

# Ash at Work Index of Feature Articles

## Issue 1, 2021 – CCPs in Geotechnical Applications

“Sustainable Use of FGD Structural Fills in Mine Reclamation: Geotechnical Properties and Environmental Response,” By Tarunjit Singh Butalia, Chin-Min Cheng, and Mehedy Amin (The Ohio State University), page 6.

“A Unique Solution to a Challenging Scenario: Placement of an Ash Buttress by Dredging Within an Ash Basin,” By R. Kula Kulasingam, Gabe Lang, and John Priebe (AECOM), page 12.

“Functional Value of Coal Combustion Products for eMSE Structures,” By John P. Swenson (EnCAP-IT), page 18.

“There’s More to CCPs Than Fly Ash,” By Eric Effinger (Charah Solutions), page 22.

“Full-Depth Reclamation and Subgrade Modification,” By Darryl Neapolitano (LafargeHolcim), page 27.

“Risk Evaluation Finds Fly Ash-Based CLSM Safe in Common Applications,” By Rafic Minkara (Boral Resources), page 29.

“Guide to Existing CCP Standards,” By Ivan Diaz (Boral Resources), page 32.

“Important Updates and New and Proposed Standards Related to CCPs,” By Ivan Diaz (Boral Resources), page 35.

## Issue 2, 2020 – Coal Ash 101

“Coal Combustion Products,” By John Simpson (John Ward Inc.), page 6.

“Concrete, Concrete Blocks, and Controlled Low-Strength Material,” By John Simpson (John Ward Inc.), page 12.

“Soil Stabilization, Road Base/Sub-Base, and Structural Fill,” By John Simpson (John Ward Inc.), page 16.

“Cement Production,” By John Simpson (John Ward Inc.), page 20.

“Agriculture and Soil Modification,” By John Simpson (John Ward Inc.), page 22.

“Gypsum Panel Products,” By John Simpson (John Ward Inc.), page 24.

“Mine Reclamation and Waste Stabilization,” By John Simpson (John Ward Inc.), page 26.

“Other End-Use Applications of CCPs,” By John Simpson (John Ward Inc.), page 28.

“The Importance of Logistics in Ash Marketing,” By Rob Reynolds (Charah Solutions), page 32.

“10 Things You Didn’t Know About Fly Ash,” By Rafic Minkara (Boral Resources), page 36.

“Coal Ash Regulation 101,” By John Ward (John Ward Inc.), page 42.

“Coal Ash Is Not Toxic,” By Lisa JN Bradley (Haley & Aldrich), page 46.

## **Issue 1, 2020 – New Frontiers in Coal Ash Beneficial Use**

“New Frontiers in Coal Ash Beneficial Use,” By Rafic Minkara (Boral Resources), page 6.

“Fly Ash Replaces Clay in the Manufacture of Fine Ceramic Tiles,” By Erik Severin (Vecor Limited), page 9.

“Synthetic Lightweight Aggregates as a Sustainable Materials Management Strategy for Coal Fly Ash and Waste Plastics,” By Chris Swan (Tufts University/E3IM LLC), page 12.

“CCPs Help Winter Drivers Get a Grip,” By John Simpson (John Ward Inc.), page 16.

“The Value of ACAA Membership: Four Reasons to Belong,” page 20.

“Coal Ash Is Not Toxic,” By Lisa JN Bradley (Haley & Aldrich), page 24.

“The U.S. Fly Ash Market: Production & Utilization Forecast,” By Alison Premo Black (American Road & Transportation Builders Association), page 34.

## **Issue 2, 2019 - CCPs: Not Just for Concrete**

“Use of FGD Materials in Mine Reclamation: Research to Commercialization,” By Tarunjit Singh Butalia, Jason Cheng, and Robert Baker (The Ohio State University), page 6.

“EPRI Researches Emerging Beneficial Uses,” By Ben Gallagher (Electric Power Research Institute), page 10.

