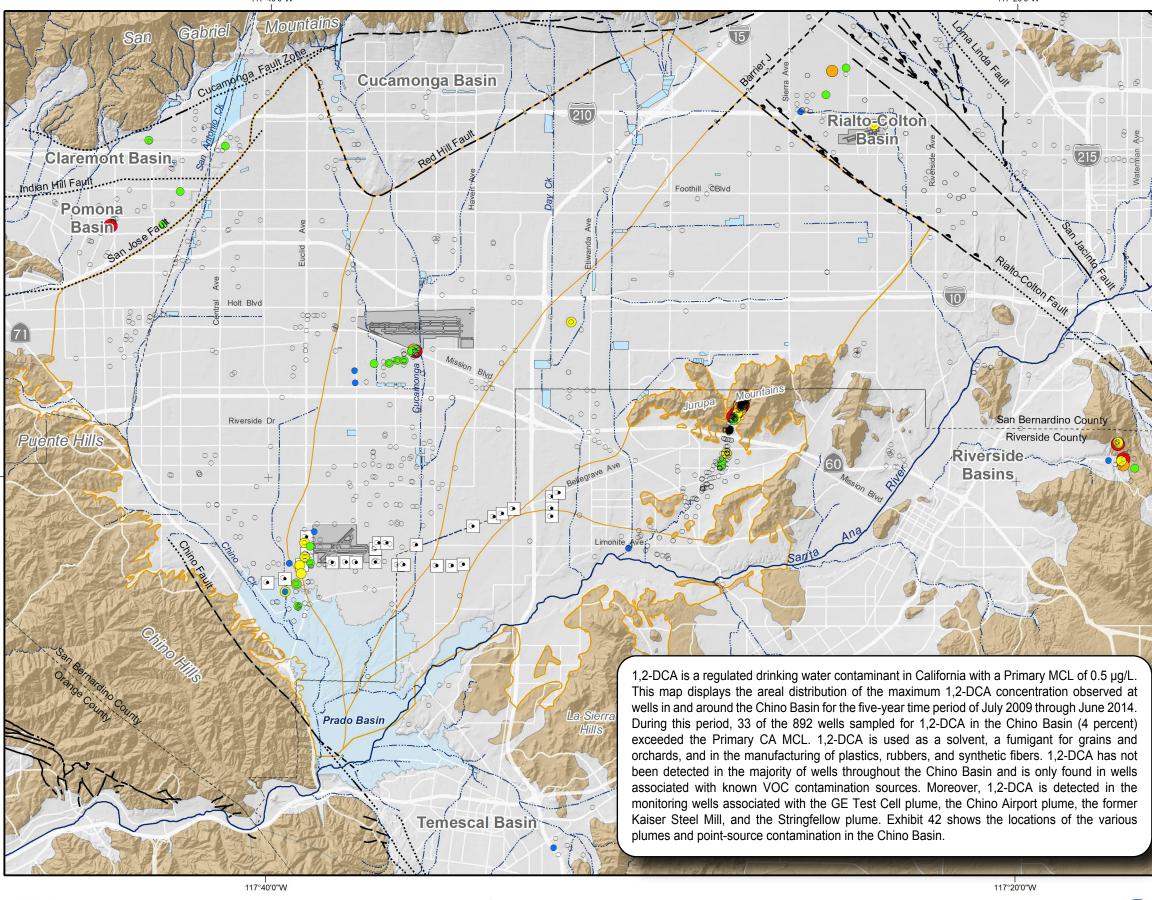


1,1-Dichloroethene (1,1-DCE) in Groundwater

Maximum Concentration (July 2009 to June 2014)

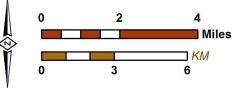
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117°20'0"W





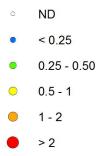
Author: JMS Date: 6/23/2015 Document Name: Exhibit 40 12DCA



117°20'0"W

2014 State of the Basin Groundwater Quality

1,2-Dichloroethane (µg/L)



