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Ms. Leslie Blake  
Remedial Project Manager  
Superfund Division  
U.S. EPA, Region 5  
77 West Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604

August 1, 2017

Subject: Vapor Intrusion Analytical Results at the Keystone Corridor Groundwater Contamination Site, Marion, County, Indiana

Dear Ms. Blake,

Per the U.S. Environmental Protection Agency's (U.S. EPA's) request, please find attached tables of the analytical results from samples collected in 2017 to assess vapor intrusion potential at the Keystone Corridor Groundwater Contamination Site (Site). The data includes subslab soil vapor and indoor and crawl space air samples from both commercial and residential properties identified for the remedial investigation (RI). All data presented in these tables are validated per the approved Quality Assurance Project Plan (QAPP) for this project.

For any questions regarding this material, please do not hesitate to contact me at 513-587-7013 or via email at [brett.fishwild@ch2m.com](mailto:brett.fishwild@ch2m.com).

Regards,  
CH2M HILL, Inc.

A handwritten signature in black ink, appearing to read 'Brett A. Fishwild'.

Brett A. Fishwild  
Site Manager

Table 1  
Indoor and Crawl Space Air Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels    |                                |                                |                            |                            | CP-002                             | CP-003                              | CP-008                              | CP-010                              | CP-010                              | CP-010                              | CP-013                              |
|---------------------------------------|-------|--------------------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                       |       | Indoor Air RSL<br>(CR = 1E-04) | Indoor Air RSL<br>(CR = 1E-05) | Indoor Air RSL<br>(CR = 1E-06) | Indoor Air RSL<br>(HI = 1) | Indoor Air RSL<br>(HI = 3) | KC-CP-002-IA-01-022717<br>1/1/2017 | KC-CP-003-IA-01-022417<br>2/24/2017 | KC-CP-008-CS-01-022117<br>2/21/2017 | KC-CP-010-CS-01-022117<br>2/21/2017 | KC-CP-010-IA-01-022217<br>2/22/2017 | KC-CP-010-IA-02-022217<br>2/22/2017 | KC-CP-013-CS-01-022317<br>2/23/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                            | ---                            | ---                            | 22000                      | 66000                      | 0.68 U                             | 0.02 J                              | 0.73 U                              | 0.73 U                              | 0.042                               | 0.14                                | 0.062                               |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 21                             | 2.1                            | 0.21                           | ---                        | ---                        | 0.68 U                             | 0.045 UJ                            | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.032 U                             | 0.038 U                             |
| 1,1,2-Trichloroethane                 | ug/m3 | 77                             | 7.7                            | 0.77                           | 0.88                       | 2.6                        | 2.7 U                              | 0.18 UJ                             | 0.73 U                              | 0.73 U                              | 0.15 U                              | 0.13 U                              | 0.15 U                              |
| 1,1-Dichloroethane                    | ug/m3 | 770                            | 77                             | 7.7                            | ---                        | ---                        | 0.68 U                             | 0.045 UJ                            | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.02 J                              | 0.038 U                             |
| 1,1-Dichloroethene                    | ug/m3 | ---                            | ---                            | ---                            | 880                        | 2600                       | 0.68 U                             | 0.045 J                             | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.032 U                             | 0.038 U                             |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 0.2                            | 0.02                           | 0.002                          | 0.88                       | 2.6                        | 2.7 U                              | 0.18 UJ                             | 0.73 U                              | 0.73 U                              | 0.15 U                              | 0.13 U                              | 0.15 U                              |
| 1,2-Dibromoethane                     | ug/m3 | 2                              | 0.2                            | 0.02                           | 39                         | 120                        | 0.68 U                             | 0.045 UJ                            | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.032 U                             | 0.038 U                             |
| 1,2-Dichloroethane                    | ug/m3 | 47                             | 4.7                            | 0.47                           | 31                         | 93                         | 0.68 U                             | 0.083 J                             | 0.29 J                              | 0.27 J                              | 0.17                                | 0.13                                | 0.13                                |
| 1,2-Dichloropropane                   | ug/m3 | 120                            | 12                             | 1.2                            | 18                         | 54                         | 0.68 U                             | 0.016 J                             | 0.73 U                              | 0.73 U                              | 0.021 J                             | 0.018 J                             | 0.013 J                             |
| Bromodichloromethane                  | ug/m3 | 33                             | 3.3                            | 0.33                           | ---                        | ---                        | 0.68 U                             | 0.79 J                              | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.032 U                             | 0.038 U                             |
| Bromoform                             | ug/m3 | 1100                           | 110                            | 11                             | ---                        | ---                        | NR                                 | NR                                  | 0.73 U                              | 0.73 U                              | NR                                  | NR                                  | NR                                  |
| Bromomethane                          | ug/m3 | ---                            | ---                            | ---                            | 22                         | 66                         | 0.68 U                             | 0.044 J                             | 0.73 U                              | 0.73 U                              | 0.037 J                             | 0.036                               | 0.038 U                             |
| Carbon tetrachloride                  | ug/m3 | 200                            | 20                             | 2                              | 440                        | 1300                       | 0.68 U                             | 0.58 J                              | 0.37 J                              | 0.36 J                              | 0.46                                | 0.5                                 | 0.66                                |
| Chlorodibromomethane                  | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.68 U                             | 0.09 J                              | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.016 J                             | 0.017 J                             |
| Chloroethane                          | ug/m3 | ---                            | ---                            | ---                            | 44000                      | 130000                     | 0.68 U                             | 0.1 J                               | 0.73 U                              | 0.73 U                              | 0.02 J                              | 0.023 J                             | 0.024 J                             |
| Chloroform                            | ug/m3 | 53                             | 5.3                            | 0.53                           | 430                        | 1300                       | 2.7 U                              | 15 J                                | 0.73 U                              | 0.73 U                              | 0.17                                | 0.32                                | 0.46                                |
| Chloromethane                         | ug/m3 | ---                            | ---                            | ---                            | 390                        | 1200                       | 2.3 J                              | 0.68 J                              | 0.37 J                              | 0.38 J                              | 0.41                                | 0.53 J                              | 0.3 J                               |
| cis-1,2-Dichloroethene                | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.68 U                             | 0.12 J                              | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.032 U                             | 0.038 U                             |
| Dichlorodifluoromethane               | ug/m3 | ---                            | ---                            | ---                            | 440                        | 1300                       | 3 J                                | 2.9 J                               | 12                                  | 2.6                                 | 2.5                                 | 2.8                                 | 2.5                                 |
| Methylene Chloride                    | ug/m3 | 120000                         | 12000                          | 1200                           | 2600                       | 7800                       | 2.7 U                              | 0.43 J                              | 1.7                                 | 2.4                                 | 1.3                                 | 1.1                                 | 11                                  |
| Tetrachloroethene                     | ug/m3 | 4700                           | 470                            | 47                             | 180                        | 540                        | 660                                | 7.7 J                               | 0.4 J                               | 8.5                                 | 8.8                                 | 33                                  | 0.44                                |
| trans-1,2-Dichloroethene              | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.68 U                             | 0.045 UJ                            | 0.73 U                              | 0.73 U                              | 0.018 J                             | 0.032 U                             | 0.42                                |
| Trichloroethylene                     | ug/m3 | 300                            | 30                             | 3                              | 8.8                        | ---                        | 12 J                               | 0.2 J                               | 0.73 U                              | 0.73 U                              | 0.13                                | 0.081                               | 0.059                               |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                            | ---                            | ---                            | 130000                     | 390000                     | 0.68 U                             | 0.52 J                              | 1.4                                 | 1.1                                 | 0.49                                | 0.51                                | 0.74                                |
| Vinyl Chloride                        | ug/m3 | 280                            | 28                             | 2.8                            | 440                        | 1300                       | 0.68 U                             | 0.027 J                             | 0.73 U                              | 0.73 U                              | 0.037 U                             | 0.032 U                             | 0.038 U                             |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