“Sintered Lightweight Aggregate: A Host of End-Use Applications,” By Rafic Minkara (Boral Resources), page 14.

“Beneficial Use of Dry Scrubber Ash in Mainline Asphalt Paving,” By Travis Collins (National Minerals Corporation), page 16.

“Structural Fill: Conserving Natural Resources Through Projects Featuring Rigorous Engineering Standards,” By John Ward (John Ward Inc.), page 19.

“How Well Do You Know CLSM?” By Thomas H. Adams (American Coal Ash Association), page 24.

“Using Business Intelligence to Gauge the U.S. Coal Ash,” By David Cox (FirmoGraphs LLC), page 26.

“FGD Gypsum Is for the Birds,” By Thomas H. Adams (American Coal Ash Association), page 31.

“CFB Ash’s Diverse Beneficial Uses,” By John Simpson (John Ward Inc.), page 34.

## **Issue 1, 2019 - CCP Beneficial Use: The Next 50 Years**

“Alternative Supplementary Cementitious Materials Availability - The Next 50 Years,” By Danny Gray (Charah Solutions), page 6.

“Geosynthetic Solutions for Final Closure: A Decade of Performance,” By Mike Ayers (Watershed Geosynthetics LLC), page 10.

“Mining Coal Ash for Rare Earth Elements,” By John Simpson (John Ward Inc.), page 16.

“Digging Through the Past: Harvesting Legacy Ash Deposits to Meet Future Demand,” By Rafic Minkara (Boral Resources), page 22.

“EPRI and Georgia Power Team Up on Harvested Ash Use Research,” By Ben Gallagher and Ken Ladwig (Electric Power Research Institute), page 28.

“The Future of Coal Ash Beneficial Use: Research and Development Needs for Testing and Qualifying Fly Ash,” By Thomas L. Robl (University of Kentucky Center for Applied Energy Research), page 32.

“A Future Outlook on Harvested Ash,” By Bill Fedorka, Robb Erwin, and Ross Gorman (The SEFA Group), page 36.

“2020 to 2070 and Beyond: Transitioning from Production to Post-Production Coal Ash Use,” By Bruce Sifton and Brad MacKenzie (SonoAsh), page 38.

“Closure-by-Removal Strategies Facilitating Beneficial,” By Joe Laubenstein (Waste Connections), page 42.

## **Issue 2, 2018 - ACAA Celebrates 50 Years**

“Fifty Years of Ash Management and Reuse,” By David C. Goss (American Coal Ash Association [Retired]), page 6.

"31 Key Events in ACAA History," By John Simpson (John Ward Inc.), page 16.

"Future Coal Ash: What Lies Ahead for Beneficial Use of Coal Combustion Products?" By John N. Ward (John Ward Inc.), page 27.

## **Issue 1, 2018 - Ash Around the World**

"An Acoustic Skin of FGD Gypsum for Hamburg, Germany's Top-Class Concert Hall," By Hans-Joachim Feuerborn (European Coal Combustion Products Association), page 6.

"Utilizing the UK's Vast Landfilled Fly Ash Deposits," By Dr. Nigel Cooke (UK Quality Ash Association), page 8.

"The Effect of Land Application of Sludge Stabilized with Coal Fly Ash and Lime on Soil and Crop Quality in Israel," By Dr. Pinchas Fine and Dr. Uri Mingelgrin (Agricultural Research Organization, Volcanic Center), page 10.

"Global Trends in Coal-Fueled Power Generation and the Need for CCP Imports to the Americas," By William Stanley and Rick Haverland (ZAG International), page 14.

"South African Fly Ash Used to Help Build the Continent's Longest Suspension Bridge," By Mark Hunter (South African Coal Ash Association), page 18.

"Fly Ash from Thermal Power Plants in India: The Challenge of 100% Utilization," By Dr. Anjan K. Chatterjee (Conmat Technologies), page 20.