Primary CA MCL = 0.5 μg/L Primary US EPA MCL = 5 μg/L



OBMP Management Zones



Chino Basin Desalter Well

Streams & Flood Control Channels



Flood Control & Conservation Basins

Geology

Water-Bearing Sediments



Quaternary Alluvium

Consolidated Bedrock



Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- ____ Location Approximate
 - Approximate Location of Groundwater Barrier
- ------- Location Concealed



roximate – – –₂– Location Uno Location of Barrier

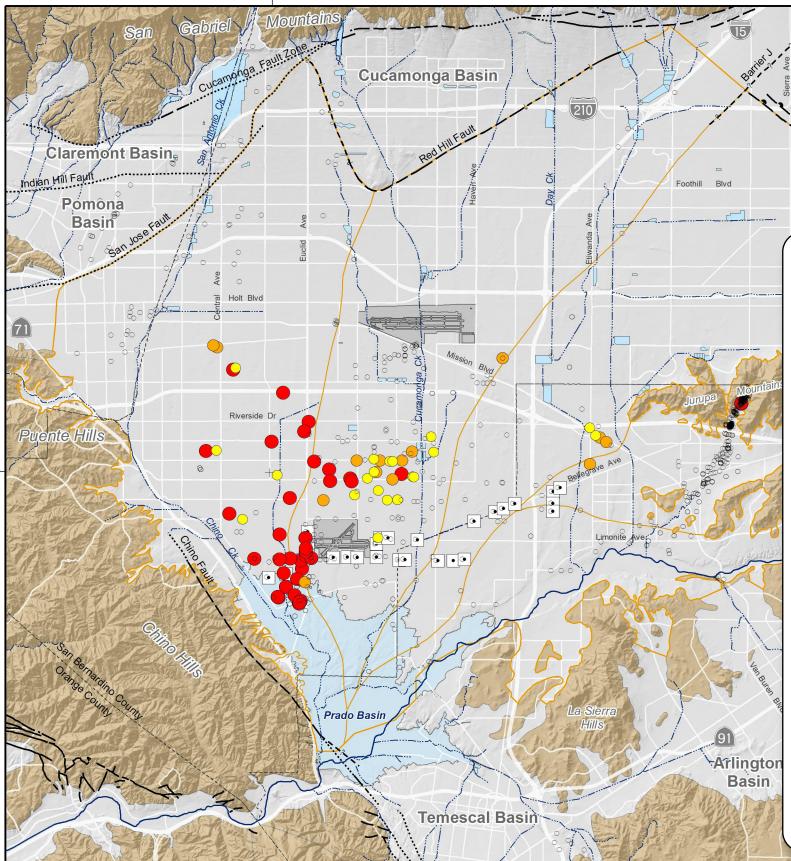




1,2-Dichloroethane (1,2-DCA) in Groundwater Maximum Concentration (July 2009 to June 2014)

117°40'0"W

215



1,2,3-TCP has a California State notification level (NL) of 0.005 µg/L. 1,2,3-TCP was used historically as a solvent, an extractive agent, a paint remover, a cleaning and degreasing agent, and in the manufacturing of soil fumigants. In 1999, the California DDW (formerly, the CDPH) established the drinking water NL as concerns over its carcinogenicity grew. The California DDW is currently developing an MCL for 1,2,3-TCP that will be based on the PHG of 0.0007 µg/L, established by OEHHA in August 2009. In 2001, 1,2,3-TCP was included on the California State UCMR list (Title 22 of the CCR, §66450) to be sampled from 2001 to 2003; however, at that time, there was no analytical method capable of achieving a detection limit for reporting (DLR) of 0.005 µg/L equivalent to the California NL. In May 2012, the US EPA released UCMR list 3, which requires nation-wide sampling of 1,2,3-TCP between 2013 and 2015. However, this current federal program does not specify the low-DLR analytical method. The California DDW encourages the sampling of 1,2,3-TCP by utilities using the laboratory method with the low DLR of 0.005 µg/L. In the Chino Basin, Watermaster, some public entities, and some monitoring parties are sampling for 1,2,3-TCP at the lower detection limit of 0.005 µg/L as the DDW is developing the MCL.

