United States
Environmental Protection Agency

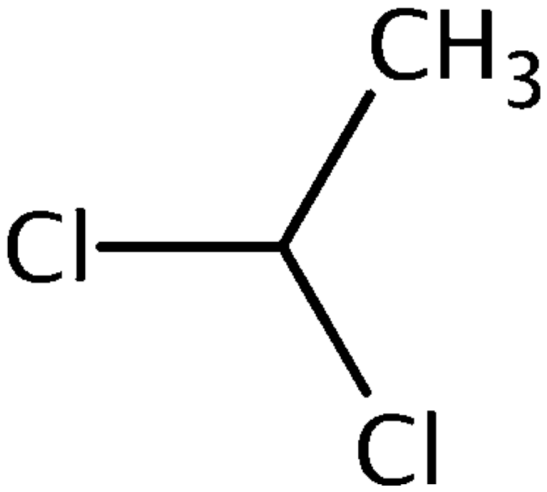
July 2024
Office of Chemical Safety and
Pollution Prevention

# Draft Risk Evaluation for 1,1-Dichloroethane

## Systematic Review Supplemental File:

**Data Extraction Information for
General Population, Consumer, and Environmental Exposure**

**CASRN: 75-34-3**




***July 2024***

This supplemental file contains information regarding the data extraction results for data sources that met the PECO screening criteria for the *Draft Risk Evaluation for 1,1-Dichloroethane*. EPA performs data extraction as part of the TSCA systematic review process described in the *Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances*. The systematic review steps are further described in the *Draft Risk Evaluation for 1,1-Dichloroethane – Systematic Review Protocol*, referred hereafter as the "1,1-Dichloroethane Systematic Review Protocol".

EPA conducted data quality evaluation and extraction based on author-reported descriptions and results; additional analyses (e.g., statistical analyses) potentially conducted by EPA are not contained in this supplemental file. The data extraction results herein are organized by evidence streams and media types. A reference may contain data for multiple evidence streams and/or media types and will be cited in different tables if appropriate. The media type "All Applicable Media" refers to modeled doses or intakes calculated from human biomonitoring data (e.g., urine, blood, etc.) or when the media specific to the modeled route (e.g., inhalation, oral, etc.) are not clearly defined. In the data extraction results, "POINT VALUE(S)" denotes when the author(s) did not report a minimum, maximum, mean, or any other summary statistics, but rather single reported level(s) (e.g., chemical concentration). Summary statistic values that were less than the analytical limit were substituted with "0," "ND," "<LOD," and "<LOQ," as appropriate. For further details about extraction criteria, review the 1,1-DCA Systematic Review Protocol.

Acronyms and abbreviations used within this supplemental file are defined in the table at the end of this file. The two letter country codes defined herein are consistent with those used in the searchable International Standardization Organization (ISO) 3166 standard for country codes. Finally, "NR" preceding a country code indicates that the author(s) did not report the city, state and region. This supplemental file may also be referred to as 1,1-Dichloroethane Data Extraction Information for General Population, Consumer, and Environmental Exposure.

Within the contents of this document, 1,1-dichloroethane may be referred to as the acronyms 1,1-DCA and 1,1-DCE. The acronyms 1,2-DCA, 1,2-DCE, and DCE refer to the chemical 1,2-dichloroethane. The acronyms 1,1,2-TCE, 1,1,2-TCA, and TCE refer to the chemical 1,1,2-trichloroethane. The acronym trans1,2-DCE refers to the chemical trans-1,2-dichloroethylene. The acronym 1,2-DCP refers to the chemical 1,2-dichloropropane

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Table 1: Data Extraction Tables of Exposure Monitoring Studies for Ambient Air