"Environmental Assessment of Coal Fly Ash Usage in Agriculture and Infrastructure Projects in Israel," By Dr. Nadya Teutsch (Geological Survey of Israel), page 28.

"Punching Above its Weight: Australian Innovation and Latrobe Magnesium," By David Paterson (Latrobe Magnesium), page 32.

"Limited Availability of Cementitious Materials Could Impact the Value Chain," By Dr. Vassiem Sheikh (SCB Europe S.r.l.), page 34.

## **Issue 1, 2017 - CCP Supply 2.0: Infrastructure and Logistics Address Shifting Markets**

"CCP Marketing," By John N. Ward (John Ward Inc.), page 6.

"Fly Ash Storage Critical for Increasing Use," By Travis Collins (National Minerals Corporation), page 22.

"Leveraging Data to Plan Coal Combustion Product Supply," By Ross Gorman (The SEFA Group), page 26.

"Coal Fly Ash Regulations Spur Questions over Dust Emissions and Wastewater Control," By Derek Schussele (Dust Control Technology), page 30.

"Key Role of Leachate Data in Evaluating CCP Beneficial Use," By Ari S. Lewis, Eric M. Dubé, and Andrew Bittner (Gradient), page 32.

"Bridging the Gap between Regional Supply and National Demand Through Charah's MultiSource<sup>sm</sup>," By Scott Ziegler (Charah LLC), page 36.

"Environmentally Friendly Pervious Concrete with Fly Ash as Sole Binder Modified by Graphene Oxide," By Gang Xu (Washington State University), page 45.

"Organo-Silane Modified Coal Fly Ash for Use and Leachate Proof Disposal," By Jenberu Feyyisa (University of North Carolina at Charlotte), page 47.

"Coal Ash Cement," By Sarah Hodges (University of Kentucky), page 51.

## **Issue 2, 2016 - Best Coal Ash Management Practices—Integrating Strategies for Disposal and Beneficial Use**

"Methods of Closing CCR Surface Impoundments: Holistic Assessment Key to Developing Effective Plans," By Ari Lewis and Andrew Bittner (Gradient), page 6.

"Integrating Ash Marketing and Management," By J. Gary Gentry (Boral Material Technologies), page 10.

"Paste Technology: Disposing of Flue Gas Desulfurization Wastewater While Addressing Other Coal Combustion Residuals Issues," By Sue Longo (Golder Associates), page 14.

"Charah's Pond Closure Experience Runs Deep," By Danny Gray (Charah LLC), page 18.

"Navajo Generating Station," By Gary England (Headwaters Resources), page 22.

"CCR Surface Impoundment Closure," By Kent Nilsson (TRC), page 26.

"Sonic Reactor Technology for Coal Ash Beneficiation and Rare Earth Element Recovery," By Claudio Arato (SonoAsh), page 28.

"Small to Midsize Industrial Ash Recycling: Niche Ash Residuals Management," By Kristin Ford (Pincelli and Associates Inc.), page 32.

"LiteEarth—Patented Synthetic Grass + EPDM Geomembrane Composite," By Chuck Fleishman (LiteEarth LLC), page 34.

"Promoting Successful Beneficial Use of Coal Combustion Residuals in Maryland," By Robin G. Lee, Leonard G. Rafalko (Environmental Resources Management Inc.), and Paul Petzrick (Maryland Department of Natural Resources), page 36.

## **Issue 1, 2016 - Synthetic Gypsum: Beneficial Uses for Construction and Agriculture**

"Granular Gypsum for Agriculture," By Danny Gray (Charah Inc.), page 6.

"EPRI Research on Use of FGD Gypsum in Agricultural Applications," By Ken Ladwig (Electric Power Research Institute), page 10.

"Gypsum Use Boasts Rich History," By Mundise Mortimer (National Gypsum Company), page 15.

