Coal Mine Safety Regulation in China and the USA

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ABSTRACT The People's Republic of China (PRC) and the USA are, by long measure, the world's largest producers and consumers of coal. Coal production is inherently risky, and fatalities are unavoidable in these large coal economies. Both countries have developed complex systems of law to regulate coal mine safety. These systems share many attributes. Despite similarities between the separate systems of mining law, the PRC significantly trails the USA in terms of coal mine safety. Due to large disparity in economic development, it may be inappropriate to compare these two countries. However, the PRC's mine safety record is significantly worse than that of other large producers who are similarly underdeveloped. It appears that the PRC has failed to effectively implement its mining safety laws. Several arguments have been made as to the cause of this failure, including lack of judicial review of agency actions, lack of meaningful trade unions, government corruption and geographical difficulties of controlling rural mines with a central government. This article explores similarities and differences between the coal economies of the USA and PRC, and introduces some of the arguments used to explain the gap in safety.

KEY WORDS: Coal, safety, labour, mining, mine, mine safety, China

The People's Republic of China (PRC) is the world's largest producer by a significant margin. In 2006, it produced an estimated 2482 Mt (million tons) of coal. The second largest producer, the USA, produced 990 Mt in 2006. The PRC's 2006 production dwarfed the rest of the world's, with a total larger than the combined tally of the next seven largest producers, including the USA. The 990 Mt produced in the USA also accounted for a huge portion of the world total, and was larger than the combined total from the number three, four and five producers (World Coal Institute, 2007: 1). The World Coal Institute's estimated production numbers for the ten largest coal producing nations in 2006 are referenced in Table 1.

The production numbers in the PRC and the USA are fostered by huge domestic markets for coal, and neither produces a significant surplus for export. The PRC exported an estimated 63 Mt, or about 2.5% of its total production in 2006. If these exports are adjusted to account for the 38 Mt of coal the PRC imported, then

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Country	Production (Mt)
PR China	2482
USA	990
India	427
Australia	309
South Africa	244
Russia	233
Indonesia	169
Poland	95
Kazakhstan	92
Colombia	64

 Table 1. Major coal producing countries

approximately 2455 Mt of coal were either consumed in the country or added to domestic recovered reserves in 2006. The USA exported only 45 Mt, or approximately 4.5% of the coal it produced in 2006, leaving 945 Mt for domestic consumption and recovered reserves (World Coal Institute, 2007: 1).¹

Coal currently provides more than 70% of the PRC's energy needs, and the economy and energy demand are growing rapidly. State-controlled media outlets reported that coal consumption in the country jumped 18% during the first six months of 2007, tracking slightly higher than the country's explosive GDP growth (Schiller, 2007: 4). While the Chinese government has made massive investment in alternative sources of energy, such as hydropower, in recent years (Yardley, 2007), for the foreseeable future coal is king. In the USA, coal fuelled approximately 50% of electricity production in 2006 (World Coal Institute, 2007: 2) and that share will likely grow with energy demand as natural gas and viable, large-scale alternative energy sources remain expensive.

Chinese and US Mine Safety Statistics

Coal mining is a very risky business and devastating accidents occur in all countries that produce commercial quantities of the mineral. Most coal mine accidents occur as the result of cave-ins, methane explosions or the flooding of mine shafts (Tien, 2005). Given the huge production and consumption numbers in the PRC and the USA, and the inherent risk of working underground with combustible elements, significant numbers of mine accidents are to be expected in both countries. Similarly, comprehensive legislation and administrative agencies directly dealing with mine safety should be expected. Both the PRC and the USA have such regulatory regimes in place, as outlined below. Nevertheless, both countries experience significant numbers of mining fatalities each year. The PRC, however, is host to a disproportionate number of coal mining fatalities when examined as a function of production. Although China's record on more traditional "human rights" is often the source of international headlines, some have termed the crisis in Chinese coal mine safety as the nation's "lesser-known human rights tragedy" (Lambrecht, 2005b: 5).