Rialto=Coltor

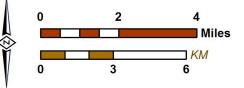
Basin

This map displays the areal distribution of the maximum 1,2,3-TCP concentration observed at wells in and around the Chino Basin for the five-year time period of July 2009 through June 2014. During this time period, 79 of the 784 wells sampled for 1,2,3-TCP in Chino Basin (10 percent) exceeded the California State NL of 0.005 μ g/L. Many of the wells north of the 60 Freeway have not been sampled and/or analyzed using the low-detection limit method. There is a 1,2,3-TCP plume that emanates from the Chino Airport, and it is co-mingled with the TCE plume. The concentrations of 1,2,3-TCP are one to two orders of magnitude greater than the concentrations in wells north of the Chino Airport. 1,2,3-TCP detections north of the Chino Airport are likely the result of non-point source application of soil fumigants to crops.



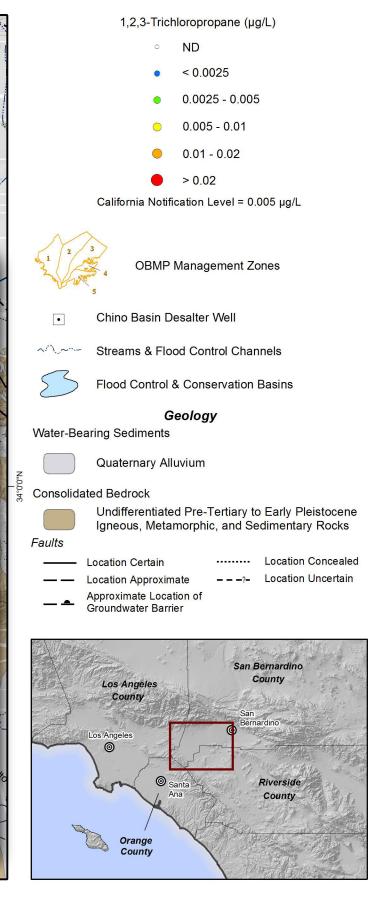
Author: JMS Date: 6/23/2015 Document Name: Exhibit 41 TCP

117°40'0"W





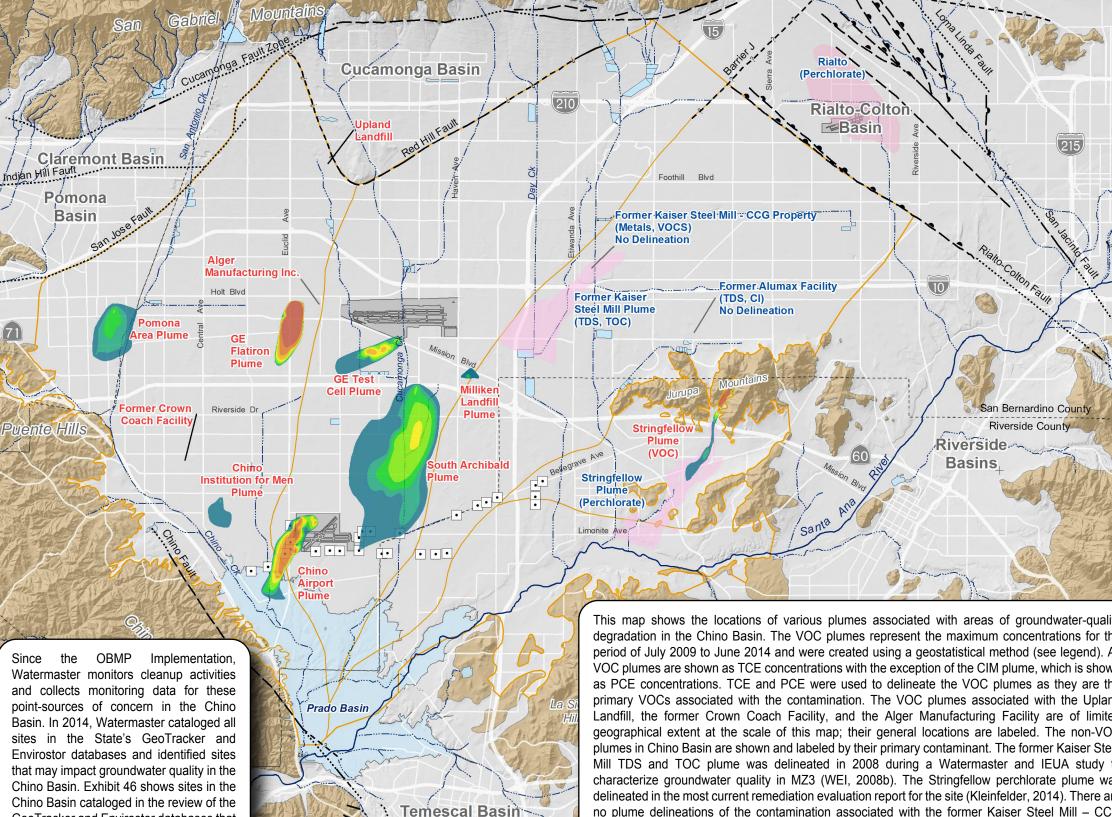
2014 State of the Basin Groundwater Quality