"Gypsum Moves Front and Center as Soil Improvement Tool," By Karen Bernick (Gypsoil), page 20.

"Cultivating Public Policy Support for Agricultural Gypsum," By Nancy Pals (Headwaters Resources) and Joshua More (Schiff Hardin LLP), page 24.

"FGD Gypsum Marketing Applications and Experiences," By G. Craig Plunk (Boral Material Technologies LLC), page 26.

"Coal Combustion Products in the Fabrication of Calcium Sulfoaluminate Cement," By Tristana Y. Duvallet and Thomas L. Robl (University of Kentucky Center for Applied Energy Research), page 30.

"FGD Gypsum—Pure as the Driven Snow?" By Lisa J.N. Bradley (Haley & Aldrich), page 34.

## **Issue 2, 2015 – Beneficiation & Reclamation**

"A New Solution for a Long-Standing Dilemma," By Jimmy C. Knowles and Bill Fedorka (The SEFA Group), page 6.

"We Energies' Coal Combustion Product Beneficiation, Recovery, and Use," By James R. Rosenmerkel and Bruce Ramme (We Energies), page 10.

"How PACT Was Used to Avoid 5 Million Tons of Landfilled Fly Ash," By G. Craig Plunk (Boral Material Technologies LLC), page 14.

"A Personality for Every Pond," By Paul C. Schmall and Christopher J. Colangelo (Moretrench), page 18.

"RestoreAir Carbon Passivation Technology," By Rafic Minkara (Headwaters Resources), page 24.

"Tribo-Electrostatic Beneficiation of Landfilled and Pondered Fly Ash," By Lewis Baker, Abhishek Gupta, Stephen Gasiorowski, and Frank Hrach (ST Equipment & Technology), page 28.

"Improving Beneficial Use, Ash Conditioning, and Metals Stabilization with High-Intensive Mixing," By Keith C. Day, Ethan G. Day (Beneficiate: North America), and Edwin C. Kercher (Kercher Industries Inc.), page 34.

"Challenges in Fly Ash Beneficial Use and Options for Increasing Utilization," By Melissa Harrison and Christopher Poling (SCB International), page 38.

"CarbonBlocker: Waste Management's Patented Solution to Preserving Fly Ash Quality and Use," By Shrief Kabis (Waste Management), page 40.

"Improving Non-Specification Grade Fly Ash for Beneficial Use," By Scott Palmer, LEED AP BD+C (Salt River Materials Group), page 44.

## **Issue 1, 2015 – Sustainability: Improving Product Performance and Longevity with Coal Ash**

"Coal Combustion Product Utilization Is Limited by Lack of Research and Legislation," By Brigitte Brown (University of Wisconsin-Madison), page 16.

"Kauai's Hindu Temple," By John N. Ward (John Ward Inc.), page 20.

"Coal Ash Underground Mine Stabilization" (Ash at Work staff), page 25.

"Comparative Life Cycle Assessment of Traditional Concrete and Concrete Made with Fly Ash," By Christa Heavey, Angelica Hernandez, Shea Hughes, and Lindsay Willman (Stanford University), page 27.

## **Issue 1, 2014 – Beyond Concrete: Coal Ash Beneficial Use Enhances Sustainability in Myriad of Applications**

"A World of Beneficial Uses," By John N. Ward (John Ward Inc.), page 8.

"Technical Considerations for Beneficial Use of Coal Ash in Civil Engineering Applications," By Veronica E. Foster (Golder Associates) and Robert S. Valorio (Minerals Technologies Inc.), page 14.

"Converting Sulfur from Flue Gas into Fertilizer," By Gail Reitenbach (Power Magazine), page 17.

"Cold In-Place Asphalt Recycling with Class C Fly Ash," By Dr. Tyson Rupnow (Louisiana Transportation Center) and Ben Franklin (Headwaters Resources), page 21.

"Flowable Fill Potentially Cuts Months of Construction," By Hank Keiper (The SEFA Group), page 24.