According to the PRC State Administration of Work Safety (SAWS), 5798 coal miners died in workplace accidents in China in 2000, 5670 were killed in coal mines in 2001, and deaths peaked in 2002, when a total of 6995 miners died (*China Labour Bulletin*, 2006b).² A further 6434 Chinese mine workers perished in 2003, 6027 in 2004 and 5986 in 2005 (*China Labour Bulletin*, 2006b). Official statistics place the 2006 death toll at 4746 miners (Schiller, 2007) and at 1066 for the first half of 2007. If the death totals are considered as a function of production, the PRC lost 4.95 miners per Mt of coal produced in 2000, 4.38 miners per Mt in 2001, 5.27 miners per Mt in 2002, 4.28 miners per Mt in 2003, 3.08 miners per Mt in 2004, 2.69 miners per Mt in 2005 and 1.91 miners per Mt in 2006 (*China Labour Bulletin*, 2007); World Coal Institute, 2007).

Considered on their own, these figures give some reason for optimism. As a ratio to the amount of coal produced, Chinese coal mine fatalities were far lower in 2006 than they were in 2000. The decrease in deaths per Mt is even greater between the deadliest year, 2002, and 2006. Indeed, the fatality to production ratio through the first half of 2007 was down almost 20% from the same period in 2006, to 1.63 fatalities per Mt (*China Labour Bulletin*, 2007b). However, when the PRC statistics are compared to those of the second major coal economy, the USA, it is clear that Chinese coal mines are disproportionately deadly.

For the entire period 2000–06, a total of 235 miners were killed in coal mine accidents in the USA (US Department of Labor, 2007c). In those years, the number of miners killed per Mt of coal peaked at 0.05 (2006) and was as low as 0.02 (2005) (US Department of Labor, 2007c; World Coal Institute, 2007). In 2000 and 2001, the fatality to production ratio was 0.04 workers per Mt (US Department of Labor, 2007c; World Coal Institute, 2007). The fatality to production ratio was 0.03 miners per Mt in 2002, 2003 and 2004 (US Department of Labor, 2007c; World Coal Institute, 2007). The fatality to production ratio was 0.03 miners per Mt in 2002, 2003 and 2004 (US Department of Labor, 2007c; World Coal Institute, 2007).

Is it Fair to Compare Chinese and US Mine Safety Statistics?

In terms of economic development, there are huge differences between the PRC and the USA. According to statistics compiled by the World Bank, the USA ranked first for Gross Domestic Product (GDP) in 2006 at US\$13.2 trillion.³ Although the PRC ranked fourth on the list, its GDP is listed at \$2.7 trillion, just 20% of the US figure (World Bank, 2007c). On the other hand, the PRC had the largest population in the world in 2006 at 1.3 billion people, while the USA has the third largest at 299 million (World Bank, 2007b). That is, the 2006 US GDP was roughly 80% larger than China's, while its population was some 77% smaller. This disparity is even more evident in terms of Gross National Income (GNI) per capita, where the USA ranked tenth at \$44,970 and the PRC ranked 129th at \$2,010 (World Bank, 2007a). Based on the World Bank's classification of countries, the PRC is a "lower middle income" economy, while the USA is a "high income" economy (World Bank, 2007d). Accordingly, a head-to-head comparison on worker safety may be argued as inappropriate. Indeed, it may be more appropriate to compare the PRC to the USA at a much earlier stage in the latter's economic development. For example, in 1907 the US mining industry experienced its deadliest year, with 3242 fatalities (US Department of Labor, 2007a). Although the US Department of Energy lists official production statistics only from 1949 onwards, a 1911 newspaper article lists 1907 US production at 480 Mt (*New York Times*, 3 January 1911). Using this value, the fatality to production ratio for the USA in 1907 was 6.75.