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Logue et al. 2010<br>***HERO ID:*** *1255270*<br>*OQD:* High | Pittsburgh, PA, US<br>Scenario: Ambient Air (24 hr conc.) in a residential area near chemical and industrial facilities in the Avalon neighborhood<br>(n = 122; DF = <0.25; Sampling Period: Feb., 2006 - Jan., 2008) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0 $\mu g/m^3$ (AM) | 5th: 0 $\mu g/m^3$;<br>25th: 0 $\mu g/m^3$;<br>50th: 0 $\mu g/m^3$;<br>75th: 0 $\mu g/m^3$;<br>95th: 0.04 $\mu g/m^3$; | 0.01 $\mu g/m^3$ (ASD) |
| Logue et al. 2010<br>***HERO ID:*** *1255270*<br>*OQD:* High | Pittsburgh, PA, US<br>Scenario: Ambient Air (24 hr conc.) in a downtown residential area with high traffic<br>(n = 122; DF = <0.25; Sampling Period: Feb., 2006 - Jan., 2008) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0 $\mu g/m^3$ (AM) | 5th: 0 $\mu g/m^3$;<br>25th: 0 $\mu g/m^3$;<br>50th: 0 $\mu g/m^3$;<br>75th: 0 $\mu g/m^3$;<br>95th: 0.04 $\mu g/m^3$; | 0.01 $\mu g/m^3$ (ASD) |
| Logue et al. 2010<br>***HERO ID:*** *1255270*<br>*OQD:* High | Pittsburgh, PA, US<br>Scenario: Ambient Air (24 hr conc.) in a residential area near chemical and industrial facilities in the Stowe neighborhood<br>(n = 122; DF = 0; Sampling Period: Feb., 2006 - Jan., 2008) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0 $\mu g/m^3$ (AM) | NR | NR |
| Logue et al. 2010<br>***HERO ID:*** *1255270*<br>*OQD:* High | Pittsburgh, PA, US<br>Scenario: Ambient Air (24 hr conc.) in a residential area with distant industrial facilities<br>(n = 122; DF = <0.25; Sampling Period: Feb., 2006 - Jan., 2008) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0.01 $\mu g/m^3$ (AM) | 5th: 0 $\mu g/m^3$;<br>25th: 0 $\mu g/m^3$;<br>50th: 0 $\mu g/m^3$;<br>75th: 0 $\mu g/m^3$;<br>95th: 0.04 $\mu g/m^3$; | 0.02 $\mu g/m^3$ (ASD) |
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from industrialized area close to a petrol refinery<br>(n = 3; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from industrialized area in the periphery of the South industrial complex (near low traffic road)<br>(n = 3; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from industrialized area inside the South industrial complex (away from roads)<br>(n = 3; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from urban area of Imperial Tarraco Square (high traffic)<br>(n = 6; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from urban area of Pla de la Seu (historical center, closed to traffic)<br>(n = 6; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |

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**Table 1 – continued from previous page**

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from urban area of Carros Square (close to port, medium traffic)<br>(n = 6; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |
| Ras-Mallorqui et al. 2007<br>***HERO ID:*** *2443817*<br>*OQD:* High | Tarragona Region, ES<br>Scenario: Ambient air from urban area of Rambla Nova (commercial and residential, low traffic)<br>(n = 6; DF = 0; Sampling Period: Dec., 2005 - Jan., 2006) | LOD: 0.03 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | NR | ND | NR | NR |
| Martí et al. 2014<br>***HERO ID:*** *2517712*<br>*OQD:* Medium | Barcelona, ES<br>Scenario: Ambient air near closed landfill (Scenario RH2 -inhabitants of city of Cerdanyola)<br>(n = 36; DF = NR; Sampling Period: 2014) | LOD: 0.001-10 ng<br>LOQ: Not Reported | NR | NR | 0.006 $\mu g/m^3$ (AM) | NR | 0.002 $\mu g/m^3$ (ASD) |
| Huang et al. 2019<br>***HERO ID:*** *5431563*<br>*OQD:* High | Xi'an, northwest China, CN<br>Scenario: Air outside of dwellings in northwest China<br>(n = 37; DF = NR; Sampling Period: Nov., 2016 - Feb., 2017) | LOD: 0.1-0.158 ppbv<br>LOQ: Not Reported | NR | NR | 0.34 $\mu g/m^3$ (AM) | NR | 0.32 $\mu g/m^3$ (ASD) |