"Environmental Win-Win—ARIPPA's Role: Cleaning Up Historic Coal Waste Sites, Restoring the Land Using Ash" (Ash at Work staff), page 27.

"PURR-fect HARMONY® Advanced Clumping Cat Litter" (Ash at Work Staff), page 32.

"Congressman David McKinley—A New ACAA Champion" (Ash at Work Staff), page 34.

"A Study in Collaborative Success: A Proposal to Sustain it," By Anne Weir (Association of Canadian Industries Recycling Coal Ash), page 36.

## **Issue 1, 2013 – World of Coal Ash in Review**

"World of Coal Ash 2013" (Ash at Work staff), page 4.

"Coal Ash: A Resource for Rare Earth and Strategic Elements," By David Mayfield and Ari Lewis (Gradient), page 17.

"ASHphalt Paving: Better Performance Using Fly Ash-Amended Binders in Asphaltic Concrete," By Art Covi (We Energies), page 22.

## **Issue 1, 2012 - CCPs on the Farm: Why Gypsum Is the Hot New (Old) Tool for Agriculture**

"CCPs in Agriculture," By Dan Zinkand (Dan Zinkand Communications), page 7.

"New Three-Year Project to Advance the Use of FGD Gypsum to Improve Water Quality," By Ken Ladwig (Electric Power Research Institute), page 12.

"Farm Aid: GYPSOIL Connects Farm Market to FGD Gypsum," By Kevin Orfield (Orfield Communications), page 16.

"Environmental Risk Assessment for Gypsum Tells Positive Story," By Karen Bernick (Gypsoil), page 19.

"Coal Ash Material Safety," By Lisa J.N. Bradley (AECOM), page 21.

"Leaching Test Methods," By Patricia McIsaac, Larry Matko, Michael H Dunn, and Richard Sheets (TestAmerica), page 28.



## **Issue 2, 2011 – Crossroads: Which Direction Will America Choose for Coal Combustion Products?**

"Coal Ash at a Crossroads," By John N. Ward (John Ward Inc.), page 14.

"Landfilling vs. Recycling," By Christopher D. Hardin (Haley & Aldrich), page 23.

"Legal Considerations," By Joshua R. More and Ashley L. Thompson (Schiff Hardin LLP), page 27.

"High Volume Fly Ash Grout," By Drew DeCarlo (Headwaters Resources), page 34.

## **Issue 1, 2011 - The \$100 Billion Benefit: Coal Ash in America's Roads and Bridges**

"The \$100 Billion Benefit: New Study Finds Utilizing Coal Ash in Roads and Bridges," By Alison Premo Black (American Road & Transportation Builders Association), page 8.

"Coal Ash in Context," By Lisa J.N. Bradley (AECOM) and John N. Ward (John Ward Inc.), page 14.

"World of Coal Ash 2011: The Science, Applications, and Sustainability of Coal Ash Worldwide" (Ash at Work staff), page 23.

"Focus on Geotechnical Uses: Soil Stabilization for Road Construction," By James R. Rosenmerkel (Lafarge North America), page 34.

"Focus on Geotechnical Uses: Flowable Fill Using Spray Dryer Ash," By Stan Peters (Castle Rock Consulting), page 40.

"Focus on Geotechnical Uses: Structural Fill for Airport Expansion Project," By Mary Reed (Construction Equipment Guide), page 42.

## **Issue 2, 2010 – Investing in Environmental Improvement: CCP Industry Deploys Capital to Improve Performance**

"Investing in Environmental Improvement: Wet to Dry Ash Handling Conversion Completed by Headwaters and Detroit Edison," By Sara Cowgill (Headwaters Resources), page 8.

"Investing in Environmental Improvement: Unique Limestone Grinding Facility Opened," By Scott Sewell (Charah Inc.), page 11.

