

US EPA ARCHIVE DOCUMENT

STUDIES RECEIVED as of August 1, 2001

1. "Acid Mine Drainage Remediation Using Fly Ash Based Grouts." Ronald D. Longley, Jr., Michael R. Silsbee, and Derek Elsworth, Pennsylvania State University. (near **Johnstown, PA** using **Conemaugh fly ash near New Florence, PA**, appeared as Appendix 2 in "Overview of CCB: Application in Coal Mines" by Paul Ziemkiewicz and Courtney Black). (DEEP mine)
2. "Coal Ash Placement in Surface Mines: Preliminary Statistical Analysis of Water Quality Data." Ann G. Kim and Carol Cardone, USDOE. (35 PA sites, groundwater comparisons)
3. "Coal Combustion By-product Utilization in Abandoned Mine Land Settings - A Case Study." ATEC Associates, IN and Indianapolis Power and Light Co., 1994. **Midwestern Abandoned Mine in Pike County, IN**. (surface mine)
4. "Disposal of Fluidized Bed Combustion Ash in an Underground Mine to Control Acid Mine Drainage and Subsidence" by Paul Ziemkiewicz and D. Courtney Black. (1994-2000). **Longridge Mine site**. (DEEP mine)
5. "Draft Statistical Analysis of Pennsylvania Minefill Groundwater Monitoring Data." SAIC, September 16, 1998. (**Pottsville Mining sites**)
6. "Evaluation of Techniques for the Disposal of Fly Ash from the Conemaugh Generating Station into an Underground Mine for In-Situ Treatment of Acid Mine Drainage" by L. H. Michaud, Michael R. Silsbee, Biman K. Sadhu, Ronald D. Longley Jr., Christine A. Eaker. March 1998. **Florence No. 2 Mine, New Florence, PA**. (DEEP mine)
7. "Fluid Placement of Fixated Scrubber Sludge in Abandoned Deep Mines to Abate Surface Subsidence and Reduce Acid Mine Drainage." GAI Consultants, November 1996. **City Mine at Petersburg, Generating Station, IN**. (DEEP mine)
8. "Impact of Ash Placement in a Surface Mine Pool on the Chemistry of the Silverbrook Basin." December 2000. Pennsylvania State University. **Big Gorilla Mine**, NEPCO CCB. (Surface mine)
9. "Injection of CCB into The Omega Mine for Reduction of Acid Mine Drainage." GAI Consultants, May 16-21, 1998. **Omega Mine near Morgantown, WV**, no data, report only. (Surface mine)

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10. "Knickerbocker Demonstration Project: Wet to Dry Slurry Placement of Fly Ash." May 2001. Pennsylvania State University. **Knickerbocker Mine**, Schuylkill Energy CCB, Keystone Cement Co. (DEEP mine)
11. "Overview of Coal Combustion Byproducts: Application in Coal Mines." Paul Ziemkiewicz and Courtney Black, National Mine Land Reclamation Center, West Virginia University, November 5, 1998. (appendices have site information on PA sites, refer to "Acid Mine Drainage Remediation using Fly Ash Base Grouts")
12. "Peabody Mine Company Universal Coal Mine, Indiana." Ishwar Murarka, Ish Inc, May 21, 2001. **Peabody Site Universal Mine, IN.** (Surface mine)
13. "Proceedings: 14th International Symposium on Management and Use of Coal Combustion Products (CCPs), Volume I and Volume II" EPRI, January 2001.
14. "Stabilization of Underground Mine Voids by Filling with Coal Conversion Residuals." Energy and Environmental Research Center, ND, June 1995. **Wilton, ND mine site.** (DEEP mine)
15. "US EPA Field Tour of CCB Application in Underground Coal Mines, Three Sites: Metikki Coal, Longridge Abandoned Coal Mine, Winding Ridge Project." June 1-2, 1999. **Metikki Mine, Longridge Mine, Winding Ridge Mine.** (very limited report-7 pages total)
16. "Use of Electric Utility Wastes for Control of Acid Mine Drainage." A.G. Kim, USDOE. **Bognanni (PA), Fran (PA), Pierce (WV) mines.**
17. "1998 Groundwater Monitoring Report: Whitewood Mine." TransAlta, March 1998. **Whitewood Mine.** (Surface mine)
18. "2000 Groundwater Monitoring Report: Highvale Mine." TransAlta, March 2001. **Highvale Mine.** (Surface mine)
19. "The Effects of Fly Ash and Flue-Gas Desulfurization Wastes on Groundwater Quality in a Reclaimed Lignite Strip Mine Disposal Site." Volume I and II by F.W. Beaver, G.H. Groenewold, O.E. Manz, and D.J. Hassett. August 1987. **Center Mine, ND** (Surface mine).
20. "Volume 1: Coal Ash Beneficial Use in Pennsylvania: Coal Ash as a Soil Substitute-Additive at Mine Sites." The Pennsylvania Department of Environmental Protection, June 11, 1999. **PA mine sites.**