Similar arguments have been put forward concerning more traditional notions of political, civil or human rights. In his study of the PRC's performance with respect to democratisation and economic development, Randall Peerenboom (2007: 39) notes that "[p]erformance on human rights standards ... and other indicia of human wellbeing, is highly correlated with wealth." Essentially, Peerenboom (2007: 39) argues that the PRC is following a hybrid of the traditional "East Asian Model" of democratisation, which "emphasizes economic development as the motor for other reforms." Such "other reforms" may be thought of as including those related to core worker safety and the number of work-related injuries and fatalities. As Peerenboom notes, the PRC outperforms other countries in the "lower middle income" classification on many of the World Bank's "good governance measures," and sits near the average for such countries in terms of "regulatory quality." Should the PRC be expected to perform at US levels with respect to coal mine safety regulation when its per capita GNI and GDP are so much lower?

Some Chinese safety officials believe that a period of high accident and death rates is necessary as a cost of economic growth and should be expected at this stage in the country's economic development. In 2005, SAWS Director Li Yizhong commented that despite the \$1.8 billion spent on improving mine safety that year, the PRC's mining industry would not reach the level of safety seen in "medium-developed countries" until 2020 (*Liquid Africa*, 19 May 2005). The following year, Li Yizhong publicly elaborated on his position:

If one looks at the experience of different countries, and the accident-prone period they endured, the United Kingdom used 70 years, the United States used 60 years, and Japan used 26 years. China's target is to use ten to fifteen years to go through such a period ... then to stabilize safety conditions (cited in Johnson, 2006: F4).

The implication is that as the Chinese economy strengthens, its safety record will improve as well. As described by an economics professor at the Beijing Institute of Technology, "China's economic development depends on huge quantities of cheap labor and low health standards" (Magnier, 2005: 4). However, empirical evidence shows that in terms of mine safety, the PRC is underperforming an even poorer large coal economy.

India, which is the third largest producer of coal with 427 Mt in 2006 (World Coal Institute, 2007), has a significantly lower per capita GNI than the PRC, ranked 161st at \$820 (World Bank, 2007a). Similarly, the Indian GDP is markedly lower than the PRC's, ranked twelfth at \$906 billion (World Bank, 2007c). In fact, India is classified as a "low income" economy by the World Bank, the lowest possible classification by that organization (World Bank, 2007d). However, in 2006 the PRC's fatality to production ratio was significantly larger than India's (Hutzler, 2007). India lost 138 miners for 427 Mt of coal, resulting in a fatality to production ratio of 0.32 (National Advisory Council of India, 2007). As noted above, the PRC's fatality to production ratio for 2006 was 1.91. While the PRC is outperforming India in terms of economic

indicators, it significantly lags in terms of coal mine safety. While it is fair to argue that the PRC should not yet be expected to achieve the same levels of worker safety that the USA has, the Chinese record in this area indicates that safety problems are large relative to its own stage of economic development.

Human rights advocates may also point out that, regardless of per capita GNI, the PRC has huge amounts of cash on hand that could be put back into essential worker safety improvements. Coal is clearly necessary to fuel the economic growth that the PRC is counting on to raise its per capita GNI and GDP, and therefore coal miners are an essential part of the economic development formula. The PRC holds the world's largest foreign currency reserves and, in September 2007, created the China Investment Corporation, a sovereign wealth fund with an initial capitalisation of \$200 billion (China Daily, 1 October 2007). Critics of the PRC's mine safety record might argue that rather than creating the world's largest sovereign wealth fund, the Chinese government could have spent a larger portion of its liquid capital to improve coal mine and general workplace safety. Such an argument is based on the belief that there is no acceptable cost for human lives, and that a country with vast financial resources should not cut corners it can afford not to in the context of worker safety. When coupled to the statistical evidence that the PRC lags the only other large coal producer with a lower per capita GNI, this argument is quite strong. It may be unjust to expect the PRC to achieve the same safety levels that much richer countries have. However, it would be equally unjust to claim that the PRC is performing as well as it can afford to when it has huge amounts of liquid capital and is underperforming a much poorer coal-producing nation on coal mine safety.

