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Airborne Hexavalent Chromium from Cement Manufacturing in Western Riverside and San Bernardino Counties

Abstract: Based on some slightly elevated hexavalent chromium concentrations found at one site in a regional air toxics study, the South Coast Air Quality Management District launched an investigation to determine the source of the hexavalent chromium emissions. Using deposition plates, ambient monitoring, meteorological analysis, source apportionment, inspections, and surveillance, the source was identified as a cement manufacturing plant in the area. The primary cause was traced to outdoor storage and handling of clinker material. This presentation will summarize the full series of events beginning with the identification of the issue and ending with enhanced regulations to solve the problem.

Bio: Philip Fine, Ph.D. is the Atmospheric Measurement Manager at South Coast Air Quality Management District in Diamond Bar, CA. He oversees the SCAQMD ambient network of over 35 air monitoring stations. He is also responsible for all field activities of numerous special air monitoring research projects focusing on air toxics and the local impacts of air pollution. Prior to joining the SCAQMD, he was a Research Assistant Professor at the University of Southern California, Los Angeles where he taught courses and conducted extensive research on particulate pollution, its health effects, atmospheric science, and measurement methods resulting in over 45 peer-reviewed scientific publications. He received his Ph.D. from California Institute of Technology in Environmental Engineering Science, and his bachelor's degree in Mechanical Engineering from the University of California, Berkeley.