



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

**MAY 24 2012**

Mr. Christopher Powers  
Project Manager  
General Services Administration  
1500 East Bannister Road  
Kansas City, Missouri 64131

Dear Mr. Powers:

The U.S. Environmental Protection Agency has reviewed the July 2011 Area Air and Sub-Slab Air Quarterly Monitoring Report-Buildings 1 and 2 Report-Revised, dated December 13, 2011, for the General Services Administration Bannister Federal Complex, located at 1500 East Bannister Road, Kansas City, Missouri. This report adequately addressed the comments in our email dated April 25, 2012, and therefore, we are approving this report.

The conclusions presented in this report are provided as an enclosure to this letter. If you have any questions, please contact me at (913) 551-7566 or by e-mail at [Hammerschmidt.ron@epa.gov](mailto:Hammerschmidt.ron@epa.gov). If I am not available, please contact Ron King, Technical Lead, at (913) 551-7568.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald F. Hammerschmidt".

Ronald F. Hammerschmidt, Ph.D.  
Director  
Environmental Services Division

Enclosure

***Conclusions from the July 2011 Area Air and Sub-Slab Air Quarterly Monitoring Report Buildings 1 and 2 Report-Revised, dated December 13, 2011***

1. The July 2011 sub-slab air monitoring results indicated a concentration of trichloroethene (TCE) above the site-specific screening levels in sub-slab samples U19 (Fan Room 3B), E23 (GSA Warehouse Former Shower Room), and W8 (DOC Warehouse Former Shower Room). Chloroform was detected at a concentration above the site-specific screening level in sub-slab sample A19 (South Utility Room) and its associated duplicate sample (Dup-SS).
2. TCE was detected above the site-specific screening levels in indoor air samples W17 and associated duplicate sample (Former Mail Room), Y18 (FEMA Office Space), U17 (Department of Defense/DOD Office of Inspector General), AA17 (Northern Freight Elevator), OB27 (Unoccupied Office Space), R17 (Veterans Affairs/VA Office Space), R16 (South Freight Elevator), R16-EXT (Outside of South Freight Elevator), R10 (Passenger Elevator), U19 (Fan Room 3B), E23 (GSA Warehouse Former Shower Room), W8 (DOC Warehouse Former Shower Room), W8-RR (DOC Warehouse Rest Room), W8-WH (DOC Warehouse), P25 (Utility Room-Caged Area), R2 (Fan Room 1B), OD8 (Pump Room), J19 (Utility Room – Cafeteria), A19 (Utility Room – South), and K8 (Former Shower Room - Hall).
3. Vinyl chloride was detected above the site-specific screening level of in indoor air sample R16 (South Freight Elevator).
4. Methylene chloride was detected at concentrations above the site-specific screening level in indoor air sample AA17 (Northern Freight Elevator).
5. Chloroform was detected at concentrations above the site-specific screening level in indoor air samples OD8 (Pump Room), E23 (GSA Warehouse Former Shower Room), Y18 (FEMA Office Space) and W8 (DOC Warehouse Former Shower Room).
6. PCE was detected at a concentration above the site-specific screening level in indoor air samples Y18 (FEMA Office Space) and AA17 (Northern Freight Elevator).
7. Cis-1,2-DCE was detected at a concentration above the site-specific screening level in indoor air sample W17 and associated duplicate sample (Former Mail Room), R16 (South Freight Elevator), AA17 (Northern Freight Elevator), R17 (Veterans Affairs/VA Office Space), U19 (Fan Room 3B) and U17 (Department of Defense/DOD Office of Inspector General).
8. Benzene was detected above the site-specific screening level in indoor air samples Y18 (FEMA Office Space) and AA17 (Northern Freight Elevator).
9. Ethylbenzene was detected above the site-specific screening level in indoor air samples P25 (Utility Room-Caged Area) and AA17 (Northern Freight Elevator).
10. Naphthalene was detected at a concentration above the site-specific screening levels in indoor air samples OD8 (Pump Room), AA17 (Northern Freight Elevator), Y18 (FEMA Office Space), A19 (Cafeteria Far South Utility Room), E23 (GSA Warehouse Former Shower Room), and K8 (Former Shower Room - Hall).

11. Concentrations of 1,3-dichlorobenzene and 1,4-dichlorobenzene were detected in indoor air sample E23 (GSA Warehouse Former Shower Room) at concentrations above the site-specific screening level.
12. The identified volatile organic compounds (VOC) concentrations exceed the cancer risk level of  $1.0 \times 10^{-6}$ . However, the calculated cancer risk levels (based on maximum detection), are within the target cancer risk range ( $1.0 \times 10^{-6}$  to  $1.0 \times 10^{-4}$ ) that is generally considered acceptable by the EPA.
13. The results indicate a non-cancer risk (based on maximum detection) above the non-cancer risk level hazard quotient (HQ) of 0.1 for TCE, vinyl chloride and cis-1,2-DCE; however, the calculated non-cancer risk levels (based on maximum detection) for vinyl chloride and cis-1,2-DCE, are below the non-cancer hazard index (HI) of 1, which is considered acceptable by the EPA. The identified TCE concentrations, with the exception of those detected at W8 and W8-RR, are below the non-cancer hazard index (HI) of 1, which is considered acceptable by the EPA.
14. Because access to sample locations R10 (Passenger Elevator), R16 (South Freight Elevator), AA17 (North Freight Elevator), W8 (Department of Commerce/DOC Warehouse Shower Room), E23 (GSA Warehouse - Shower Room), and K8 (Former Shower Room) is limited and exposure to workers is intermittent and of short duration, the VOC concentrations detected in the indoor air samples collected from these locations were compared to Short-Term Risk-Based Screening Levels.
15. The indoor air samples collected, with the exception of samples AA17 and E23, did not exhibit VOC concentrations at levels above the detection limit or the Short-Term Risk-Based Screening Levels. Indoor air samples AA17 and E23 exhibited naphthalene concentrations above the Short-Term Risk-Based Screening Level.
16. The 3<sup>rd</sup> quarter calculated cancer cumulative health risk for maximum concentrations for the indoor air and outdoor air VOCs was calculated at  $1.32 \times 10^{-4}$  which is outside (exceeds) the EPA acceptable cancer risk range of  $1.0 \times 10^{-6}$  to  $1.0 \times 10^{-4}$ .
17. Without the inclusion of the short-term exposure locations, 3<sup>rd</sup> quarter calculated cancer cumulative health risk was calculated at  $4.24 \times 10^{-5}$  which is within the EPA acceptable cancer risk range of  $1.0 \times 10^{-6}$  to  $1.0 \times 10^{-4}$ .
18. The calculated cumulative non-cancer HQ for all VOCs was calculated at  $6.43 \times 10^0$  which is above the EPA acceptable HI of 1.
19. Without the inclusion of the short-term exposure locations, the calculated cumulative HQ for the indoor air and outdoor air VOCs was calculated at  $4.20 \times 10^0$  which is above the EPA acceptable HI of 1.
20. Laboratory results of the water sample collected from the south freight elevator sump (indoor air sample location R16) indicate that groundwater located in the vicinity of the south freight elevator (indoor air sample location R16) is impacted by releases of chlorinated solvents to groundwater from either historical site use or from the adjacent Department of Energy (DOE) facility.
21. The potential for groundwater impacts from historical site use and identified chlorinated solvent impacted groundwater plume located under the adjacent Department of Energy (DOE) facility, are likely sources of impact to the GSA BFC sub-slab and indoor air.