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21. "Volume 2: Coal Ash Used as Minefill-Placement Not in Contact with Groundwater." The Pennsylvania Department of Environmental Protection, June 11, 1999. **PA mine sites.**
22. "Volume 3: Coal Ash Used as Minefill-Placement in Contact with Groundwater." The Pennsylvania Department of Environmental Protection, June 11, 1999. **PA mine sites.**
23. "Post-mining Groundwater Chemistry and the Effects of In-pit Coal Ash Disposal: Predictive Geochemical Modeling Based on Laboratory Leaching Experiments." M.R. Trudell, D. Cheel, S.R. Moran. August 1984. **Diplomat Mine, Vesta Mine, Highvale Mine, Alberta, Canada.**
24. "Water Quality at an Abandoned Mine Site Treated with Ccb." Ralph J. Harfner, USGS. **Fleming Mine, Tuscarawas county, OH.**
25. "Hydrologic Monitoring at Three Mine Sites Reclaimed with Mixtures of Spoil and Coal Combustion Residues in Illinois." Dr. Steven P. Esling and Dr. Bradley C. Paul. **Forsythe-Energy Mine, Thunderbird Mine, Harco Mine, IL.**
26. "Water Quality Effects of Beneficial CCBs Use at Coal Mines." Dr. Paul Ziemkiewicz and D.C. Black. **Frazee Mine, MD; Mettiki Mine, MD; Fran Mine, PA; Chaplin Hill Mine, WV.**
27. "Engineering Design for the Injection of Alkaline CCBs into a Maryland Coal Mine to Abate Acid Mine Drainage." L. Rafalko et. al. **Frazee Mine, MD.**
28. "Underground Placement of Coal Processing Waste and CCB Based Paste Backfill for Enhanced Mining Economics." Y.P. Chugh, et. al. **Crown III Mine, IL.**
29. "Re-mining with CCBs at the Broken Aro Demonstration Site." Ben J. Stuart and Gary Novak. **Broken Aro Mine, Coshocton county, OH.**
30. "The Western Maryland Coal Combustion By-products/Acid Mine Drainage Initiative: The Winding Ridge Demonstration Project." Leonard Rafalko and Paul Petzrick. **Frazee Mine, Friendsville, MD.**
31. "The Effect of Coal Combustion Residues on Acid Mine Drainage from Inactive Surface Mines." A.G. Kim and T.E. Ackman, US Bureau of Mines. **Bognanni strip mine, Green county, PA.**