NR = Analyte not reported by lab for TO15 SIM analysis

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

***Italics results*** indicate exceedence of screening level (CR = 1E-05)

**Boxed results** indicate exceedence of screening level (CR = 1E-06)

**Bold** results indicate exceedence of screening level (HI = 1)

**Highlighted results** indicate exceedence of screening level (HI = 3)

Table 1  
Indoor and Crawl Space Air Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels    |                                |                                |                            |                            | CP-013                              | CP-013                              | CP-016                              | CP-016                              | CP-016                              | CP-017                              | CP-019                              |
|---------------------------------------|-------|--------------------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                       |       | Indoor Air RSL<br>(CR = 1E-04) | Indoor Air RSL<br>(CR = 1E-05) | Indoor Air RSL<br>(CR = 1E-06) | Indoor Air RSL<br>(HI = 1) | Indoor Air RSL<br>(HI = 3) | KC-CP-013-IA-01-022317<br>2/23/2017 | KC-CP-013-IA-02-022417<br>2/24/2017 | KC-CP-016-IA-01-022717<br>2/27/2017 | KC-CP-016-IA-02-022417<br>2/24/2017 | KC-CP-016-IA-04-022717<br>2/27/2017 | KC-CP-017-IA-01-022317<br>2/23/2017 | KC-CP-019-IA-01-022717<br>2/27/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                            | ---                            | ---                            | 22000                      | 66000                      | 0.049 J                             | 0.065 J                             | 3.3 J                               | 3.3 J                               | 5.5 J                               | 0.09 J                              | 0.039 U                             |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 21                             | 2.1                            | 0.21                           | ---                        | ---                        | 0.081 U                             | 0.041 U                             | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.039 U                             |
| 1,1,2-Trichloroethane                 | ug/m3 | 77                             | 7.7                            | 0.77                           | 0.88                       | 2.6                        | 0.32 U                              | 0.16 U                              | 0.34 U                              | 0.17 UJ                             | 0.25 U                              | 0.68 U                              | 0.16 U                              |
| 1,1-Dichloroethane                    | ug/m3 | 770                            | 77                             | 7.7                            | ---                        | ---                        | 0.081 U                             | 0.041 U                             | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.039 U                             |
| 1,1-Dichloroethene                    | ug/m3 | ---                            | ---                            | ---                            | 880                        | 2600                       | 0.081 U                             | 0.041 U                             | 0.19 J                              | 0.033 J                             | 0.062 U                             | 0.17 U                              | 0.039 U                             |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 0.2                            | 0.02                           | 0.002                          | 0.88                       | 2.6                        | 0.32 U                              | 0.16 U                              | 0.34 U                              | 0.17 UJ                             | 0.25 U                              | 0.68 U                              | 0.16 U                              |
| 1,2-Dibromoethane                     | ug/m3 | 2                              | 0.2                            | 0.02                           | 39                         | 120                        | 0.081 U                             | 0.041 U                             | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.039 U                             |
| 1,2-Dichloroethane                    | ug/m3 | 47                             | 4.7                            | 0.47                           | 31                         | 93                         | 0.082                               | 0.08 J                              | 0.13 J                              | 0.12 J                              | 0.25 J                              | 0.17                                | 0.064 J                             |
| 1,2-Dichloropropane                   | ug/m3 | 120                            | 12                             | 1.2                            | 18                         | 54                         | 0.081 U                             | 0.024 J                             | 0.057 J                             | 0.036 J                             | 0.14 J                              | 0.064 J                             | 0.039 U                             |
| Bromodichloromethane                  | ug/m3 | 33                             | 3.3                            | 0.33                           | ---                        | ---                        | 0.49                                | 0.89                                | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.65                                |
| Bromoform                             | ug/m3 | 1100                           | 110                            | 11                             | ---                        | ---                        | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  |
| Bromomethane                          | ug/m3 | ---                            | ---                            | ---                            | 22                         | 66                         | 0.035 J                             | 0.11 J                              | 0.036 J                             | 0.038 J                             | 0.041 J                             | 0.066 J                             | 0.039 U                             |
| Carbon tetrachloride                  | ug/m3 | 200                            | 20                             | 2                              | 440                        | 1300                       | 0.55                                | 0.55 J                              | 0.64 J                              | 0.55 J                              | 0.59 J                              | 0.52                                | 0.5 J                               |
| Chlorodibromomethane                  | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.11                                | 0.17 J                              | 0.085 U                             | 0.024 J                             | 0.062 U                             | 0.17 U                              | 0.094 J                             |
| Chloroethane                          | ug/m3 | ---                            | ---                            | ---                            | 44000                      | 130000                     | 0.046 J                             | 0.047 J                             | 0.085 U                             | 0.051 J                             | 0.031 J                             | 0.061 J                             | 0.042                               |
| Chloroform                            | ug/m3 | 53                             | 5.3                            | 0.53                           | 430                        | 1300                       | 2.2                                 | 2.8 J                               | 0.34 J                              | 0.37 J                              | 0.26 J                              | 1.9                                 | 8.7 J                               |
| Chloromethane                         | ug/m3 | ---                            | ---                            | ---                            | 390                        | 1200                       | 0.8 J                               | 0.49 J                              | 0.99 J                              | 0.55 J                              | 0.91 J                              | 1.9 J                               | 0.55 J                              |
| cis-1,2-Dichloroethene                | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.081 U                             | 1.8 J                               | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.039 U                             |
| Dichlorodifluoromethane               | ug/m3 | ---                            | ---                            | ---                            | 440                        | 1300                       | 2.4                                 | 2.8 J                               | 3.5 J                               | 3.2 J                               | 3.9 J                               | 2.8                                 | 2.2 J                               |
| Methylene Chloride                    | ug/m3 | 120000                         | 12000                          | 1200                           | 2600                       | 7800                       | 84                                  | 0.46 J                              | 17 J                                | 4.8 J                               | 1.7 J                               | 0.66 J                              | 0.61 J                              |
| Tetrachloroethene                     | ug/m3 | 4700                           | 470                            | 47                             | 180                        | 540                        | 0.63                                | 310 J                               | 36 J                                | 34 J                                | 200 J                               | 84                                  | 1.8                                 |
| trans-1,2-Dichloroethene              | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 2.6                                 | 0.031 J                             | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.039 U                             |
| Trichloroethylene                     | ug/m3 | 300                            | 30                             | 3                              | 8.8                        | ---                        | 0.054 J                             | 4.5 J                               | 3.9 J                               | 4.9 J                               | 22 J                                | 0.95                                | 0.16 J                              |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                            | ---                            | ---                            | 130000                     | 390000                     | 0.58                                | 0.6 J                               | 0.67 J                              | 0.61 J                              | 0.66 J                              | 0.55                                | 0.56 J                              |
| Vinyl Chloride                        | ug/m3 | 280                            | 28                             | 2.8                            | 440                        | 1300                       | 0.081 U                             | 0.079 J                             | 0.085 U                             | 0.041 UJ                            | 0.062 U                             | 0.17 U                              | 0.039 U                             |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