"Usage Declines May Signal Beginning of Troubling Trend," By David C. Goss (American Coal Ash Association [Consultant]), page 14.

"Technology Focus: Ash Quality Improvement – Ammonia Removal and Recovery," By Joe W. Cochran, S. Frank Kirkconnell, Nathan Kirkconnell, and Paul Longo (PMI Ash Technologies LLC), page 20.

"Technology Focus: Ash Utilization – Porcelain Grade Ceramics," By Ross Guenther (Ceramext LLC), page 26.

"Fly Ash Plays Key Role in Energy Efficient Headquarters Building," By Rachel Retterath (Great River Energy), page 28.

## **Issue 1, 2010 - EPA's Coal Ash Rule Proposals: Good Science vs. Political Science**

"New Bricks, New Market for Fly Ash," By David C. Goss (American Coal Ash Association [Consultant]), page 7.

"Program Pays for Using Coal Ash," By Lura Schmoyer and Miranda Intrator (West Main Consultants), page 8.

"CCP Beneficial Use Shows Steady Growth," By David C. Goss (American Coal Ash Association [Consultant]), page 11.

"Whatever Happened to Old What's-His-Name?" By David C. Goss (American Coal Ash Association [Consultant]), page 17.

"Superfund Liability and 'Useful Product Defense' in CCP Transactions," By Joshua More (Schiff Hardin LLP), page 21.

"Vancouver's Winter Olympics Go for Green," By Anne Weir (Association of Canadian Industries Recycling Coal Ash), page 26.

"Potential Use of FGD Gypsum as an Agricultural Amendment," By Liming Chen, David Kost, and Warren A. Dick (The Ohio State University), page 32.

## **Issue 2, 2009 – Preserving Natural Beauty**

"Transcending Portland Cement with 100 Percent Fly Ash Concrete," By Doug Cross, Michelle Akin, Jerry Stephens, and Eli Cuelh (Montana State University), page 12.

"Western North Carolina Program Separates Ash for Commercial, Sustainable Use," By Elaine Marten (Waste Reduction Partners), page 20.

"Revising the Coal Combustion Byproduct Regulations in Virginia," By Melissa Porterfield (Virginia Department of Environmental Quality), page 22.

"A Wisconsin First Turns Highway Project Green," By James R. Rosenmerkel (Rosenmerkel Engineering), page 27.

"Insurance Coverage for Coal Ash Liabilities," By David L. Elkind (Dickstein Shapiro LLP), page 30.

## **Issue 1, 2009 - A Green Gem in the Treasure State**

"A Green Gem in the Treasure State: Project Uses Concrete Mix with 100 Percent Fly Ash," By Doug Cross, Jerry Stephens, and Mike Berry (Montana State University), page 13.

"Geopolymer Concretes: A Green Construction Technology Rising from the Ash," By Erez Allouche (Louisiana Tech University), page 23.

"Déjà Vu All Over Again – HVFA," By David C. Goss (American Coal Ash Association), page 29.

"What Strategic Planning Can Do for You," By Cheri Miller (Gypsum Parameters LLC), page 33.

"Removing Mercury from Coal Emissions: Options for Ash-Friendly Technologies," By John Sager (U.S. Environmental Protection Agency), page 39.

## **Issue 2, 2008 – ACAA's 40<sup>th</sup> Anniversary**

"Using Fly Ash and Natural Pozzolans in Long Life Structures," By Bruce Ramme and Julia Jacobsmeyer (We Energies), page 6.

"Regulations for Beneficial Use Changing Nationwide," By David C. Goss (American Coal Ash Association), page 13.

"Re-Imaging Coal: Novel Process Removes Mercury While Retaining Ash Sales," By Al Bland (Western Research Institute), page 18.

"Partnering for Success: Update on Mercury Control Technologies," By Thomas J. Feeley III, Charles E. Miller, and Andrew P. Jones (DOE/NETL), page 26.