1,2,3-Trichloropropane (1,2,3-TCP) in Groundwater

Maximum Concentration (July 2009 to June 2014)



(71)

Since the OBMP Implementation. Watermaster monitors cleanup activities and collects monitoring data for these point-sources of concern in the Chino Basin. In 2014, Watermaster cataloged all sites in the State's GeoTracker and Envirostor databases and identified sites that may impact groundwater quality in the Chino Basin. Exhibit 46 shows sites in the Chino Basin cataloged in the review of the GeoTracker and Envirostor databases that may have impact to groundwater quality.

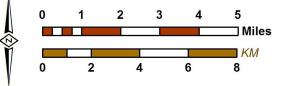
This map shows the locations of various plumes associated with areas of groundwater-quality degradation in the Chino Basin. The VOC plumes represent the maximum concentrations for the period of July 2009 to June 2014 and were created using a geostatistical method (see legend). All VOC plumes are shown as TCE concentrations with the exception of the CIM plume, which is shown as PCE concentrations. TCE and PCE were used to delineate the VOC plumes as they are the primary VOCs associated with the contamination. The VOC plumes associated with the Upland Landfill, the former Crown Coach Facility, and the Alger Manufacturing Facility are of limited geographical extent at the scale of this map; their general locations are labeled. The non-VOC plumes in Chino Basin are shown and labeled by their primary contaminant. The former Kaiser Steel Mill TDS and TOC plume was delineated in 2008 during a Watermaster and IEUA study to characterize groundwater guality in MZ3 (WEI, 2008b). The Stringfellow perchlorate plume was delineated in the most current remediation evaluation report for the site (Kleinfelder, 2014). There are no plume delineations of the contamination associated with the former Kaiser Steel Mill - CCG Property, or former Alumax Facility



Author: VMW Date: 20150409 File: Exhibit_44.mxd

117°40'0"W

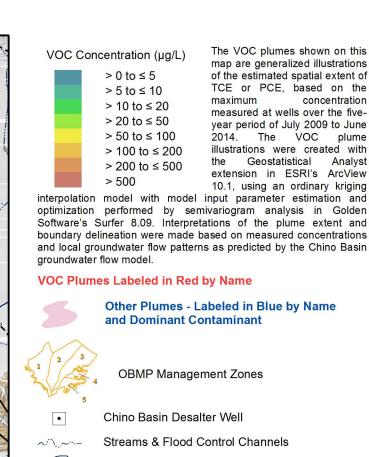
117°40'0"W





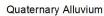
117°20'0"W

2014 State of the Basin Groundwater Quality



Flood Control & Conservation Basins

Geology



Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Concealed Location Certain - - -?- Location Uncertain Location Approximate
- Approximate Location of Groundwater Barrier