NR = Analyte not reported by lab for TO15 SIM analysis

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

***Italics results*** indicate exceedence of screening level (CR = 1E-05)

**Boxed results** indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

**Highlighted results** indicate exceedence of screening level (HI = 3)

Table 1  
Indoor and Crawl Space Air Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels    |                                |                                |                            |                            | CP-023                              | CP-023                              | CP-023                              | CP-023                              | CP-024                              | CP-051                              | CP-051                              |
|---------------------------------------|-------|--------------------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                       |       | Indoor Air RSL<br>(CR = 1E-04) | Indoor Air RSL<br>(CR = 1E-05) | Indoor Air RSL<br>(CR = 1E-06) | Indoor Air RSL<br>(HI = 1) | Indoor Air RSL<br>(HI = 3) | KC-CP-023-IA-01-022217<br>2/22/2017 | KC-CP-023-IA-02-022217<br>2/22/2017 | KC-CP-023-IA-03-022217<br>2/22/2017 | KC-CP-023-IA-04-022217<br>2/22/2017 | KC-CP-024-IA-01-022317<br>2/23/2017 | KC-CP-051-IA-01-022617<br>2/26/2017 | KC-CP-051-IA-02-022617<br>2/26/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                            | ---                            | ---                            | 22000                      | 66000                      | 0.027 J                             | 0.051                               | 0.2 U                               | 0.084                               | 0.72                                | 0.22 J                              | 0.037 J                             |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 21                             | 2.1                            | 0.21                           | ---                        | ---                        | 0.038 U                             | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.043 U                             | 0.036 U                             | 0.047 U                             |
| 1,1,2-Trichloroethane                 | ug/m3 | 77                             | 7.7                            | 0.77                           | 0.88                       | 2.6                        | 0.15 U                              | 0.16 U                              | 0.81 U                              | 0.17 U                              | 0.17 U                              | 0.14 U                              | 0.19 U                              |
| 1,1-Dichloroethane                    | ug/m3 | 770                            | 77                             | 7.7                            | ---                        | ---                        | 0.038 U                             | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.043 U                             | 0.013 J                             | 0.047 U                             |
| 1,1-Dichloroethene                    | ug/m3 | ---                            | ---                            | ---                            | 880                        | 2600                       | 0.038 U                             | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.043 U                             | 0.035 J                             | 0.047 U                             |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 0.2                            | 0.02                           | 0.002                          | 0.88                       | 2.6                        | 0.15 U                              | 0.16 U                              | 0.81 U                              | 0.17 U                              | 0.17 U                              | 0.14 U                              | 0.19 U                              |
| 1,2-Dibromoethane                     | ug/m3 | 2                              | 0.2                            | 0.02                           | 39                         | 120                        | 0.038 U                             | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.043 U                             | 0.036 U                             | 0.047 U                             |
| 1,2-Dichloroethane                    | ug/m3 | 47                             | 4.7                            | 0.47                           | 31                         | 93                         | 0.32 J                              | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.24                                | 0.074 J                             | 0.076 J                             |
| 1,2-Dichloropropane                   | ug/m3 | 120                            | 12                             | 1.2                            | 18                         | 54                         | 0.03 J                              | 0.064 J                             | 0.2 U                               | 0.049                               | 0.055                               | 0.21 J                              | 0.21 J                              |
| Bromodichloromethane                  | ug/m3 | 33                             | 3.3                            | 0.33                           | ---                        | ---                        | 0.038 U                             | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.043 U                             | 3.6 J                               | 0.85 J                              |
| Bromoform                             | ug/m3 | 1100                           | 110                            | 11                             | ---                        | ---                        | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  |
| Bromomethane                          | ug/m3 | ---                            | ---                            | ---                            | 22                         | 66                         | 0.047 J                             | 0.06                                | 0.2 U                               | 0.053                               | 0.03 J                              | 0.022 J                             | 0.028 J                             |
| Carbon tetrachloride                  | ug/m3 | 200                            | 20                             | 2                              | 440                        | 1300                       | 0.56 J                              | 0.63 J                              | 0.47                                | 0.58                                | 0.53                                | 1 J                                 | 0.52 J                              |
| Chlorodibromomethane                  | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.038 U                             | 0.035 J                             | 0.2 U                               | 0.033 J                             | 0.02 J                              | 0.64 J                              | 0.14 J                              |
| Chloroethane                          | ug/m3 | ---                            | ---                            | ---                            | 44000                      | 130000                     | 0.037 J                             | 0.052                               | 0.2 U                               | 0.061                               | 0.039 J                             | 0.038 J                             | 0.044 J                             |
| Chloroform                            | ug/m3 | 53                             | 5.3                            | 0.53                           | 430                        | 1300                       | 0.26 J                              | 0.16 U                              | 0.81 U                              | 0.6                                 | 0.5                                 | 20 J                                | 3.7 J                               |
| Chloromethane                         | ug/m3 | ---                            | ---                            | ---                            | 390                        | 1200                       | 0.62 J                              | 0.53 J                              | 1.1 J                               | 0.61 J                              | 0.086 UJ                            | 0.54 J                              | 0.5 J                               |
| cis-1,2-Dichloroethene                | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.038 U                             | 0.04 U                              | 0.2 U                               | 0.041 U                             | 0.043 U                             | 0.063 J                             | 0.047 U                             |
| Dichlorodifluoromethane               | ug/m3 | ---                            | ---                            | ---                            | 440                        | 1300                       | 3 J                                 | 5.7                                 | 2.7                                 | 2.9                                 | 2.2                                 | 3 J                                 | 2.7 J                               |
| Methylene Chloride                    | ug/m3 | 120000                         | 12000                          | 1200                           | 2600                       | 7800                       | 0.62 J                              | 0.88                                | 20                                  | 7                                   | 2.1                                 | 0.62 J                              | 4.1 J                               |
| Tetrachloroethene                     | ug/m3 | 4700                           | 470                            | 47                             | 180                        | 540                        | 34 J                                | 130 J                               | 200 J                               | 85 J                                | 570                                 | 8.5 J                               | 0.92 J                              |
| trans-1,2-Dichloroethene              | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.013 J                             | 0.04 U                              | 0.2 U                               | 0.012 J                             | 0.014 J                             | 0.055 J                             | 0.25 J                              |
| Trichloroethylene                     | ug/m3 | 300                            | 30                             | 3                              | 8.8                        | ---                        | 0.22 J                              | 0.57 J                              | 0.46 J                              | 0.29                                | 7.3                                 | 0.48 J                              | 0.066 J                             |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                            | ---                            | ---                            | 130000                     | 390000                     | 0.66 J                              | 0.66                                | 0.61 J                              | 0.67                                | 0.52                                | 0.62 J                              | 0.6 J                               |
| Vinyl Chloride                        | ug/m3 | 280                            | 28                             | 2.8                            | 440                        | 1300                       | 0.038 U                             | 0.036 J                             | 0.2 U                               | 0.041 U                             | 0.043 U                             | 0.036 U                             | 0.047 U                             |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