Table 2: Data Extraction Tables of Exposure Monitoring Studies for Drinking Water

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Landmeyer et al. 2014<br>***HERO ID:*** *5639273*<br>*OQD:* High | McBee, SC, US<br>Scenario: Drinking water from public-supply wells - 2010<br>(n = 9; DF = 0.11; Sampling Period: Aug., 2010) | LOD: Not Reported<br>LOQ: 0.044 µg/L | NR | 0.042 mg/L | NR | NR | NR |
| Landmeyer et al. 2014<br>***HERO ID:*** *5639273*<br>*OQD:* High | McBee, SC, US<br>Scenario: Drinking water from domestic-supply wells - 2012<br>(n = 3; DF = 0.33; Sampling Period: Feb., 2012 - Aug., 2012) | LOD: Not Reported<br>LOQ: 0.044 µg/L | POINT VALUE(S): [<0.022 mg/L; <0.022 mg/L; 0.046 mg/L] | | | | |
| Landmeyer et al. 2014<br>***HERO ID:*** *5639273*<br>*OQD:* High | McBee, SC, US<br>Scenario: Drinking water from public-supply wells - 2011<br>(n = 8; DF = 0.125; Sampling Period: Aug., 2011) | LOD: Not Reported<br>LOQ: 0.022 µg/L | POINT VALUE(S): [<0.022 mg/L; <0.022 mg/L; <0.022 mg/L; <0.022 mg/L; <0.022 mg/L; <0.022 mg/L; <0.022 mg/L; 0.052 mg/L] | | | | |
| Landmeyer et al. 2014<br>***HERO ID:*** *5639273*<br>*OQD:* High | McBee, SC, US<br>Scenario: Drinking water from public-supply wells - 2012<br>(n = 3; DF = 0.33; Sampling Period: Feb., 2012 - Aug., 2012) | LOD: Not Reported<br>LOQ: 0.044 µg/L | POINT VALUE(S): [<0.022 mg/L; <0.022 mg/L; 0.367 mg/L] | | | | |
| Kingsbury et al. 2008<br>***HERO ID:*** *3364193*<br>*OQD:* High | Clackamas River, OR; Truckee River, CA; Cache la Poudre River, CO; Elm Fork Trinity River, TX; Chattahoochee River, GA; White River, IN; Potomac River, VA; Running Gutter Brook, MA; Neuse River, NC, US<br>Scenario: Source drinking water (plant intake) samples at United States CWS - Oct 2002-March 2004<br>(n = 147; DF = 0; Sampling Period: Oct., 2002 - Mar., 2004) | LOD: 0.035 µg/L<br>LOQ: Not Reported | NR | NR | ND | NR | NR |