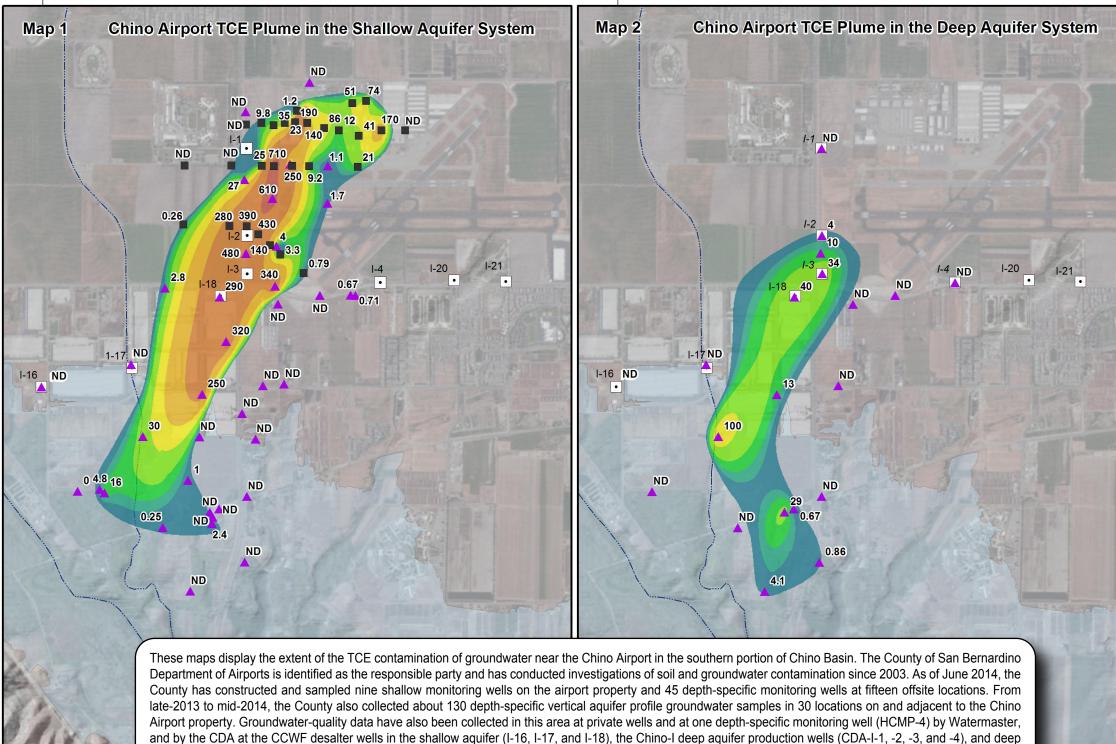




Delineation of Groundwater Contamination Plumes and Point Sources of Concern

Exhibit 42

Analyst



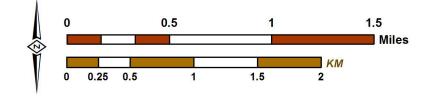
aquifer zone testing during the construction of the CCWF wells (I-16, I-17, and I-18).

The multiple-depth, groundwater-quality monitoring at wells and borings in and to the south of the Chino Airport has allowed for TCE to be characterized horizontally and vertically. TCE has been detected in both the shallow unconfined aquifer system (see Map 1), and the deeper confined aquifer system (see Map 2). TCE is more thoroughly characterized in the shallow aquifer system than in the deep aquifer system.

117°40'0"W

117°40'0"W Prepared by: WINTER THE BARGEMENT MAR 23692 Birtcher Drive Lake Forest, CA 92630 949.420.3030 www.weiwater.com

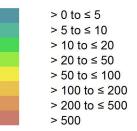
Author: VMW Date: 20120214 File: Exhibit_45.mxd





, GeoEye GIS User

TCE Concentration (µg/L)



The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE, based on the maximum concentrations measured at wells from July 2009 to June 2014. The VOC plume illustrations were created with the Geostatistical Analyst extension in ESRI's ArcView 10.1, using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 8.09. Interpretations of the plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

TCE MCL = $5 \mu g/L$

5

Wells & Maximum TCE Concentration (µg/L) for July 2009 to June 2014.



