

2007 Coal and Industrial Minerals Report

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Editor's note: This report on mining developments in Indiana during 2007 was published in the May issue of the journal Mining Engineering, a journal of the Society for Mining, Metallurgy, and Exploration, Inc.

Nonfuel summary

Overall, 2007 was another good year for the Indiana industrial minerals industry with total production value reaching \$997 million, another record high for the state and a 1.6 percent increase over 2006.¹ Indiana ranked twenty-second amongst all states for 2007 in value of production. Crushed limestone and dolomite, construction sand and gravel, industrial sand, dimension limestone and sandstone, gypsum, common clay and shale, ball clay, peat, lime, and masonry and portland cement are mineral commodities that were produced in Indiana. An average of 3,508 individuals were employed in Indiana's nonfuel sector during 2007, according to figures released by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This represents a decrease of less than 1 percent from 2006 employment levels.

Aggregates and other industrial minerals

More aggregate is produced by weight in Indiana than any other mineral commodity. Approximately 59.4 metric tons (Mt) (65.5 million short tons [st]) of crushed stone and 24.9 Mt

¹Preliminary figures representing unpublished U.S. Geological Survey (USGS) data, subject to change; official USGS 2007 data will be published in the Indiana chapter of the USGS Mineral Yearbook, Area Reports: Domestic 2007, Volume II. All nonfuel mineral production data in this report were compiled by the USGS.

(27.5 million st) of construction sand and gravel were produced in Indiana in 2007, representing an increase of less than 1 percent and a decrease of 15 percent, respectively, when compared to 2006. The Indiana Mineral Aggregates Association reports that member companies experienced a relatively slow growth year in 2007 and they are expecting similar results for 2008. West Plains Mining, LLC, began operations at their Kentner Creek crushed stone mine and agricultural lime plant in Wabash County. The Mississippi Lime Company, under the name of Synergy, began the process of obtaining permits for a mine and lime plant at Monon in Wabash County, next to a Vulcan Materials Company crushed stone quarry. The lime from this operation is expected to be used as scrubber stone for coal-fired electric power companies and chemical and steel operations in the area. A coal brokering company called the Ohio River Group and other entities will also develop a quarry in Putnam County for production of scrubber stone and construction aggregates. The Hanson Aggregates Mideast Region, Inc., Clark County Atkins Quarry which was reported as closed in last year's report, reopened in 2007. A German company, HeidelbergCement AG, acquired the United Kingdom company Hanson Plc. In Indiana about 20 Hanson aggregate operations will be affected, but it is not yet clear in what manner. There were no other acquisitions of crushed stone quarries during 2007 and no closures were reported.

The National Stone, Sand and Gravel Association granted several national Awards For Excellence to Indiana crushed stone producers: Rogers Group, Inc., Bloomington Crushed Stone in Monroe County won an About Face Showplace Award and an Excellence in Community Relations Award; that company's Newton County Quarry won an About Face Outstanding Achievement Award and an Excellence in Community Relations Award; Hanson Aggregates Mideast, Inc., Atkins Quarry in Clark County won an Excellence in Community Relations

Award; and that company's Aggrock Quarry in Clark County won an Environmental Excellence Bronze Award.

Three new sand and gravel companies were operating by the end of the year. The new producers are D. & H. Gravel in Warren County, Beaver Gravel Corp.'s Strawtown Pit, in Hamilton County, and McGuire Excavating & Trucking in Vigo County. Five pits changed hands in 2007. Huntington Ready Mix, Inc., H. & W. Sand & Gravel, became Knecht Excavating doing business as Star Excavating, Star Materials (Huntington County); Wilson Excavating Lyon Pit became Fremont Sand & Gravel, LLC (Steuben County); Rockmakers LLC, MRI Sand & Gravel became Martinsville Rockmakers, Inc. (Morgan County); and Siders & Son Gravel became Chuck Shane Gravel (Wabash County). This last operation is currently closed, but plans to reopen soon for large contract jobs only. A sixth acquisition is in progress: Dennis Trucking, Plant No. 2 is being acquired by S. & G. Excavating, Inc. (Vigo County). Nine sand and gravel pits closed during 2007: Canyon Sand & Gravel, Inc., in Allen County; Rogers Group, Inc.'s Greene County Plant; U.S. Aggregates, Inc.'s Noblesville Northeast Plant in Hamilton County; Vulcan Materials Company's Eagle Creek Sand & Gravel in Lake County; Aggregate Resources, Inc.'s Waverly Plant in Morgan County; Elda Corp.'s Cook Gravel in Madison County; Carey Realty Company, Inc. in Kosciusko County; and Huntington Ready Mix, Inc.'s Peru Sand & Gravel in Miami County. In addition, U.S. Aggregates, Inc., closed its Richmond Plant #2 in Wayne County and moved the equipment and production back to its original Richmond location. Carey Realty Company is looking for someone to purchase their property. Plainfield Ready Mix, Patriot Materials, in Morgan County was acquired by Aggregate Resources, Inc., and then closed; Indiana Group Services, LLC, attempted to obtain a zoning change for a mine in Lake County, but the request was denied. Rogers Group, Inc.'s Morgan

County Sand and Gravel, Vulcan Materials Company's Daugherty Sand & Gravel in Tippecanoe County, and Vulcan Materials Company's Swisher Sand and Gravel also in Tippecanoe County received About Face Program Showplace Awards from the National Stone, Sand & Gravel Association. Morgan County Sand and Gravel also received an Excellence in Community Relations Award from that organization.