Table 3: Data Extraction Tables of Exposure Monitoring Studies for Groundwater

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Fan et al. 2009<br>***HERO ID:*** *631540*<br>*OQD:* Medium | Taiwan, TW<br>Scenario: Groundwater from a well near drinking water treatment plant (W1-10)<br>(n = 60; DF = 0; Sampling Period: Apr., 2005 - Oct., 2005) | LOD: 0.64 µg/L<br>LOQ: Not Reported | NR | NR | <LOD | NR | NR |
| Chen et al. 1995<br>***HERO ID:*** *659873*<br>*OQD:* Medium | Orange County, Florida, US<br>Scenario: Groundwater near landfill<br>(n = 8; DF = 0.625; Sampling Period: 1989 - 1993) | LOD: Not Reported<br>LOQ: Not Reported | POINT VALUE(S): [0.74 µg/mL; 0.07 µg/mL; 10.84 µg/mL; 0.08 µg/mL; 0.06 µg/mL; ND; ND; ND] | | | | |
| Schrab et al. 1993<br>***HERO ID:*** *661846*<br>*OQD:* Low | Eastern, US<br>Scenario: Groundwater (G-3) near municipal solid waste landfill<br>(n = 3; DF = 0; Sampling Period: 1993) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | Trace µg/L (AM) | NR | NR |
| Sabel et al. 1984<br>***HERO ID:*** *724484*<br>*OQD:* Medium | Minnesota, US<br>Scenario: Groundwater from landfill sites with suggested leachate contamination<br>(n = 13; DF = 0.54; Sampling Period: 1984) | LOD: Not Reported<br>LOQ: Not Reported | 0.5 µg/L | 1900 µg/L | NR | NR | NR |
| Sabel et al. 1984<br>***HERO ID:*** *724484*<br>*OQD:* Medium | Minnesota, US<br>Scenario: Groundwater from landfill sites with unknown or good water quality<br>(n = 7; DF = 0; Sampling Period: 1984) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Enwright Assoc Inc et al. 1984<br>***HERO ID:*** *1335577*<br>*OQD:* Medium | Virginia, US<br>Scenario: Groundwater from Allied Corporation, Chesterfield Plant (non-detects excluded)<br>(n = 20; DF = 0.2; Sampling Period: Feb., 1984) | LOD: 4.5 µg/L<br>LOQ: Not Reported | POINT VALUE(S): [90 µg/L; 111 µg/L; 10 µg/L; 9.6 µg/L; ND; ND; ND; ND; ND; ND; ND; ND; ND; ND; ND; ND; ND; ND; ND] | | | | |
| Westinghouse Savannah River Company et al. 1997<br>***HERO ID:*** *1740826*<br>*OQD:* Medium | South Carolina, US<br>Scenario: Groundwater monitoring wells in a landfill (nondetects excluded)<br>(n = 136; DF = 0.19; Sampling Period: 1995 - 1996) | LOD: 2-0.05 µg/L<br>LOQ: Not Reported | POINT VALUE(S): [1.14 µg/L; 36 µg/L; 20.4 µg/L; 25.4 µg/L; 0.07 µg/L; 2.94 µg/L; 4.89 µg/L; 11.3 µg/L; 10.7 µg/L; 17.5 µg/L; 17.5 µg/L; 11.4 µg/L; 11.2 µg/L; 9.58 µg/L; 9.58 µg/L; 13.5 µg/L; 16.6 µg/L; 156 µg/L; 0.29 µg/L; 0.64 µg/L; 0.51 µg/L; 0.39 µg/L; 0.37 µg/L; 1.55 µg/L; 0.05 µg/L; 71.8 µg/L] | | | | |
| Roy F. Weston Inc et al. 1986<br>***HERO ID:*** *5436115*<br>*OQD:* Medium | Burlington, VT, US<br>Scenario: Groundwater from Fire Department Training Area and old landfill at Burlington Air National Guard Base<br>(n = 8; DF = 0.25; Sampling Period: Sept., 1984) | LOD: 5 µg/L<br>LOQ: Not Reported | POINT VALUE(S): [BDL µg/L; BDL µg/L; Trace µg/L; BDL µg/L; BDL µg/L; BDL µg/L; 1200 µg/L; BDL µg/L] | | | | |
| Heck et al. 1992<br>***HERO ID:*** *5438509*<br>*OQD:* Medium | Reno County, Kansas, US<br>Scenario: Groundwater from private wells near Reno County Landfill<br>(n = 5; DF = 0; Sampling Period: Aug., 1990) | LOD: Not Reported<br>LOQ: 0.2 µg/L | NR | NR | <LOQ | NR | NR |
| Heck et al. 1992<br>***HERO ID:*** *5438509*<br>*OQD:* Medium | Reno County, Kansas, US<br>Scenario: Groundwater from monitoring wells near Reno County Landfill<br>(n = 8; DF = 0.38; Sampling Period: Aug., 1990) | LOD: Not Reported<br>LOQ: 0.2 µg/L | POINT VALUE(S): [8.2 µg/L; <0.2 µg/L; 120 µg/L; <0.2 µg/L; <0.2 µg/L; 9.0 µg/L; <0.2 µg/L; <0.2 µg/L] | | | | |