"How Carbon-Based Sorbents Will Impact Fly Ash Utilization and Disposal," By Debra F. Pflughoeft-Hassett, David J. Hassett, Tera D. Buckley, Loreal V. Heebink, and John H. Pavlish (University of North Dakota Energy & Environmental Research Center), page 37.

"High Carbon Fly Ash Finds Uses in Highway Construction," By Haifang Wen (University of Wisconsin at Madison) and Robert Patton (DOE-NETL), page 42.

"Rice Husk Ash: Untapped Potential as a Global Cement Replacement," By Helena Meryman (SBC Global), page 46.

## **Issue 1, 2008 - Toothpaste to Railroad Ties: CCP Use Over the Past Four Decades**

"Forty Years with the National Ash Association and ACAA," By Oscar Manz (University of North Dakota), page 4.

"Spray Dryer Ash Finds a Market," By Jon Little (Platte River Power Authority), page 10.

"Beneficial Use of Coal Combustion Products Continues to Grow," By Michael MacDonald (American Coal Ash Association), page 14.

"Follow That Mercury!" By Alvaro A. Linero (Florida Department of Environmental Protection), page 18.

"Coal Fly Ash: The Most Powerful Tool for Sustainability of the Concrete Industry," By P.K. Mehta (University of California, Berkeley), page 38.

"EPRI's Coal Combustion Product Use Research," By Ken Ladwig (Electric Power Research Institute), page 44.

"Utilizing Fly Ash Particles to Produce Low-Cost Metal Matrix Composites," By Graham Withers (Ultalite), page 50.

## **Issue 2, 2007 - FGD Gypsum's Place in American Agriculture**

"Rehabilitating Asphalt Highways," By Tarunjit S. Butalia (The Ohio State University), page 11.

"FGD Gypsum's Place in American Agriculture," By Chad Haynes (U.S. Department of Agriculture), page 22.

"Waste Not, Want Not: Promoting Sustainability," By Anne Weir (Association of Canadian Industries Recycling Coal Ash), page 26.

"Fly Ash Benefits Building Industry," By Nisha Vyas Mahler (Century Products LLC), page 36.

"Technology Meets Aggregate," By Charles Wilson (INNERT Co.) and Christopher Swan (E3 Innovative Materials), page 41.

## **Issue 1, 2007 - ACAA Releases Annual Coal Combustion Product Production and Use Survey**

"Awareness and Benefits Drive Increasing CCP Beneficial Use" (Ash at Work staff), page 7.

"Venture Recycles 60,000 Tons of Coal Ash Per Year," By Melissa Burke (American Coal Ash Association), page 14.

"EPA Recognizes Industry Leaders for Beneficial Use," By David C. Goss (American Coal Ash Association), page 16.

"Combustion Products: Recycling to Build South Carolina," By Willard Strong (PowerSource Magazine), page 24.

"Fly Ash Chemical Classification Based on Lime," By John Fox (BASF Admixtures Inc.), page 28.

"Increasing Class C Fly Ash Reduces Alkali Silica Reactivity," By James K. Hicks (Mineral Resource Technologies Inc., A CEMEX Company), page 31.

"Thinking Outside the Box," By James McLean (InBulk Technologies), page 40.

## **Issue 2, 2006 - Optimal Mixes for Concrete Durability and for Industry Collaboration**

"Optimal Mixes for Concrete Durability and for Industry Collaboration," By Mike Thomes (Xcel Energy), page 8.

"Poland's CCP Market Prospects Rise with European Union Status," By Agnieszka Myszkowska (Ekotech), page 12.

"Service Life Modeling for Fly Ash in Concrete," By Kevin Copeland (Boral Material Technologies Inc.), page 14.

"Geotechnical Applications of CCPs in Wisconsin," By Tuncer B. Edil and Craig H. Benson (University of Wisconsin-Madison), page 16.

"Chromium VI in European Legislation," By Hans-Joachim Feuerborn (VGB Power Tech), page 22.