Location of Depth-Specific Vertical Aquifer Profile Samples & Maximum TCE Concentration (µg/L) at that Location During 2013 to 2014 Sampling

ND = TCE was Non-Detect in Samples from July 2009 to June 2014

Chino Basin Desalter Well



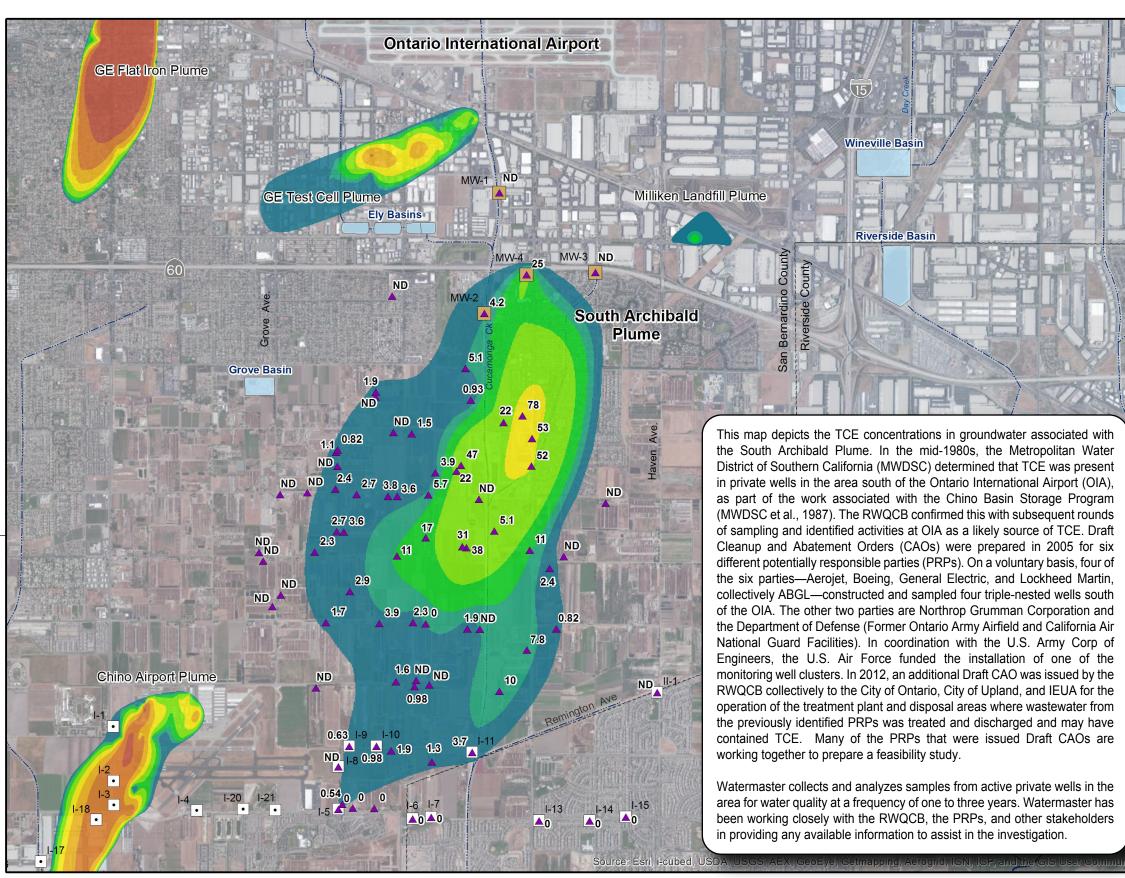
Streams & Flood Control Channels



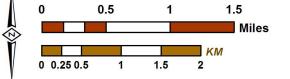
Flood Control & Conservation Basins



Chino Airport TCE Plume Shallow and Deep Aquifers

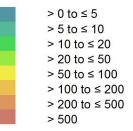


Author: VMW Date: 20130226 File: Exhibit_46.mxd





TCE Concentration (µg/L)



The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE, based on maximum concentration measured from July 2009 to June 2014. The VOC plume illustrations were created with the Geostatistical Analyst extension in ESRI's ArcView 10.1, using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 8.09. Interpretations of the plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