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**Table 3 – continued from previous page**

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Bigsby et al. 1989<br>***HERO ID:*** *5449639*<br>*OQD:* Uninformative | Near Junction City in northeast Kansas (Geary County), US<br>Scenario: Groundwater upgradient of Geary county landfill<br>(n = 1; DF = 0; Sampling Period: Oct., 1988 - Sept., 1988) | LOD: 0.5 µg/L<br>LOQ: Not Reported | POINT VALUE(S): [<0.5 µg/L] | | | | |
| Bigsby et al. 1989<br>***HERO ID:*** *5449639*<br>*OQD:* Uninformative | Near Junction City in northeast Kansas (Geary County), US<br>Scenario: Groundwater downgradient of Geary county land-fill<br>(n = 6; DF = 0; Sampling Period: Oct., 1988 - Sept., 1988) | LOD: 0.5 µg/L<br>LOQ: Not Reported | NR | NR | <LOD | NR | NR |
| Hopple et al. 2009<br>***HERO ID:*** *3975066*<br>*OQD:* High | Various locations, US<br>Scenario: Groundwater from principal aquifers across the United States<br>(n = 221; DF = 0.05; Sampling Period: Oct., 2002 - Jul., 2005) | LOD: Not Reported<br>LOQ: 0.024 µg/L | NR | 6.53 µg/L | NR | NR | NR |
| Hopple et al. 2009<br>***HERO ID:*** *3975066*<br>*OQD:* High | Various locations, US<br>Scenario: Source water (resampled) from principal aquifers across the United States<br>(n = 71; DF = 0.11; Sampling Period: Jun., 2004 - Sept., 2005) | LOD: Not Reported<br>LOQ: 0.024 µg/L | NR | 7.02 µg/L | NR | NR | NR |
| Buszka et al. 2009<br>***HERO ID:*** *4912133*<br>*OQD:* Medium | Elkhart, Indiana, US<br>Scenario: Water from 4 wells<br>(n = 7; DF = 0.86; Sampling Period: Nov., 2000 - Oct., 2002) | LOD: Not Reported<br>LOQ: Not Reported | <LOQ | 12.0 µg/L | 7.0 µg/L (AM) | 50th: 8.0 µg/L; | 4.24 µg/L (ASD) |

Table 4: Data Extraction Tables of Exposure Monitoring Studies for Indoor Air

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Lindstrom et al. 1995<br>***HERO ID:*** *78782*<br>*OQD:* Medium | Foothills of Rocky Mountains, US<br>Scenario: Indoor air of conventional single-family homes pre-occupancy phase (unfurnished and unoccupied)<br>(n = 6; DF = 0; Sampling Period: Dec., 1992) | LOD: 1.21 $\mu g/m^3$<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Lindstrom et al. 1995<br>***HERO ID:*** *78782*<br>*OQD:* Medium | Foothills of Rocky Mountains, US<br>Scenario: Indoor air of experimental single-family town-homes pre-occupancy phase (unfurnished and unoccupied)<br>(n = 10; DF = 0; Sampling Period: Dec., 1992) | LOD: 1.21 $\mu g/m^3$<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Lindstrom et al. 1995<br>***HERO ID:*** *78782*<br>*OQD:* Medium | Foothills of Rocky Mountains, US<br>Scenario: Indoor air of experimental single-family town-homes during occupancy<br>(n = 12; DF = 0; Sampling Period: May, 1993) | LOD: 0.12 $\mu g/m^3$<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Lindstrom et al. 1995<br>***HERO ID:*** *78782*<br>*OQD:* Medium | Foothills of Rocky Mountains, US<br>Scenario: Indoor air of conventional single-family homes during occupancy<br>(n = 6; DF = 0; Sampling Period: May, 1993) | LOD: 0.12 $\mu g/m^3$<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Huang et al. 2019<br>***HERO ID:*** *5431563*<br>*OQD:* High | Xi'an, northwest China, CN<br>Scenario: Indoor air of dwellings in northwest China<br>(n = 44; DF = NR; Sampling Period: Nov., 2016 - Feb., 2017) | LOD: 0.1-0.158 ppbv<br>LOQ: Not Reported | NR | NR | 0.47 $\mu g/m^3$ (AM) | NR | 0.44 $\mu g/m^3$ (ASD) |
| Li et al. 2019<br>***HERO ID:*** *5736601*<br>*OQD:* High | Quebec Province; Ontario Province; British Columbia Province; Atlantic Provinces; Prairie Provinces, CA<br>Scenario: Indoor air from living rooms in homes<br>(n = 3524; DF = 0.004; Sampling Period: Jan., 2012 - Dec., 2013) | LOD: 0.053 $\mu g/m^3$<br>LOQ: 0.04 $\mu g/m^3$ | NR | 1.7 $\mu g/m^3$ | NR | NR | NR |