Indiana ranked first nationally in all dimension stone production during 2007 and usually ranks first in dimension limestone production. The U.S. Geological Survey reports that 259 kt (285 thousand st) of dimension stone were produced during the year, an 11.2 percent increase over the previous year. Industry sources report that the general downturn in the economy has not affected the dimension limestone industry as new contracts keep coming and they are busy. No new dimension stone quarries opened in 2007. Indiana Limestone Company, Inc., idled its Crown Quarry in Monroe County and moved production to its Empire Quarry. That quarry is located in its P.M. & B. quarry complex near Bedford in Lawrence County. Stone was excavated for the Empire State Building in New York City from that complex of quarries. C. & H. Stone Co., Inc. closed its C. & H. Quarry in Monroe County and is now only engaged in stone fabrication. Indiana companies also produce dimension sandstone in Brown, Parke, and Spencer Counties.

Approximately 2.9 Mt (3.2 million st) of portland cement were produced in Indiana during the year, a 3.1 percent decrease from 2006 production. Common clay production was 760 kilotons (kt) (838 thousand st) during 2007, a 2.4 percent decrease from the previous year. One new brick company began production in Indiana, Boral Bricks, Inc., in Vigo County; another one Brampton Brick, Inc., is planned for Sullivan County. In addition, Knies Construction, Inc., received an MSHA mine identification number for its Unimin Pit in Dubois County. The

company does contract mining for the Unimin Corp., which processes clay at a plant in Huntingburg. Undisclosed quantities of ball clay, gypsum, industrial sand, lime, masonry cement, peat, and freshwater pearls were also produced in the state during the year.

The Indiana Geological Survey (IGS) released two publications of interest to the industrial minerals industry during 2007: N. R. Shaffer, K. H. Sowder, C. P. Weibel, M. E. Wolfe, and R. L. Paylor, *Map showing industrial minerals operations and carbonate regions affected by solution features in Illinois, Indiana, Kentucky, and Ohio*, Open-File Study 07-02, Scale: 1:1,000,000; N. R. Shaffer and D. A. DeChurch, eds., *Proceedings of the 40th Forum on the Geology of Industrial Minerals (May 2-7, 2004, Bloomington, Indiana)*, Occasional Paper 67. The National Minerals Education Conference was cohosted by the Indiana Geological Survey and the Indiana Mineral Aggregates Association (IMAA). A CD-ROM of presentations is available from the IGS or the IMAA.

Coal

Approximately 32.4 Mt (35.7 million st) of coal were produced in Indiana during 2007, a 1.8 percent increase over 2006 production, according to preliminary U.S. Department of Energy, Energy Information Administration figures. Indiana again ranked eighth nationally in coal production. Gibson County was the largest coal producer in 2007 with a total of 12.5 Mt (13.8 million st) (Figure 1). An average of 3,055 individuals were employed in the coal mining industry in Indiana during 2007, a less than 1 percent increase over 2006 employment figures according to MSHA. Seven companies operated 24 coal mines in Indiana. There were 18 surface mines and 6 underground mines, with about 30 percent of Indiana's 2007 coal production coming from underground mines.

Much of the following information was obtained from Dave Phillips of the Indiana

Department of Natural Resources, Division of Reclamation (IDOR). In 2007, IDOR approved and issued six permits affecting a total of 19.3 km² (4,761 acres) surface and underground. There were two permits for new mines in Knox County: Triad Mining, Inc., Freelandville Mine, Center Pit, with 3.8 km² (946.8 acres) surface; and Black Panther Mining, LLC, Oaktown Mine No. 1, with 4.2 km² surface (1,033.4 acres) and 0.1 km² underground (14.8 acres). Freelandville Mine, East Pit, will mine into the Center Pit, probably within the next two years. Construction is expected to begin soon at Oaktown Mine No. 1 with production expected to start in the first half of 2009. Templeton Coal Company holds a permit for another nearby mine named Oaktown Mine. No development is occurring there, but the current plan is for that permit to eventually become part of the Oaktown Mine No. 1 underground mine. About 5 million tons may be produced each year. The other four permits were for modifications from the original surface mine permits, three of them for Black Beauty Coal Company, LLC: Miller Creek Mine's Knox Pit, in Knox County 5.6 km² (1,393 acres); Francisco Mine in Sullivan County 1.7 km² (428.3 acres); and Somerville Mine in Gibson County 2.8 km² (682.8 acres). The Miller Creek Mine, Knox Pit, had operated previously as Horizon Natural Resources' Beech Coal Company, Sycamore Mine, and was acquired in 2005 from Lexington Coal Company. Lexington Coal Company had acquired it earlier as part of Horizon Natural Resources bankruptcy proceedings. The mine is now active. The Somerville Mine consists of Somerville North and Central pits. There is also a Somerville West which will be mined as part of Somerville North Mine and plans are in the works for a Somerville Southwest Mine. There is also a Somerville East Mine currently active in Pike County and a Somerville South Mine in Gibson County. The latter is part of the Discovery Mine. The other modification was 1.1 km² (261.9 acres) for Vigo Coal Operating Company's Cypress Creek Mine in Warrick County. When Cypress Creek is