TCE MCL = 5 µg/L

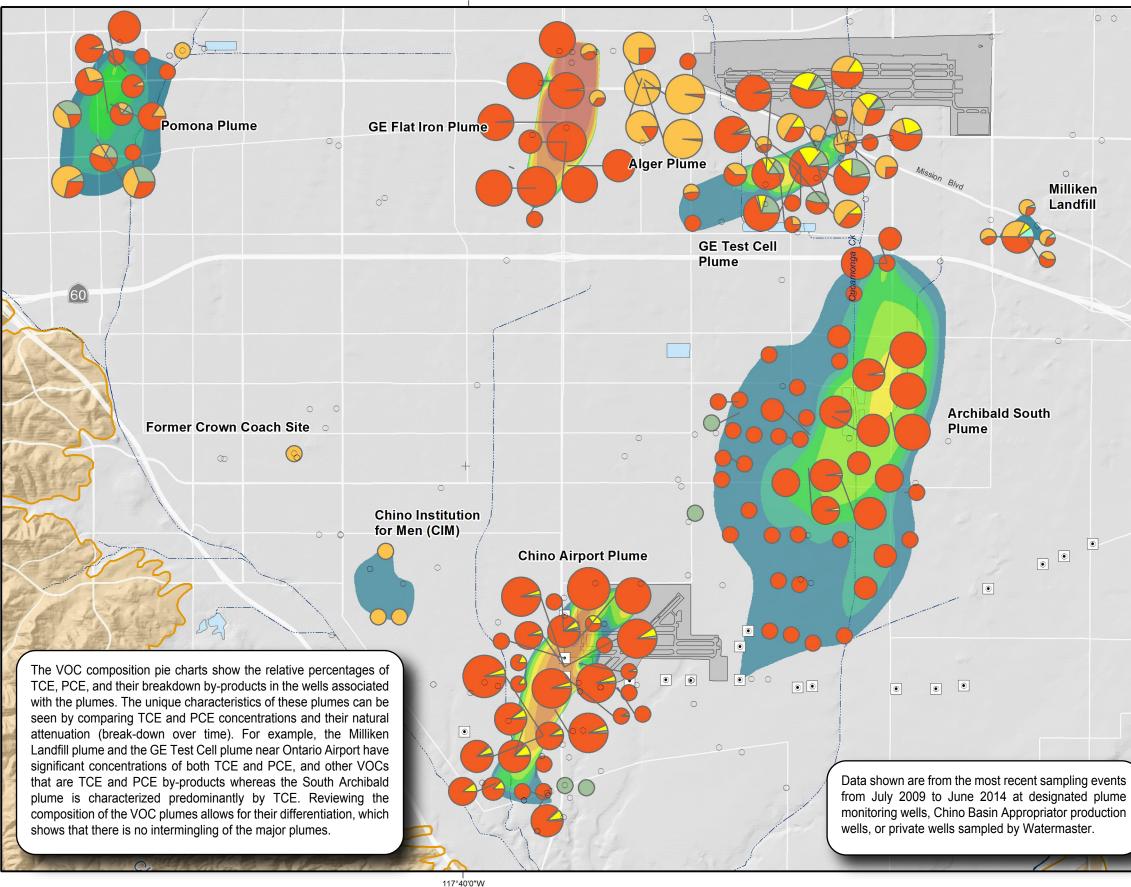
- ABGL Monitoring Wells
- 5
- Wells & MaximumTCE Concentration (ug/L) from July 2009 to June 2014.
- ND = TCE was Non Detect in Samples from July 2009 to June 2014
- Chino Basin Desalter Well
- Streams & Flood Control Channels



Flood Control & Conservation Basins

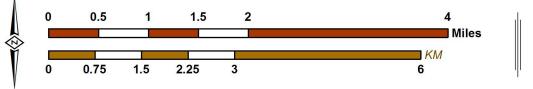


South Archibald TCE Plume



117°40'0"W

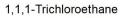
Author: JMS Date: 6/23/2015 Document Name: Exhibit_45_PieChart







Percent of Detectable TCE, PCE, and their Degradation By-Products During the Last Sample



1,1-Dichloroethane

1,1-Dichloroethene

1,2-Dichloroethane

cis-1,2-Dichloroethene



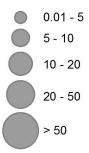
Tetrachloroethene (PCE)

trans-1,2-Dichloroethene

Trichloroethene (TCE)

Vinyl Chloride

Sample Size (Based on the Sum of TCE, PCE, and their Degradation By-Products [µg/L])



Wells with Non-Detect Results for VOCs During Last Sample Event



Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock



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Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks



VOC Composition Charts Wells Within and Adjacent to VOC Plumes

Exhibit 45

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