

## AGENDA

1:00 – 1:10	Introductions, Agenda Review	Bob Spoerri & Eric Schaeffer
1:10-1:20	What is FGD Gypsum?	Dave Goss
1:20-1:40	FGD Gypsum impact on metals in soils and plants	Dr. Malcolm Sumner
1:40-2:00	FGD Gypsum, Soil Erosion & Water Quality	Dr. L. Darrell Norton
2:00-2:10	A Farmer's Perspective on FGD Gypsum	Jack Maloney
2:10-2:30	Use of FGD Gypsum in Agriculture	Dr. Warren Dick
2:30-2:50	Risk Assessment for use of FGD Gypsum in Agriculture	Dr. Rufus L. Chaney
2:50-3:05	Break	
3:05- 3:15	Market Factors	Dave Goss
3:15-3:25	Implementing an FGD Gypsum agricultural program	Bob Spoerri & Ron Chamberlain
3:25-3:55	Open Discussion	John Andersen, Moderator
3:55-4:00	Next Steps and Close	Bob Spoerri & Eric Schaeffer

## PRESENTER BIOGRAPHIES

### **David C. Goss**

David C. Goss served as the Executive Director of the American Coal Ash Association from August 2002 until his retirement in February 2009. Previously he worked for Xcel Energy where he coordinated the ash management activities for nine coal-fueled power plants located in Colorado and TDOE's Combustion Byproducts Recycled Consortium (CBRC). He has been active in the EPA's Coal Combustion Products Partnership (C<sup>2</sup>P<sup>2</sup>) since its inception in 2003 and was the CCP industry representative to the Industrial Resources Council (IRC). Goss received his Bachelor of Arts Degree from the University of Denver and a Masters of Public Administration from the University of Oklahoma.

### **Dr. Warren Dick**

Dr. Warren Dick is currently a professor at the School of Environmental and Natural Resources of Ohio State University. Warren grew up on a farm in North Dakota. He was a chemistry major as an undergraduate at Wheaton College in Illinois and attended graduate school at Iowa State University where he received his PhD in 1980 in soil biochemistry. Since 1980 he has worked at The Ohio State University in Wooster, OH. During a sabbatical year in 1991-1992, he worked at AgCanada in Ottawa, Ontario.

Warren has been active in his profession and has served as Editor of the *Journal of Environmental Quality* (1995-2001) and Editor-in-Chief of the Soil Science Society of America (2000-2006) and the American Society of Agronomy (2009- present). He became a Fellow of both the American Society of Agronomy and the Soil Science Society of America in 1997. His research has focused on cycling of carbon, nitrogen and sulfur in soils. Warren has been active since about 1990 on research related to beneficial land application uses of coal combustion products. This has included using clean coal combustion products for mineland reclamation and flue gas desulfurization (FGD) gypsum for agricultural use. Warren teaches a course on Soil and Environmental Biochemistry and has advised more than 25 graduate students and a dozen visiting international scientists. He is on the Ohio Agricultural Research and Development Center's speakers list and has given talks to numerous local, national and international audiences.

### **Dr. L. Darrell Norton**

Dr. L. Darrell Norton is a Research Soil Scientist for the USDA-ARS National Soil Erosion Research Laboratory located on the campus of Purdue University, West Lafayette, IN where he also is a Professor in the Departments of Agronomy and Agricultural and Biological Engineering. He has been with the Laboratory since 1982 conducting research on various aspects of soil erosion related to physio-chemical interactions between soil and rainwater. The last 19 years he has been leading research in the Laboratory to evaluate various industrial byproduct materials for use in controlling erosion and managing water in agricultural production systems. Much of his research has focused on relatively clean high Ca and S containing materials from air purification systems from coal-fired power plants. Dr. Norton's research team

conducted an award winning project that created an environmental friendly synthetic soil from composts of fly-ash, bottom-ash and bio-solids from a pharmaceutical plant for use in reclamation and re-vegetation of strip mined lands. Dr. Norton and co-authors including many of his PhD students have published more than 250 articles and technical reports and has been widely invited to present results of his research at Scientific Congresses all over the World. He has conducted projects and cooperative research with many Agencies in the USA and many International Research Institutions such as CSIRO, Australia, EMBRAPA, Brazil, UN-FAO, India, CAS, China, US-AID, Africa, BARD, Israel, and many University and Institutes in the USA and Europe. He holds a BSc. '75 and MSc. '76 from Purdue University and a PhD '81 from The Ohio State University.

