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The Dow Chemical Company
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USA

Dr. David H. Garabrant, M.D., M.P.H.
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Dear Dr. Garabrant:

We recently reviewed two articles published in Environmental Science and Technology by Goovaerts, et al (2008a, 2008b) and short paper from Organohalogen Compounds that was presented at Dioxin 2008 by Trinh et al. (2008). We found the research interesting, and would like to investigate the findings further. I am writing this letter to request that several pieces of information be made available:

1. From Goovaerts (2008a)
 - ISCST3 air dispersion modeling input (.inp) and output (.plt) files for air concentration and total deposition flux (wet and dry) that was conducted for the incinerator modeled in the study
 - An ArcGIS grid of the simulation grid (261x261) that was used to simulate the spatial distribution of TEQ values
 - Each of the 100 realizations associated with each grid cell in the simulation grid.
 - A table of matched information on total deposition flux (wet and dry), air concentration, and soil concentration for the 53 historical samples used in this analysis.
 - The specific location (coordinates) of each of the 53 historical samples used in this analysis.

2. From Goovaerts (2008b)
 - The updated 100 realizations associated with each grid cell in the simulation grid
 - A table of matched information on total deposition flux (wet and dry), air concentration, and soil concentration for the 51 UMDES samples used in this analysis. We do not need to know the specific location (coordinates) for the UMDES soil samples in keeping with requirements to keep the data confidential but only need the soil concentrations matched with the air deposition data.

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3. From Trinh (2008)

- A shapefile of the grid node locations modeled for scenarios 1, 2, and 3
- Input and output files for scenario 1 (ISCST3), scenario 2 (AERMOD), and scenario 3 (AERMOD). Please include air concentration and deposition flux (wet and dry).
- A table of matched information on total deposition flux (wet and dry), air concentration, and soil concentration for
 - Scenario 1 – total deposition flux (wet & dry) based on ISCST3 and the 53 historical soil samples
 - Scenario 2 – total deposition flux (wet & dry) based on AERMOD and the 53 historical soil samples
 - Scenario 3 – total deposition flux (wet & dry) based on AERMOD and the 104 soil samples (53 historical + 51 UMDES). We do not need to know the specific location (coordinates) for the UMDES soil samples in keeping with requirements to keep the data confidential but only need the soil concentrations matched with the air deposition data.
- Meteorological data associated with scenario 1 (1987-1991) recorded at Flint, and scenarios 2 and 3 (2001-2005) as provided by MDEQ for the weather station at Midland-Bay-Saginaw.
- The updated realizations associated with each grid cell for scenarios 1, 2, and 3

Thank you for providing this information. It is our hope that these concepts and data can be incorporated into future investigations and modeling that is performed for Midland.

Best Regards,



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References

Goovaerts, P., Trinh, H.T., Demond, A., Franzblau, A., Garabrant, D., Gillespie, B., Lepkowski, J. Adriaens, P. (2008a) *Geostatistical Modeling of the Spatial Distribution of Soil Dioxins in the Vicinity of an Incinerator. 1. Theory and Application to Midland, Michigan*. Environmental Science and Technology. Vol 42, No. 10, pp. 3648-3654.

Goovaerts, P., Trinh, H.T., Demond, A., Towey, T., Chang, S., Gwinn, D., Hong, B., Franzblau, A., Garabrant, D., Gillespie, B., Lepkowski, J. Adriaens, P. (2008b) *Geostatistical Modeling of the Spatial Distribution of Soil Dioxins in the Vicinity of an Incinerator. 2. Verification and Calibration Study*. Environmental Science and Technology. Vol 42, No. 10, pp. 3655-3661.

Trinh, H., Goovaerts, P., Garabrant, D., Hong, B., Gwinn, D., Adriaens, P. (2008a) *Comparison of ISCST3 and AERMOD Air Dispersion Models to Predict Dioxin Deposition from An Incinerator in Midland, Michigan*. Organohalogen Compounds, Vol. 70, pp. 1430-1433.