NR = Analyte not reported by lab for TO15 SIM analysis

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

***Italics results*** indicate exceedence of screening level (CR = 1E-05)

**Boxed results** indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

**Highlighted results** indicate exceedence of screening level (HI = 3)

Table 1  
Indoor and Crawl Space Air Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels    |                                |                                |                            |                            | CP-056                              | CP-064                              | CP-064                              | CP-064                              | CP-067                              |
|---------------------------------------|-------|--------------------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                       |       | Indoor Air RSL<br>(CR = 1E-04) | Indoor Air RSL<br>(CR = 1E-05) | Indoor Air RSL<br>(CR = 1E-06) | Indoor Air RSL<br>(HI = 1) | Indoor Air RSL<br>(HI = 3) | KC-CP-056-IA-01-022517<br>2/25/2017 | KC-CP-064-CS-01-032417<br>3/24/2017 | KC-CP-064-IA-01-032417<br>3/24/2017 | KC-CP-064-IA-02-032417<br>3/24/2017 | KC-CP-067-IA-01-022717<br>2/27/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                            | ---                            | ---                            | 22000                      | 66000                      | 3.7                                 | 0.18                                | 0.12                                | 0.058                               | 0.018 J                             |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 21                             | 2.1                            | 0.21                           | ---                        | ---                        | 0.041 U                             | 0.014 U                             | 0.015 U                             | 0.016 U                             | 0.046 U                             |
| 1,1,2-Trichloroethane                 | ug/m3 | 77                             | 7.7                            | 0.77                           | 0.88                       | 2.6                        | 0.16 U                              | 0.016 U                             | 0.017 U                             | 0.017 U                             | 0.19 U                              |
| 1,1-Dichloroethane                    | ug/m3 | 770                            | 77                             | 7.7                            | ---                        | ---                        | 0.018 J                             | 0.012 U                             | 0.013 U                             | 0.028 J                             | 0.046 U                             |
| 1,1-Dichloroethene                    | ug/m3 | ---                            | ---                            | ---                            | 880                        | 2600                       | 0.02 J                              | 0.017 U                             | 0.018 U                             | 0.071                               | 0.12 J                              |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 0.2                            | 0.02                           | 0.002                          | 0.88                       | 2.6                        | 0.16 U                              | 0.019 U                             | 0.02 U                              | 0.021 U                             | 0.19 U                              |
| 1,2-Dibromoethane                     | ug/m3 | 2                              | 0.2                            | 0.02                           | 39                         | 120                        | 0.041 U                             | 0.016 U                             | 0.017 U                             | 0.017 U                             | 0.046 U                             |
| 1,2-Dichloroethane                    | ug/m3 | 47                             | 4.7                            | 0.47                           | 31                         | 93                         | 0.07                                | 0.15                                | 0.064                               | 0.21                                | 0.076 J                             |
| 1,2-Dichloropropane                   | ug/m3 | 120                            | 12                             | 1.2                            | 18                         | 54                         | 0.032 J                             | 0.023 J                             | 0.025 J                             | 0.025 J                             | 0.027 J                             |
| Bromodichloromethane                  | ug/m3 | 33                             | 3.3                            | 0.33                           | ---                        | ---                        | 0.18                                | 0.059                               | 0.075                               | 0.29                                | 2.4                                 |
| Bromoform                             | ug/m3 | 1100                           | 110                            | 11                             | ---                        | ---                        | NR                                  | NR                                  | NR                                  | NR                                  | NR                                  |
| Bromomethane                          | ug/m3 | ---                            | ---                            | ---                            | 22                         | 66                         | 0.035 J                             | 0.027 J                             | 0.032 J                             | 0.024 J                             | 0.036 J                             |
| Carbon tetrachloride                  | ug/m3 | 200                            | 20                             | 2                              | 440                        | 1300                       | 0.48 J                              | 0.48                                | 0.5                                 | 0.55                                | 0.68 J                              |
| Chlorodibromomethane                  | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.031 J                             | 0.018 U                             | 0.018 U                             | 0.055                               | 0.37                                |
| Chloroethane                          | ug/m3 | ---                            | ---                            | ---                            | 44000                      | 130000                     | 0.017 J                             | 0.029 J                             | 0.027 J                             | 0.098                               | 0.083                               |
| Chloroform                            | ug/m3 | 53                             | 5.3                            | 0.53                           | 430                        | 1300                       | 1.1                                 | 2.3                                 | 3.1                                 | 15                                  | 26 J                                |
| Chloromethane                         | ug/m3 | ---                            | ---                            | ---                            | 390                        | 1200                       | 0.56 J                              | 0.34                                | 0.37                                | 0.46                                | 0.81 J                              |
| cis-1,2-Dichloroethene                | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.041 U                             | 0.018 U                             | 0.019 U                             | 0.02 U                              | 0.046 U                             |
| Dichlorodifluoromethane               | ug/m3 | ---                            | ---                            | ---                            | 440                        | 1300                       | 2.6                                 | 2.9                                 | 3.4                                 | 2.9                                 | 2.8 J                               |
| Methylene Chloride                    | ug/m3 | 120000                         | 12000                          | 1200                           | 2600                       | 7800                       | 0.29                                | 1                                   | 0.63                                | 1.2                                 | 0.42 J                              |
| Tetrachloroethene                     | ug/m3 | 4700                           | 470                            | 47                             | 180                        | 540                        | 2.1                                 | 0.17                                | 0.093                               | 0.25                                | 0.74                                |
| trans-1,2-Dichloroethene              | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.041 U                             | 0.015 U                             | 0.015 U                             | 0.016 U                             | 0.046 U                             |
| Trichloroethylene                     | ug/m3 | 300                            | 30                             | 3                              | 8.8                        | ---                        | 1.6 J                               | 0.019 J                             | 0.024 J                             | 0.033 J                             | 0.069 J                             |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                            | ---                            | ---                            | 130000                     | 390000                     | 0.56                                | 0.7                                 | 0.51                                | 0.74                                | 0.59 J                              |
| Vinyl Chloride                        | ug/m3 | 280                            | 28                             | 2.8                            | 440                        | 1300                       | 0.041 U                             | 0.015 U                             | 0.016 U                             | 0.031 J                             | 0.064 J                             |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