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32. "Abatement of Acid Mine Drainage Pollution to Upper Three Runs by Capping an Acid Producing Reclaimed Surface Mine with Fluidized Bed Combustion Fly Ash." William Hellier, PA DEP. **McCloskey Mine, PA.**
33. "The Backhaul & Utilization of Coal Ash in Reclamation & AMD Mitigation by Patriot Mining Company, Inc." Ronald Hamric, Patriot Mining Co. **Albright Mine, WV, Stacks Run Refuse, WV, and Chaplin Hill Mine, WV.**
34. "Injection of FGD Grout to Abate Acid Mine Drainage in Underground Coal Mines." Shan Mafi, Michael Damian, Robert Baker. **Roberts-Dawson Mine, OH.**
35. "Water-Quality Monitoring at an Abandoned Mine Land Reclamation Site Amended with Fly Ash and Fixated Scrubber Sludge." Tracy Branam, Margaret Ennis, Ron Smith, Indiana Geological Survey. **Midwestern Mine, IN.**
36. "Appendix 7: Midwestern Abandoned Mine Land Reclamation Project." ATC Associates. **Midwestern Mine, IN. (SAIC)**
37. "Appendix 10." **Universal Site, IN. Deer Ridge Mine, IN. Key West Mine, IN. Little Sandy #10 Mine, IN. Miller Creek Mine, IN.**
38. "Engineering Design for the Injection of Alkaline CCBs into a Maryland Coal Mine to Abate Acid Mine Drainage." Rafalko, Mountain, Mallon, Petzrick, Chugh. **Frazee Mine, MD.**
39. "An *In situ* Remediation Method for Abandoned Underground Coal Mines Using Coal Combustion Products." G.A. Canty and J.W. Everett. **Bache and Denman Mine, OK.**
40. "Synthesis of Available Information on the Management of Coal Combustion Products (CCPs) in Mines." Ishwar Mirarka and Ken Ludwig. June 1999. **Peabody Mine, IN, Storm Strip Mine, WV, Midwestern Mine, IN, Arnold Willis "City" Mine, IN, Frazee Mine, MD, Omega Mine, WV, Surface Mine in Clinton county, PA, Kempton Mine, MD-WV, Red Oak Mine, OK, Harwick Mine, PA.**
41. "Hydrologic and Water Quality Effects of Deep Mine CCB Injection - Preliminary Results of a Maryland Case Study." William Aljoe, US DOE. **Frazee Mine, Winding Ridge site, MD.**
42. "Installation Restoration Program 120th Fighter Wing Montana Air National Guard Great Falls, Montana: Quarterly Groundwater Monitoring Report for April 1999 Data."

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- 43. "2000 Groundwater Monitoring Report: Keephills Thermal Generating Plant." TransAlta, March 2001.
- 44. "2000 Groundwater Monitoring Report: Sundance Thermal Generating Plant." TransAlta, March 2001.
- 45. "2000 Groundwater Monitoring and Soil Management Report: Wabamun Thermal Generating Plant." TransAlta, March 2001.

REPORTS WITH LIMITED SITE CHARACTERISTICS:

- 46. Archbald Power Corp (surface mine)
- 47. B-D Mining (surface mine) (Gilberton Power Co. CCB source)
- 48. Continental Energy Associates, Ltd (surface mine)
- 49. D&F Coal Co. (surface mine)
- 50. Emerald Anthracite, HUD Inc. (surface mine)
- 51. Harriman Coal Corp (surface mine) (Good Spring #1 East and West)
- 52. Jeddo-Highland Coal Co. (surface mine) (Jeddo Basin West, Northampton Generating CCB source)
- 53. K&K Coal Co. (surface mine) (Eagle Hill Operation)
- 54. Lehigh Coal & Navigation (surface mine) (Nesquehoning Borough, Shaft #3 and Lausanne Tunnel)
- 55. Mountain Valley Management (surface mine) (West Glen Power Operation, Keystone CCB source)
- 56. N&L Coal Co. (surface mine) (Morris Ridge Operation)
- 57. Northeast Energy Co. (surface mine)
- 58. Northeastern Power Co. (surface mine) (on-site co-generation CCB source)

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59. **Northampton Fuel Supply Co. (surface mine) (formerly Silverbrook Anthracite, Alden Stripping #2 North and Loomis Bank Operation)**
60. **Packer V Coal Co. Inc (surface mine) (Packer 5 Mine, Schuylkill Energy Resource and Yatesville co-generation CCB source)**
61. **Pacton Corp(surface mine)**
62. **Pagnotti Coal Co. (surface mine) (Morea/New Boston, Wheelabrator/FEC and Hazelton Shaft West)**
63. **Panther Creek Partners (surface mine) (on-site co-generation CCB source)**
64. **John Popple Truck (surface mine) (Clinton Stripping)**
65. **Porter Associates Inc. (surface mine) (formerly Kocher Coal Co.)**
66. **Reading Anthracite Co. (surface mine) (St. Clair Pit, Panther Creek co-generation CCB source and Knickerbocker site, Yatesville co-generation CCB source)**
67. **Susquehanna Coal Co. (surface mine) 9(Glen Lyon Operation and Mt. Carmel co-generation)**
68. **Westwood Energy Properties (surface mine) (on-site co-generation CCB source)**
69. **Wheelabrator Culm Services Inc. (surface mine) (on-site co-generation CCB source)**