### **Dr. Rufus L. Chaney**

Dr. Rufus L. Chaney is a Senior Research Agronomist in the Environmental Management and By-Product Utilization Laboratory of the USDA-Agricultural Research Service at Beltsville, MD, where he conducts research on the fate, food-chain transfer, and potential effects of soil microelements. He obtained his B.S. from Heidelberg College, Tiffin, OH in 1964 (Chemistry) and his Ph.D. from Purdue University, W. Lafayette, IN (Biochemistry). He has conducted research with USDA-ARS since 1969 in varied laboratories and positions. His research includes studies on 1) plant uptake of metals and translocation to edible plant tissues; considers plant-soil interactions in microelement phytoavailability; 2) speciation of metals in plants and bioavailability to animals; 3) development of hyperaccumulator crops to phytoextract and recycle metals in contaminated soils; 4) bioavailability of lead and other metals in soils, biosolids, and composts directly ingested by animals; 5) development of "Tailor-Made Composts and Biosolids" to remediate Pb, Zn, Cd, Ni and other element contaminated soils including urban gardens; and 6) potential methods to reduce food-chain transfer or toxicity of metals in these organic resources and potential regulatory approaches to protect food safety and soil fertility. These areas of study make him especially qualified to conduct risk assessment for trace elements in agricultural environments. Since beginning his career in 1969, Dr. Chaney has 418 published papers and 255 published abstracts on these topics. He has cooperated with the US-Environmental Protection Agency, the US-Food and Drug Administration, the Office of Management and Budget, and many States in preparing advice and regulations for utilization of biosolids and risk evaluation and remediation of metal contaminated soils.

### **Dr. Malcolm Sumner**

Malcolm Sumner (Professor Emeritus) was a professor at the University of Natal, Pietermaritzburg and at the University of Georgia. He has edited 5 books including the "Handbook of Soil Science". He is also the author/co-author of 2 books, 249 refereed papers, 41 book chapters and 300 other publications. Some career accomplishments include: Fellow, Soil Science Society of America and American Society of Agronomy; Soil Science Society of America Research Award; American Society of Agronomy Werner L. Nelson Award; CSIRO, Australia Sir Frederick McMasters Visiting Fellowship; American Society of Agronomy Research Award; Honorary Doctor of Science, University of Natal; Soil Science Society of America International Award; Soil Science Society of America Distinguished Service Award. He has consulted with various agricultural enterprises, companies, mining houses, state and local

governments throughout the world, including UNDP, FAO, Australian Sugar Industry, ENICHEM (Italy), University of Idaho, and Foundation for Research (South Africa).

### **Robert Spoerri**

Robert Spoerri is currently President and CEO of Beneficial Reuse Management of Chicago, IL which develops beneficial reuse programs for industrial companies to conserve natural resources, preserve landfill space and otherwise benefit the environment. Bob has been involved in building, managing and leading high performance businesses for more than 30 years. He spent over 20 years at LaSalle Partners/Jones Lang LaSalle, the world's leading real estate services and investment management firm, including 10 years as Chief Operating Officer and President. Bob subsequently served as CEO of Comro.com, a company in the real estate technology business and Mapeley PLC, a London based property investment and Development Company. Bob received an MBA degree from Harvard Business School and a B.S. from Indiana University.

### **Ron Chamberlain**

Ron Chamberlain is the Managing Director of Gypsoil, LLC, the FGD Gypsum marketing Division of Beneficial Reuse Management. Ron founded earthANEW, a company specifically focused on marketing byproduct Gypsum for agricultural use, in 2006. Beneficial Reuse Management acquired earthANEW in 2009 and Ron joined the BRM team. His 38 years experience in the Agriculture Industry includes management positions at Ag Spectrum Company, United Agricultural Products, Super Crost Seeds, BASF USA and BASF Europe. Ron has a BS in Agricultural Mechanization from Purdue University.

### **John Andersen**

John Andersen is President and founder of Greenleaf Advisors, LLC, an advisory firm that 'bridges enterprises to build a healthy and sustainable world'. The company has a particular focus on the intersection between the environment and human health. John's thirty years of experience serving businesses, nonprofits, governments and universities, has demonstrated that it takes effective engagement between these sectors to achieve sustainable results on complex issues. Prior to Greenleaf Advisors, John was the Great Lakes Director of The Nature Conservancy and an International Managing Director of Jones Lang LaSalle. He presently serves as a President's Council Member of Heartland Alliance for Human Needs and Human Rights, and is on the Environment and Energy Commission in his home town of Wilmette, IL. He holds a B.A. in economics from Brown University and an MBA from Harvard University. John is currently a faculty member at DePaul University, where he teaches Sustainable Value Creation in the business school.