NR = Analyte not reported by lab for TO15 SIM analysis

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

***Italics results*** indicate exceedence of screening level (CR = 1E-05)

**Boxed results** indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

**Highlighted results** indicate exceedence of screening level (HI = 3)

Table 2  
Indoor and Crawl Space Air Results - Residential  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Residential Screening Levels   |                                |                                |                            |                            | RP-039                                  | RP-039                                  | RP-041                                  | RP-041                                  | RP-042                                  | RP-042                                  | RP-047                                  | RP-062                                  | RP-062                                  |
|---------------------------------------|-------|--------------------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Indoor Air RSL<br>(CR = 1E-04) | Indoor Air RSL<br>(CR = 1E-05) | Indoor Air RSL<br>(CR = 1E-06) | Indoor Air RSL<br>(HI = 1) | Indoor Air RSL<br>(HI = 3) | KC-RP-039-CS-01-<br>022217<br>2/22/2017 | KC-RP-039-IA-01-<br>022217<br>2/22/2017 | KC-RP-041-CS-01-<br>022517<br>2/25/2017 | KC-RP-041-IA-01-<br>022517<br>2/25/2017 | KC-RP-042-CS-01-<br>022517<br>2/25/2017 | KC-RP-042-IA-01-<br>022817<br>2/28/2017 | KC-RP-047-IA-01-<br>022217<br>2/22/2017 | KC-RP-062-IA-01-<br>022517<br>2/25/2017 | KC-RP-062-IA-02-<br>022517<br>2/25/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                            | ---                            | ---                            | 5200                       | 16000                      | 1.8                                     | 3.3                                     | 0.62 J                                  | 0.36 J                                  | 0.82                                    | 0.39 J                                  | 2                                       | 0.08 J                                  | 0.069 J                                 |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 4.8                            | 0.48                           | 0.048                          | ---                        | ---                        | 0.042 U                                 | 0.039 U                                 | 0.034 U                                 | 0.06                                    | 0.037 U                                 | 0.032 U                                 | 0.041 U                                 | 0.038 U                                 | 0.032 U                                 |
| 1,1,2-Trichloroethane                 | ug/m3 | 18                             | 1.8                            | 0.18                           | 0.21                       | 0.63                       | 0.17 U                                  | 0.15 U                                  | 0.14 U                                  | 0.17 U                                  | 0.15 U                                  | 0.13 U                                  | 0.17 U                                  | 0.15 U                                  | 0.13 U                                  |
| 1,1-Dichloroethane                    | ug/m3 | 180                            | 18                             | 1.8                            | ---                        | ---                        | 0.042 U                                 | 0.019 J                                 | 0.051 J                                 | 0.42 J                                  | 0.037 U                                 | 0.032 U                                 | 0.043                                   | 0.019 J                                 | 0.032 U                                 |
| 1,1-Dichloroethene                    | ug/m3 | ---                            | ---                            | ---                            | 210                        | 630                        | 0.042 U                                 | 0.017 J                                 | 0.034 U                                 | 0.043 U                                 | 0.037 U                                 | 0.032 U                                 | 0.019 J                                 | 0.038 U                                 | 0.032 U                                 |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 0.017                          | 0.0017                         | 0.00017                        | 0.21                       | 0.63                       | 0.17 U                                  | 0.15 U                                  | 0.14 U                                  | 0.17 U                                  | 0.15 U                                  | 0.13 U                                  | 0.17 U                                  | 0.15 U                                  | 0.13 U                                  |
| 1,2-Dibromoethane                     | ug/m3 | 0.47                           | 0.047                          | 0.0047                         | 9.4                        | 28                         | 0.042 U                                 | 0.039 U                                 | 0.014 J                                 | 0.043 U                                 | 0.037 U                                 | 0.032 U                                 | 0.041 U                                 | 0.046 J                                 | 0.032 U                                 |
| 1,2-Dichloroethane                    | ug/m3 | 11                             | 1.1                            | 0.11                           | 7.3                        | 22                         | 0.5                                     | 0.22                                    | 0.17 J                                  | 11 J                                    | 0.093                                   | 0.13 J                                  | 3.7                                     | 0.11 J                                  | 0.093 J                                 |
| 1,2-Dichloropropane                   | ug/m3 | 28                             | 2.8                            | 0.28                           | 4.2                        | 13                         | 0.017 J                                 | 0.034 J                                 | 0.024 J                                 | 0.04 J                                  | 0.021 J                                 | 0.029 J                                 | 0.032 J                                 | 0.032 J                                 | 0.036 J                                 |
| Bromodichloromethane                  | ug/m3 | 7.6                            | 0.76                           | 0.076                          | ---                        | ---                        | 0.28                                    | 1.8                                     | 0.034 U                                 | 0.47 J                                  | 0.037 U                                 | 0.032 U                                 | 1.8                                     | 0.037 J                                 | 0.23 J                                  |
| Bromomethane                          | ug/m3 | ---                            | ---                            | ---                            | 5.2                        | 16                         | 0.042 U                                 | 0.032 J                                 | 0.048 J                                 | 0.049 J                                 | 0.037 U                                 | 0.036 J                                 | 0.039 J                                 | 0.033 J                                 | 0.026 J                                 |
| Carbon tetrachloride                  | ug/m3 | 47                             | 4.7                            | 0.47                           | 100                        | 300                        | 1                                       | 1.2                                     | 0.74 J                                  | 0.86 J                                  | 0.8 J                                   | 0.74 J                                  | 0.59                                    | 0.5 J                                   | 0.51 J                                  |
| Chlorodibromomethane                  | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.042 J                                 | 0.28                                    | 0.034 U                                 | 0.1 J                                   | 0.037 U                                 | 0.032 U                                 | 0.34                                    | 0.027 J                                 | 0.042 J                                 |
| Chloroethane                          | ug/m3 | ---                            | ---                            | ---                            | 10000                      | 30000                      | 0.042 U                                 | 0.029 J                                 | 0.034 U                                 | 0.092 J                                 | 0.037 U                                 | 0.019 J                                 | 0.068                                   | 0.029 J                                 | 0.025 J                                 |
| Chloroform                            | ug/m3 | 12                             | 1.2                            | 0.12                           | 100                        | 300                        | 1.2                                     | 5.2                                     | 0.54 J                                  | 2.4 J                                   | 1.1                                     | 0.66 J                                  | 5.3                                     | 0.2 J                                   | 1 J                                     |
| Chloromethane                         | ug/m3 | ---                            | ---                            | ---                            | 94                         | 280                        | 0.35                                    | 0.4                                     | 0.81 J                                  | 2.3 J                                   | 0.46 J                                  | 0.69 J                                  | 0.57                                    | 0.42 J                                  | 0.44 J                                  |
| cis-1,2-Dichloroethene                | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.042 U                                 | 0.025 J                                 | 0.034 U                                 | 0.043 U                                 | 0.037 U                                 | 0.032 U                                 | 0.019 J                                 | 0.038 J                                 | 0.032 U                                 |
| Dichlorodifluoromethane               | ug/m3 | ---                            | ---                            | ---                            | 100                        | 300                        | 2.5                                     | 2.7                                     | 3.8 J                                   | 2.3 J                                   | 2.7                                     | 3.2 J                                   | 2.3                                     | 2.9 J                                   | 2.8 J                                   |
| Methylene Chloride                    | ug/m3 | 10000                          | 1000                           | 100                            | 630                        | 1900                       | 2.5                                     | 1.3                                     | 0.68 J                                  | 1.1 J                                   | 0.43                                    | 0.47 J                                  | 33                                      | 0.51 J                                  | 0.34 J                                  |
| Tetrachloroethene                     | ug/m3 | 1100                           | 110                            | 11                             | 42                         | 130                        | 67                                      | 190                                     | 8.8 J                                   | 6.4 J                                   | 7.8                                     | 3.2 J                                   | 5.4                                     | 0.27 J                                  | 0.28 J                                  |
| trans-1,2-Dichloroethene              | ug/m3 | ---                            | ---                            | ---                            | ---                        | ---                        | 0.042 U                                 | 0.02 J                                  | 0.012 J                                 | 0.043 U                                 | 0.037 U                                 | 0.01 J                                  | 0.016 J                                 | 0.042 J                                 | 0.032 U                                 |
| Trichloroethylene                     | ug/m3 | 48                             | 4.8                            | 0.48                           | 2.1                        | ---                        | 2.2                                     | 6.3                                     | 0.4 J                                   | 0.28 J                                  | 0.5 J                                   | 0.23 J                                  | 4.5                                     | 0.06 J                                  | 0.022 J                                 |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                            | ---                            | ---                            | 31000                      | 94000                      | 2.2                                     | 0.54                                    | 0.87 J                                  | 0.56 J                                  | 0.57                                    | 0.65 J                                  | 0.53                                    | 0.57 J                                  | 0.58 J                                  |
| Vinyl Chloride                        | ug/m3 | 17                             | 1.7                            | 0.17                           | 100                        | 300                        | 0.042 U                                 | 0.039 U                                 | 0.034 U                                 | 0.043 U                                 | 0.037 U                                 | 0.032 U                                 | 0.041 U                                 | 0.012 J                                 | 0.032 U                                 |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-003                                  | CP-008                                  | CP-010                                  | CP-010                                  | CP-010                                  | CP-010                                  | CP-010                                  | CP-010                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-003-SS-01-<br>022417<br>2/24/2017 | KC-CP-008-SS-01-<br>022117<br>2/21/2017 | KC-CP-010-SS-01-<br>022117<br>2/21/2017 | KC-CP-010-SS-02-<br>022117<br>2/21/2017 | KC-CP-010-SS-03-<br>022117<br>2/21/2017 | KC-CP-010-SS-04-<br>022117<br>2/21/2017 | KC-CP-010-SS-05-<br>022117<br>2/21/2017 | KC-CP-010-SS-06-<br>022117<br>2/21/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 0.47 J                                  | 0.78                                    | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.48 J                                  |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 1.5 UJ                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 0.34 J                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.27 J                                  | 0.32 J                                  | 0.7 U                                   |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 0.25 J                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.31 J                                  | 0.71 U                                  | 0.7 U                                   |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 0.64 J                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 1.5 UJ                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 4,000                                   | 76                                      | 3.2 J                                   | 5.8                                     | 2.5                                     | 310                                     | 14                                      | 4.1                                     |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.32 J                                  | 0.44 J                                  | 0.75                                    | 0.52 J                                  | 0.7 U                                   |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 48                                      | 0.64 J                                  | 1,300                                   | 100                                     | 11                                      | 23                                      | 31                                      | 130                                     |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 0.23 J                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 0.43 J                                  | 0.4 J                                   | 8.2 U                                   | 0.42 J                                  | 0.41 J                                  | 0.4 J                                   | 0.45 J                                  | 0.38 J                                  |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 0.75 U                                  | 0.74 U                                  | 8.2 U                                   | 0.74 U                                  | 0.75 U                                  | 0.73 U                                  | 0.71 U                                  | 0.7 U                                   |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-010                                  | CP-010                                  | CP-010                                  | CP-011                                  | CP-011                                  | CP-013                                  | CP-013                                  | CP-013                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-010-SS-07-<br>022117<br>2/21/2017 | KC-CP-010-SS-08-<br>022117<br>2/21/2017 | KC-CP-010-SS-09-<br>022117<br>2/21/2017 | KC-CP-011-SS-01-<br>022317<br>2/23/2017 | KC-CP-011-SS-02-<br>022317<br>2/23/2017 | KC-CP-013-SS-01-<br>022417<br>2/24/2017 | KC-CP-013-SS-02-<br>022417<br>2/24/2017 | KC-CP-013-SS-03-<br>022317<br>2/23/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 1                                       | 2.3 J                                   | 1.4                                     | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 1.4 UJ                                  | 1.4 UJ                                  | 260 UJ                                  | 1,100 UJ                                | 78 U                                    |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.29 J                                  | 0.31 J                                  | 0.29 J                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 0.76 U                                  | 2.5 U                                   | 0.41 J                                  | 0.35 J                                  | 0.27 J                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 0.76 U                                  | 2.5 U                                   | 19                                      | 10                                      | 0.53 J                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 1.4 UJ                                  | 1.4 UJ                                  | 260 UJ                                  | 1,100 UJ                                | 78 U                                    |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 4.8                                     | 2.8                                     | 2.5                                     | 3.2 J                                   | 2                                       | 130 U                                   | 540 U                                   | 78 U                                    |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 66                                      | 400                                     | 690                                     | 110                                     | 250                                     | 18,000                                  | 99,000                                  | 11,000                                  |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 1.4                                     | 0.72 U                                  | 96 J                                    | 1,100                                   | 22 J                                    |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 0.39 J                                  | 2.5 U                                   | 0.4 J                                   | 0.44 J                                  | 0.42 J                                  | 130 U                                   | 540 U                                   | 78 U                                    |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 0.76 U                                  | 2.5 U                                   | 0.7 U                                   | 0.72 U                                  | 0.72 U                                  | 130 U                                   | 540 U                                   | 78 U                                    |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-016                                  | CP-016                                  | CP-016                                  | CP-016                                  | CP-016                                  | CP-016                                  | CP-016                                  | CP-016                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-016-SS-01-<br>022717<br>2/27/2017 | KC-CP-016-SS-02-<br>022717<br>2/27/2017 | KC-CP-016-SS-03-<br>022417<br>2/24/2017 | KC-CP-016-SS-04-<br>022417<br>2/24/2017 | KC-CP-016-SS-05-<br>022417<br>2/24/2017 | KC-CP-016-SS-06-<br>022417<br>2/24/2017 | KC-CP-016-SS-07-<br>022717<br>2/27/2017 | KC-CP-016-SS-08-<br>022717<br>2/27/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 530                                     | 760                                     | 1,200                                   | 770                                     | 2,600                                   | 1,100                                   | 1,700                                   | 1,000                                   |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 8.5                                     | 10                                      | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 0.73 U                                  | 0.73 U                                  | 80 UJ                                   | 7.5 UJ                                  | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 0.73 U                                  | 0.28 J                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 4.3                                     | 5.8                                     | 40 U                                    | 2.8 J                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 0.33 J                                  | 2.9                                     | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 0.73 UJ                                 | 0.73 UJ                                 | 80 UJ                                   | 7.5 UJ                                  | 15 U                                    | 83 U                                    | 37 UJ                                   | 470 UJ                                  |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 2.5                                     | 2.4                                     | 40 U                                    | 2.6 J                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 1.6                                     | 7                                       | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 190 J                                   |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 84                                      | 31                                      | 6,100                                   | 630                                     | 1,600                                   | 14,000                                  | 7,100                                   | 67,000                                  |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 130                                     | 180                                     | 3,000                                   | 62                                      | 2,400                                   | 11,000                                  | 2,900                                   | 5,400                                   |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 2                                       | 3.3                                     | 40 U                                    | 3.1 J                                   | 11 J                                    | 83 U                                    | 37 U                                    | 470 U                                   |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 0.73 U                                  | 0.73 U                                  | 40 U                                    | 3.8 U                                   | 15 U                                    | 83 U                                    | 37 U                                    | 470 U                                   |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-016                                  | CP-016                                  | CP-016                                  | CP-016                                  | CP-017                                  | CP-017                                  | CP-017                                  | CP-017                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-016-SS-09-<br>022317<br>2/23/2017 | KC-CP-016-SS-10-<br>022317<br>2/23/2017 | KC-CP-016-SS-11-<br>022217<br>2/22/2017 | KC-CP-016-SS-12-<br>022217<br>2/22/2017 | KC-CP-017-SS-01-<br>022217<br>2/22/2017 | KC-CP-017-SS-02-<br>022217<br>2/22/2017 | KC-CP-017-SS-03-<br>022217<br>2/22/2017 | KC-CP-017-SS-04-<br>022217<br>2/22/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 500 J                                   | 1,400                                   | 100 J                                   | 340                                     | 410                                     | 160                                     | 740                                     | 350 U                                   |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 540 U                                   | 790 UJ                                  | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 540 U                                   | 790 UJ                                  | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 92,000                                  | 65,000                                  | 22,000                                  | 26,000                                  | 65,000                                  | 11,000                                  | 150,000                                 | 54,000                                  |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 1,900                                   | 2,900                                   | 130 U                                   | 44 J                                    | 210 J                                   | 90                                      | 4,300                                   | 350 U                                   |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 540 U                                   | 390 U                                   | 130 U                                   | 150 U                                   | 380 U                                   | 76 U                                    | 500 U                                   | 350 U                                   |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-017                              | CP-017                              | CP-018                              | CP-018                              | CP-018                              | CP-019                              | CP-023                              | CP-023                              |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-017-SS-05-022317<br>2/23/2017 | KC-CP-017-SS-06-022317<br>2/23/2017 | KC-CP-018-SS-01-022817<br>2/28/2017 | KC-CP-018-SS-02-022817<br>2/28/2017 | KC-CP-018-SS-03-022817<br>2/28/2017 | KC-CP-019-SS-01-022717<br>2/27/2017 | KC-CP-023-SS-01-022217<br>2/22/2017 | KC-CP-023-SS-02-022217<br>2/22/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 68 U                                | 260 U                               | 380 U                               | 240 J                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 140 UJ                              | 520 UJ                              | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 35                                  | 370 U                               | 210 U                               |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 7.8                                 | 370 U                               | 210 U                               |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 1,800                               | 370 U                               | 210 U                               |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 140 UJ                              | 520 UJ                              | 380 UJ                              | 690 UJ                              | 250 UJ                              | 6.5 UJ                              | 370 U                               | 210 U                               |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 2.9 J                               | 370 U                               | 210 U                               |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 68 U                                | 260 U                               | 130 J                               | 350 J                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 7,600                               | 50,000                              | 65,000                              | 120,000                             | 36,000                              | 990                                 | 65,000                              | 32,000                              |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 68 U                                | 260 U                               | 1,300                               | 1,700                               | 180 J                               | 32                                  | 220 J                               | 69 J                                |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 68 U                                | 260 U                               | 380 U                               | 690 U                               | 250 U                               | 6.5 U                               | 370 U                               | 210 U                               |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-023                                  | CP-023                                  | CP-023                                  | CP-023                                  | CP-023                                  | CP-023                                  | CP-023                                  | CP-023                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-023-SS-03-<br>022217<br>2/22/2017 | KC-CP-023-SS-04-<br>022217<br>2/22/2017 | KC-CP-023-SS-05-<br>022217<br>2/22/2017 | KC-CP-023-SS-06-<br>022217<br>2/22/2017 | KC-CP-023-SS-07-<br>022217<br>2/22/2017 | KC-CP-023-SS-08-<br>022217<br>2/22/2017 | KC-CP-023-SS-09-<br>022217<br>2/22/2017 | KC-CP-023-SS-10-<br>022217<br>2/22/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 140 U                                   | 54 J                                    | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 53,000 J                                | 40,000                                  | 68,000                                  | 71,000                                  | 65,000                                  | 90,000                                  | 78,000                                  | 4,700                                   |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 210                                     | 140 J                                   | 280 J                                   | 390                                     | 530 U                                   | 700 U                                   | 510 U                                   | 20                                      |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 140 U                                   | 160 U                                   | 380 U                                   | 300 U                                   | 530 U                                   | 700 U                                   | 510 U                                   | 15 U                                    |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-024                                  | CP-024                                  | CP-024                                 | CP-027                                  | CP-027                                  | CP-053                                  | CP-056                                  | CP-056                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-024-SS-01-<br>022217<br>2/22/2017 | KC-CP-024-SS-02-<br>022217<br>2/22/2017 | KC-CP-024-SS-03-<br>022217<br>1/1/2017 | KC-CP-027-SS-01-<br>022317<br>2/23/2017 | KC-CP-027-SS-02-<br>022317<br>2/23/2017 | KC-CP-053-SS-01-<br>022417<br>2/24/2017 | KC-CP-056-SS-01-<br>022517<br>2/25/2017 | KC-CP-056-SS-02-<br>022517<br>2/25/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 89 U                                    | 340 U                                   | 140 J                                  | 410                                     | 550                                     | 2,300                                   | 530                                     | 390                                     |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.35 J                                  |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 3.6 J                                   | 1.7                                     |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 31 UJ                                   | 0.78 U                                  | 0.81 U                                  |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 89 U                                    | 340 U                                   | 180 U                                  | 490                                     | 250                                     | 16 U                                    | 4.2                                     | 2.6                                     |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 89 U                                    | 340 U                                   | 180 U                                  | 2,900                                   | 310                                     | 16 U                                    | 73                                      | 7.8                                     |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 31 UJ                                   | 0.78 U                                  | 0.81 U                                  |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 240                                     | 3.1                                     | 2.7                                     |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 14,000                                  | 50,000                                  | 24,000                                 | 20,000                                  | 26,000                                  | 9.8 J                                   | 230                                     | 77                                      |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 91                                      | 270 J                                   | 320                                    | 1,000                                   | 1,400                                   | 4.9 J                                   | 95                                      | 76                                      |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 19                                      | 6                                       | 4                                       |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 89 U                                    | 340 U                                   | 180 U                                  | 120 U                                   | 140 U                                   | 16 U                                    | 0.78 U                                  | 0.81 U                                  |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