Table 5: Data Extraction Tables of Exposure Monitoring Studies for Other

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Schrab et al. 1993<br>***HERO ID:*** *661846*<br>*OQD:* Low | Eastern, US<br>Scenario: Leachate (L-2) from municipal solid waste landfill<br>(n = 2; DF = 0.5; Sampling Period: 1993) | LOD: Not Reported<br>LOQ: Not Reported | 0.0 µg/L | 12.0 µg/L | 6.0 µg/L (AM) | NR | NR |
| Schrab et al. 1993<br>***HERO ID:*** *661846*<br>*OQD:* Low | Eastern, US<br>Scenario: Leachate (L-3) from municipal solid waste landfill<br>(n = 3; DF = 0; Sampling Period: 1993) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0.0 µg/L (AM) | NR | NR |
| Sabel et al. 1984<br>***HERO ID:*** *724484*<br>*OQD:* Medium | Minnesota, US<br>Scenario: Leachates from municipal solid waste landfill leachate collection systems<br>(n = 6; DF = 0.83; Sampling Period: 1984) | LOD: Not Reported<br>LOQ: Not Reported | 0.6 µg/L | 46.0 µg/L | NR | NR | NR |

Table 6: Data Extraction Tables of Exposure Monitoring Studies for Soil

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Martí et al. 2014<br>***HERO ID:*** *2517712*<br>*OQD:* Medium | Barcelona, ES<br>Scenario: Soil gas outside closed landfill (Scenario RH4 & 6 - future residential and industrial/commercial spaces)<br>(n = 4; DF = NR; Sampling Period: 2014) | LOD: 0.001-10 ng<br>LOQ: Not Reported | NR | NR | 0.06 $\mu g/m^3$ (AM) | NR | 0.03 $\mu g/m^3$ (ASD) |
| Martí et al. 2014<br>***HERO ID:*** *2517712*<br>*OQD:* Medium | Barcelona, ES<br>Scenario: Soil gas outside closed landfill (Scenario RH5 - future kindergarten)<br>(n = 3; DF = NR; Sampling Period: Jun., 2012) | LOD: 0.001-10 ng<br>LOQ: Not Reported | NR | NR | 0.05 $\mu g/m^3$ (AM) | NR | ND ug/$m^3$ (ASD) |