## **Issue 1, 2006 - CCPs: A Valuable U.S. Economic Resource**

"CCPs: A Valuable U.S. Economic Resource," By Janet Gellici (American Coal Council), page 6.

"A Win/Win Solution for FGD-Gypsum: Researchers Discover Beneficial Applications for By-Product in Agriculture," By Cliff Ramsier (Ag Spectrum Co.) and Darrell Norton (U.S. Department of Agriculture), page 10.

"Reuse and Disposal Working Together: A Hybrid Approach to CCP Management," By Ron Jorgenson and Jason Obermeyer (Golder Associates Inc.), page 16.

"The Current State of the Science Related to the Re-Release of Mercury from Coal Combustion Products," By Debra F. Pflughoeft-Hasset, David J. Hassett, Loreal V. Heebink, and Tera D. Buckley (University of North Dakota Energy & Environmental Research Center), page 26.

"2004 ACAA Survey Reflects Continued Annual Growth in Ash Utilization" (Ash at Work staff), page 29.

"The Industrial Resources Council - A New Marketing Opportunity," By David C. Goss (American Coal Ash Association), page 36.

"Field Demonstration of Coal Combustion Byproducts-Based Road Sub-Base in Illinois," By Chugh Y.P., Mohanty S. (Southern Illinois University), and Bryant M. (Ameren Energy Fuels and Services), page 37.

## **Issue 2, 2005 - C<sup>2</sup>P<sup>2</sup> Awards**

"C<sup>2</sup>P<sup>2</sup> Awards Ceremony Follow-Up" (Ash at Work staff), page 8.

"Environmental Release of Mercury from Coal Utilization By-Products: Will New Mercury Controls at Power Plants Make a Difference?" By William W. Aljoe, Thomas J. Feeley III, Lynn A. Brickett, Karl T. Schroeder (DOE/NETL), and James T. Murphy (Science Applications International Corp.), page 12.

"A New Beneficial Use for 'Unusable' Fly Ash," By Javed I. Bhatti and John Gajda (CTL Group Inc.), page 18.

"Computer Modeling and CCPs," By Defne Apul (University of Toledo), Kevin Gardner, and Taylor Eighmy (Recycled Materials Resource Center), page 23.

"The Future of FGD Gypsum," By E. Cheri Miller (Tennessee Valley Authority), page 29.

## **Issue 1, 2005 - High Volume Fly Ash in Concrete**

"Beneficial Use of Coal Ash at Mine Sites in Pennsylvania," By Kathleen McGinty (Pennsylvania Department of Environmental Protection), page 8.

"High Volume Fly Ash for Everyday Concrete," By Robert Munro (Lafarge North America), page 11.

"North Dakota College Erects New Building Made Largely From Byproducts of Coal Combustion," By Vicki Voskuil (Bismarck State College), page 16.

"Cement Shortage and Performance-Based Specifications," By Carol Carder (Rocky Mountain Construction), page 22.

"Putting Green Construction Using CCPs," By Max Schlossberg (Penn State University), page 26.

## **Issue 1, 2004 – What Are CCPs?**

"What Are Coal Combustion Products?" By David C. Goss (American Coal Ash Association), page 8.

"North Carolina Group Develops Integrated Plan for Coal Ash Use," By Elaine Marten (Waste Reduction Partners), page 14.

"Bevill Regulatory Developments," By Jim Roewer (Utility Solid Waste Group), page 17.

"Benefits of Using Fly Ash to Mitigate Alkali-Silica Reactivity in Concrete," By Jimmy Knowles (The SEFA Group), page 19.

"FGD Synthetic Gypsum Quality and Supply Issues for Wallboard Manufacture," By P.J. Henkels (United States Gypsum Company), page 23.

"Soil Treatments with Class C Fly Ash," By Craig Plunk (Boral Material Technologies), page 27.