*Italics results* indicate exceedence of screening level (CR = 1E-05)

Boxed results indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

Highlighted results indicate exceedence of screening level (HI = 3)

Table 3  
Subslab Vapor Results - Commercial  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Commercial Screening Levels     |                                 |                                 |                             |                             | CP-064                                  | CP-067                                  | CP-067                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-CP-064-SS-01-<br>032317<br>3/23/2017 | KC-CP-067-SS-01-<br>022717<br>2/27/2017 | KC-CP-067-SS-02-<br>022717<br>2/27/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 730000                      | 220000                      | 76                                      | 2.3                                     | 1.2                                     |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 700                             | 70                              | 7                               | --                          | ---                         | 0.22 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,1,2-Trichloroethane                 | ug/m3 | 2600                            | 260                             | 26                              | 29                          | 88                          | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,1-Dichloroethane                    | ug/m3 | 26000                           | 2600                            | 260                             | --                          | ---                         | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,1-Dichloroethene                    | ug/m3 | ---                             | ---                             | --                              | 29000                       | 88000                       | 0.25 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 6.8                             | 0.68                            | 0.07                            | 29                          | 88                          | 0.14 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,2-Dibromoethane                     | ug/m3 | 68                              | 6.8                             | 0.68                            | 1300                        | 3900                        | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,2-Dichloroethane                    | ug/m3 | 1600                            | 160                             | 16                              | 1000                        | 3100                        | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| 1,2-Dichloropropane                   | ug/m3 | 4100                            | 410                             | 41                              | 580                         | 1800                        | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| Bromodichloromethane                  | ug/m3 | 1100                            | 110                             | 11                              | --                          | ---                         | 0.22 U                                  | 0.72 U                                  | 0.75 U                                  |
| Bromoform                             | ug/m3 | 37000                           | 3700                            | 370                             | --                          | ---                         | 0.22 U                                  | 0.72 U                                  | 0.75 U                                  |
| Bromomethane                          | ug/m3 | ---                             | ---                             | --                              | 730                         | 2200                        | 0.28 U                                  | 0.72 U                                  | 0.75 U                                  |
| Carbon tetrachloride                  | ug/m3 | 6800                            | 680                             | 68                              | 15000                       | 44000                       | 0.22 U                                  | 0.43 J                                  | 0.24 J                                  |
| Chlorodibromomethane                  | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| Chloroethane                          | ug/m3 | ---                             | ---                             | --                              | 1500000                     | 4400000                     | 0.25 U                                  | 0.72 U                                  | 0.75 U                                  |
| Chloroform                            | ug/m3 | 1800                            | 180                             | 18                              | 14000                       | 43000                       | 1.3                                     | 0.72 U                                  | 0.75 U                                  |
| Chloromethane                         | ug/m3 | ---                             | ---                             | --                              | 13000                       | 39000                       | 0.22 U                                  | 0.72 UJ                                 | 0.75 UJ                                 |
| cis-1,2-Dichloroethene                | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.23 U                                  | 0.72 U                                  | 0.75 U                                  |
| Dichlorodifluoromethane               | ug/m3 | ---                             | ---                             | --                              | 15000                       | 44000                       | 2.2                                     | 2.4                                     | 2.3                                     |
| Methylene Chloride                    | ug/m3 | 4100000                         | 410000                          | 41000                           | 88000                       | 260000                      | 0.25 U                                  | 0.72 U                                  | 0.75 U                                  |
| Tetrachloroethene                     | ug/m3 | 160000                          | 16000                           | 1600                            | 5800                        | 18000                       | 0.87                                    | 150                                     | 71                                      |
| trans-1,2-Dichloroethene              | ug/m3 | ---                             | ---                             | --                              | --                          | ---                         | 0.28 U                                  | 0.72 U                                  | 0.75 U                                  |
| Trichloroethylene                     | ug/m3 | 10000                           | 1000                            | 100                             | 290                         | ---                         | 0.2 U                                   | 0.72 U                                  | 0.75 U                                  |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | ---                             | ---                             | --                              | 4400000                     | 13000000                    | 0.43 J                                  | 0.42 J                                  | 0.39 J                                  |
| Vinyl Chloride                        | ug/m3 | 9300                            | 930                             | 93                              | 15000                       | 44000                       | 0.25 U                                  | 0.72 U                                  | 0.75 U                                  |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