Table 7: Data Extraction Tables of Exposure Monitoring Studies for Surface Water

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from centre of inner estuary (Site 9, pooled)<br>(n = 5; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0.78 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from outer estuary at new boat ramp on southern shore (Site 8)<br>(n = 13; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0.73 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from estuary at north shoreline (Site 7)<br>(n = 9; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 1.14 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from inner estuary at old boat ramp (Site 6)<br>(n = 13; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 2.98 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from Penrhyn estuary at discharge point of Floodvale Drain (Site 5)<br>(n = 13; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 4.17 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from Upper Penrhyn Estuary (Site 4)<br>(n = 13; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 5.64 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from Penrhyn estuary at discharge point of Springvale Drain (Site 3)<br>(n = 9; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 11.9 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from an upstream source area of Floodvale Drain (Site 2)<br>(n = 5; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 14.2 µg/L (AM) | NR | NR |
| Hunt et al. 2007<br>***HERO ID:*** *5438705*<br>*OQD:* High | Sydney, AU<br>Scenario: Surface water from an upstream source area of Springvale Drain (Site 1)<br>(n = 13; DF = NR; Sampling Period: 2004 - 2005) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 48.7 µg/L (AM) | NR | NR |
| Chen et al. 1995<br>***HERO ID:*** *659873*<br>*OQD:* Medium | Orange County, Florida, US<br>Scenario: Surface water from Wide Cyprus Swamp near a landfill<br>(n = 12; DF = 0.5; Sampling Period: 1989 - 1993) | LOD: Not Reported<br>LOQ: Not Reported | POINT VALUE(S): [0.06 µg/L; 0.06 µg/L; 0.06 µg/L; 0.07 µg/L; 0.07 µg/L; 0.06 µg/L; ND; ND; ND; ND; ND; ND] | | | | |

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**Table 7 – continued from previous page**

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Enwright Assoc Inc et al. 1984<br>***HERO ID:*** *1335577*<br>*OQD:* Medium | Virginia, US<br>Scenario: Raw intake water supplied to Allied Corporation, Chesterfield Plant<br>(n = 6; DF = 0; Sampling Period: Feb., 1984) | LOD: 4.5 µg/L<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Ellis et al. 2007<br>***HERO ID:*** *3544475*<br>*OQD:* Medium | Birmingham, GB<br>Scenario: River Tame surface water downstream the Birmingham Triassic sandstone aquifer effluent<br>(n = 35; DF = 0.358; Sampling Period: 2001) | LOD: 0.1 µg/L<br>LOQ: Not Reported | NR | 25.74 µg/L | 0.95 µg/L (AM) | NR | NR |
| Roy F. Weston Inc et al. 1986<br>***HERO ID:*** *5436115*<br>*OQD:* Medium | Burlington, VT, US<br>Scenario: Surface water from Fire Department Training Area and old landfill at Burlington Air National Guard Base<br>(n = 3; DF = 0; Sampling Period: Sept., 1984) | LOD: 5.0 µg/L<br>LOQ: Not Reported | NR | NR | <LOD | NR | NR |
| Roy F. Weston Inc et al. 1986<br>***HERO ID:*** *5436115*<br>*OQD:* Medium | Burlington, VT, US<br>Scenario: Surface Water from Construction Landfill at Burlington Air National Guard Base<br>(n = 3; DF = 0; Sampling Period: Sept., 1984) | LOD: 5.0 µg/L<br>LOQ: Not Reported | NR | NR | <LOD | NR | NR |
| Bigsby et al. 1989<br>***HERO ID:*** *5449639*<br>*OQD:* Uninformative | Near Junction City in northeast Kansas (Geary County), US<br>Scenario: Surface water from Smokey Hill River<br>(n = 3; DF = 0; Sampling Period: Sept., 1988) | LOD: 0.5 µg/L<br>LOQ: Not Reported | NR | NR | <LOD | NR | NR |