completed in a year or so, the company plans to move to the Red Brush Mine, an area where there has been previous mining, and the Oaktown Mine No. 1.

Production started in 2007 at the surface Triad Mining, Inc., Hurricane Creek Mine in Gibson County and the underground Sunrise Coal, LLC, Carlisle Mine in Sullivan County. Limited production had started at the Solar Sources, Inc.'s surface Shamrock Mine in Dubois County 2006, but it was in full production by the last part of 2007. The company will ship coal from the mine by truck and also by rail using a rail line at the Charger Mine in Pike County. The Charger Mine had been the Kindill #2 Mine before being sold as part of Horizon Natural Resources bankruptcy proceedings. No production is currently occurring there, although the company plans an underground mine at the site at a future time. Construction progressed on a tippie at the old Chinook Mine in Clay County, now called Clayvigo #1 Mine. Covol Engineered Fuels will process slurry in part of the mine to recover coal ranging in size from 0.5 inch down to a fine powder. About five million tons of fine coal is expected to be recovered from this site and sent to local utilities. Start-up was planned by early 2008. Three men died in a 500-foot fall during construction of a 550 ft. mine ventilation shaft at the underground Gibson County Coal, LLC, Gibson County Mine, halting construction for several weeks. The company is planning a Gibson County South underground mine to be production sometime between 2008 and 2010. There were also five renewals approved for surface mines, and four approved for underground mines.

The Division of Reclamation also reported 301 nonsignificant revisions approved with an additional 44 incidental boundary revisions and 34 land-use changes. There were 32 transfers of surface mine permits, 5 transfers of underground permits, and 1 transfer of a processing facility during the year. Most of the transfers were organizational in nature with Black Beauty Coal

Company, becoming Black Beauty Coal Company, LLC. The Antioch Mine of English Resources, Inc., was transferred to Little Sandy Coal Company, Inc. This mine has been idled since 2005. No date has been set for restarting it, but it is expected within two years. Jarvis Coal, LLC, acquired the Hymera Mine from Coal Field Development Company in October and renamed it J.C. #1 Mine. Although it has been idled for several months, it is expected to be back in production soon, depending on contracts. The Wabash Mine closed in 2007. This Illinois mine extends under Indiana in Gibson County.

Black Beauty Coal, LLC's Farmersburg Mine in Vigo County won a National Mining Association and MSHA Sentinels of Safety Award in the large company surface-coal category. Black Beauty Coal, LLC's Somerville Central Mine in Gibson County won a U.S. Office of Surface Mining (OSM) Excellence in Surface Mining and Reclamation Award. The Mine also received a Silver Good Neighbor Award from the OSM

Several small revisions to state mining regulations were made, including the following. A coal operator now has an opportunity to plant trees as a vegetative cover on prime farm land with landowner consent and submission of commercial forest planning and management plans to the Division of Reclamation. Indiana code was changed to mirror federal law to allow reclamation projects to be completed with less than 50 percent funding from federal funds. Other changes allow the Indiana Department of Natural Resources director to initiate an application for release of a bond in some cases, and exempt impoundments within an incised structure from annual inspection. Other minor revisions were also made.

Coal-related publications published by the IGS during 2007 include: A. Drobniak, K. R. Shaffer, J. A. Rupp, and M. Mastalerz, *Major point sources of CO₂ emissions and conceptual geological sequestration strategies in Indiana*, Open-File Study 07-01; M. Mastalerz, and A.

Drobniak, *Radioactive elements in Indiana coals*, Open-File Study 07-03; A. Drobniak, C. Pfitzer, and M. Mastalerz, *Map showing Indiana's railroad system*, Open-File Study 07-04; L. Weber, *Indiana Geological Survey—2008 IGS calendar—mining coal, images from the past*, Indiana Geological Survey calendar. The 2007 National Association of Abandoned Mine Land Programs Conference was co-hosted by the Indiana Geological Survey and the Indiana Department of Natural Resources, Division of Reclamation. Presentations made at this conference will be available for download from the Division of Reclamation or can be provided on DVD by that agency.