***Italics results*** indicate exceedence of screening level (CR = 1E-05)

**Boxed results** indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

**Highlighted results** indicate exceedence of screening level (HI = 3)

Table 4  
Subslab Vapor Results - Residential  
Keystone Corridor Groundwater Contamination Site

|                                       |       | Residential Screening Levels    |                                 |                                 |                             |                             | RP-039                                  | RP-042                                  | RP-047                                  | RP-062                                  |
|---------------------------------------|-------|---------------------------------|---------------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
|                                       |       | Soil Vapor VISL<br>(CR = 1E-04) | Soil Vapor VISL<br>(CR = 1E-05) | Soil Vapor VISL<br>(CR = 1E-06) | Soil Vapor VISL<br>(HI = 1) | Soil Vapor VISL<br>(HI = 3) | KC-RP-039-SS-01-<br>022117<br>2/21/2017 | KC-RP-042-SS-01-<br>022417<br>2/24/2017 | KC-RP-047-SS-01-<br>022117<br>2/21/2017 | KC-RP-062-SS-01-<br>022417<br>2/24/2017 |
| 1,1,1-Trichloroethane                 | ug/m3 | ---                             | ---                             | --                              | 170000                      | 520000                      | 170                                     | 130                                     | 39                                      | 30                                      |
| 1,1,2,2-Tetrachloroethane             | ug/m3 | 160                             | 16                              | 1.6                             | --                          | --                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| 1,1,2-Trichloroethane                 | ug/m3 | 580                             | 58                              | 5.8                             | 7                           | 21                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| 1,1-Dichloroethane                    | ug/m3 | 5800                            | 580                             | 58                              | --                          | --                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| 1,1-Dichloroethene                    | ug/m3 |                                 | ---                             | --                              | 7000                        | 21000                       | 54 U                                    | 0.54 J                                  | 0.73 U                                  | 0.79 U                                  |
| 1,2-Dibromo-3-chloropropane           | ug/m3 | 0.56                            | 0.06                            | 0.01                            | 7                           | 21                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| 1,2-Dibromoethane                     | ug/m3 | 16                              | 1.6                             | 0.16                            | 310                         | 940                         | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| 1,2-Dichloroethane                    | ug/m3 | 360                             | 36                              | 3.6                             | 240                         | 730                         | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| 1,2-Dichloropropane                   | ug/m3 | 940                             | 94                              | 9.4                             | 140                         | 420                         | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| Bromodichloromethane                  | ug/m3 | 250                             | 25                              | 2.5                             | --                          | --                          | 54 U                                    | 0.32 J                                  | 0.73 U                                  | 0.79 U                                  |
| Bromoform                             | ug/m3 | 8500                            | 850                             | 85                              | --                          | --                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| Bromomethane                          | ug/m3 | --                              | ---                             | --                              | 170                         | 520                         | 54 U                                    | 0.55 J                                  | 0.73 U                                  | 0.79 U                                  |
| Carbon tetrachloride                  | ug/m3 | 1600                            | 160                             | 16                              | 3500                        | 10000                       | 37 J                                    | 49                                      | 0.66 J                                  | 0.79 U                                  |
| Chlorodibromomethane                  | ug/m3 | --                              | ---                             | --                              | --                          | --                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| Chloroethane                          | ug/m3 | --                              | ---                             | --                              | 350000                      | 1000000                     | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| Chloroform                            | ug/m3 | 410                             | 41                              | 4.1                             | 3400                        | 10000                       | 55                                      | 150                                     | 4.9                                     | 1.5                                     |
| Chloromethane                         | ug/m3 | --                              | ---                             | --                              | 3100                        | 9400                        | 54 U                                    | 0.44 J                                  | 0.73 U                                  | 0.79 U                                  |
| cis-1,2-Dichloroethene                | ug/m3 | --                              | ---                             | --                              | --                          | --                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| Dichlorodifluoromethane               | ug/m3 | --                              | ---                             | --                              | 3500                        | 10000                       | 54 U                                    | 2                                       | 2.1                                     | 2.2                                     |
| Methylene Chloride                    | ug/m3 | 340000                          | 340000                          | 3400                            | 21000                       | 63000                       | 54 U                                    | 0.81 U                                  | 1.2                                     | 0.79 U                                  |
| Tetrachloroethene                     | ug/m3 | 36000                           | 3600                            | 360                             | 1400                        | 4200                        | 7,700                                   | 760                                     | 95                                      | 310                                     |
| trans-1,2-Dichloroethene              | ug/m3 | --                              | ---                             | --                              | --                          | --                          | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |
| Trichloroethylene                     | ug/m3 | 1600                            | 160                             | 16                              | 70                          | --                          | 260                                     | 87                                      | 33                                      | 9.2                                     |
| Trichlorotrifluoroethane <sup>a</sup> | ug/m3 | --                              | ---                             | --                              | 1040000                     | 3100000                     | 54 U                                    | 0.46 J                                  | 0.4 J                                   | 0.43 J                                  |
| Vinyl Chloride                        | ug/m3 | 560                             | 56                              | 5.6                             | 3500                        | 10000                       | 54 U                                    | 0.81 U                                  | 0.73 U                                  | 0.79 U                                  |

<sup>a</sup> RSL for 1,1,2-trichloro-1,2,2-trifluoroethane used as a surrogate for trichlorotrifluoroethane.

" --- " means no screening level available

Underlined results indicate exceedence of screening level (CR = 1E-04)

***Italics results*** indicate exceedence of screening level (CR = 1E-05)

**Boxed results** indicate exceedence of screening level (CR = 1E-06)

**Bold results** indicate exceedence of screening level (HI = 1)

**Highlighted results** indicate exceedence of screening level (HI = 3)