Table 8: Data Extraction Tables of Exposure Monitoring Studies for Wastewater

| Citation Information | Site and Data Description | Limit (LOD/LOQ) | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|---|
| Bell et al. 1993<br>***HERO ID:*** *658661*<br>*OQD:* Medium | Ontario, CA<br>Scenario: Wastewater off-gas from Skyway in Burlington<br>(n = 4; DF = NR; Sampling Period: 1993) | LOD: 1.0 $\mu g/m^3$<br>LOQ: Not Reported | NR | 5 $\mu g/m^3$ | NR | NR | NR |
| Bell et al. 1993<br>***HERO ID:*** *658661*<br>*OQD:* Medium | Ontario, CA<br>Scenario: Wastewater off-gas from Highland Creek in Metropolitan Toronto<br>(n = 4; DF = NR; Sampling Period: 1993) | LOD: 1.0 $\mu g/m^3$<br>LOQ: Not Reported | NR | 298 $\mu g/m^3$ | NR | NR | NR |
| Enwright Assoc Inc et al. 1984<br>***HERO ID:*** *1335577*<br>*OQD:* Medium | Virginia, US<br>Scenario: Chemical pond wastewater from Allied Corporation, Chesterfield Plant<br>(n = 21; DF = 0; Sampling Period: Feb., 1984) | LOD: 4.5 $\mu g/L$<br>LOQ: Not Reported | NR | NR | ND | NR | NR |
| Ghassemi et al. 1984<br>***HERO ID:*** *1358515*<br>*OQD:* Medium | USA, US<br>Scenario: Leachate from 11 waste disposal sites<br>(n = 8; DF = 0.25; Sampling Period: Jan., 1981 - Jan., 1983) | LOD: Not Reported<br>LOQ: Not Reported | NR | NR | 0.594 mg/L (AM) | NR | NR |

Table 9: Data Extraction Tables of Exposure Modeling Studies for Groundwater

| Citation Information | Site and Data Description | Min | Max | Mean | Percentile | Variance |
|---|---|---|---|---|---|---|
| Lee et al. 2002<br>***HERO ID:*** *33739*<br>*OQD:* Medium | Taoyuan City, TW (Modeled Location)<br>Scenario: Modeled dermal chronic intake exposure from residential groundwater use near former electronics manufacturing factory | POINT VALUE(S): [0.0000325 mg/kg/day] | | | | |
| Lee et al. 2002<br>***HERO ID:*** *33739*<br>*OQD:* Medium | Taoyuan City, TW (Modeled Location)<br>Scenario: Modeled inhalation chronic intake exposure from residential groundwater use near former electronics manufacturing factory | POINT VALUE(S): [0.00311 mg/kg/day] | | | | |

Table 10: Glossary of Select Terms for Data Extraction

| Term | Definition |
|---|---|
| /day | per day |
| $\mu$- | micro- |
| AM | Arithmetic Mean |
| ASD | Arithmetic Standard Deviation |
| AU | Australia |
| BDL | Below Detection Limit |
| BW | Bodyweight |
| CA | Canada |
| CA, US | California |
| CO | Colorado |
| DF | Detection Frequency |
| DWTP | Drinking Water Treatment Plant |
| EPA | Environmental Protection Agency |
| ES | Spain |
| $ft^2$ | feet squared |
| g | gram |
| GA | Georgia |
| GB | Great Britain |
| GM | Geometric Mean |
| h | hour |
| IN | Indiana |
| k- | kilo- |
| L | liter |
| L- | Landfill |
| LOD | Limit of Detection |
| LOQ | Limit of Quantification |
| m | meter |
| m- | milli- |
| $m^2$ | square meter |
| $m^3$ | cubic meter |
| MA | Massachusetts |
| MDL | Method Detection Limit |
| mol | mole |
| MR | Madrid Region |
| MRL | Method Reporting Limit |
| n | Sample Size |
| n- | nano- |
| NC | North Carolina |
| ND | Non-Detected |
| NR | Not Reported |
| OQD | Overall Quality Determination |
| OR | Oregon |
| p- | pico- |
| PA | Pennsylvania |
| PDMS | polydimethylsiloxane rubber composite |
| PM | Particulate Matter |
| POCIS | polar organic chemical integrative sampler |
| RSD | Relative Standard Deviation |
| SE | Sweden |

**Continued on next page . . .**

**Table 10 . . . continued from previous page**

| Term | Definition |
|---|---|
| SPMD | semipermeable membrane device |
| STP | Sewage Treatment Plant |
| SVOC | Semi-Volatile Organic Compound |
| TW | Taiwan |
| TX | Texas |
| US or USA | United States of America |
| VA | Virginia |
| VT | Vermont |