The PRC Mine Safety Legal Regime

The PRC has a comprehensive, sophisticated and complex legal regime dealing with coal mine safety. National legislation, administrative action and judicial interpretations have all made significant contributions to this regulatory scheme, and it has been an area of focus in recent years. The PRC has made many significant improvements to its mining law since 2000, and these improvements undoubtedly have helped to produce the decline in fatality to production ratio described above.

The National People's Congress and the Standing Committee of the National People's Congress are vested with the power to draft and enact all national legislation (Tien, 2005). This power includes responsibility for creating national coal production goals and mine safety laws. According to the *People's Daily Online* (25 November 2007), the State Council, which includes the premier, vice-premiers, state councillors, senior ministers, the auditor-general and the secretary-general is

the highest executive organ of State power, as well as the highest organ of State administration ... [and is] responsible for carrying out the principles and policies of the Communist Party of China as well as the regulations and laws adopted by the [National People's Congress], and dealing with such affairs as China's internal politics, diplomacy, national defense, finance, economy, culture and education.

Underneath the umbrella of the State Council are roughly fifty specific Ministries and Commissions. While broad national legislation is undertaken by the National People's Congress or the Standing Committee, the various administrative agencies within the State Council have the power to "enact national laws and administrative regulations and formulate provisions or implement rules" (Tien, 2005: 18).

National People's Congress and Standing Committee Legislation

At the macro-level, the National People's Congress enacted The Law of the People's Republic of China on Safety in Mines (Mining Safety Law) in 1993 (Chinamining.org, 2006b). The Mining Safety Law serves as the regulatory backdrop for all measures taken by the State Committee and administrative agencies, and establishes broad principles of mining safety that must be adhered to. Among other things, the Law addresses safety in mine construction, safety in the exploitation of mines, safety in management of mining enterprises, the supervision and control over mine safety, the disposition of accidents in mines, and the legal responsibility for such accidents. Similar to many other macro-level laws in the PRC, the legislation recognises that its purpose must always be considered in light of the need for economic development. The Mining Safety Law "is formulated for the purpose of ensuring safety in production in mines, preventing accidents and protecting personal safety of workers and staff at mines and promoting the development of mining industry" (Chinamining.org, 2006b, emphasis added). However, setting specific standards is generally left to the Departments of Labour Administration operating under the State Council.

The Coal Law of the People's Republic of China (Coal Law), as adopted by the Standing Committee of the Eighth National People's Congress in 1996, also addresses mine safety at the macro level. Among other things, the Coal Law requires that all coal mines be licensed by the appropriate authority, and conditions licensing on meeting certain safety requirements (Chinamining.org, 2006a). The Coal Law again leaves the establishment of safety standards to the State Council and subsidiary bodies, but does include some hard requirements. For example, Chapter III, entitled *Coal Production and Safety in Coal Mine*, requires that the "mine director has received proper training in accordance with the law and obtained a credential for mine directors" (Article 23[3]), and that, under Article 40, "[c]oal mining enterprises shall give their staff and workers counseling and training on safety in production; those having not received such counseling or training may not go to the operation" (Chinamining.org, 2006a).

In 2002, the 28th Meeting of Standing Committee of the Ninth National People's Congress adopted the overarching *Law of the People's Republic of China on Work Safety* (Work Safety Law). The Work Safety Law has the stated purpose of "enhancing supervision and control over work safety, preventing accidents due to lack of work safety and keeping their occurrence at a lower level, ensuring the safety of people's lives and property *and promoting the development of the economy*" (Chinamining.org, 2006c, emphasis added). This law has several key provisions: Chapter I, Article 6 states that workers "*shall have the right* to work safety assurance in accordance with law;" Chapter I, Article 7 states that "[t]rade unions shall,

in accordance with law, make arrangement for employees to participate in the democratic management of and supervision over work safety in their units and safeguard the legitimate rights and interests of the employees in work safety;" Chapter II, Article 19: states that "mines ... shall up organizations or be manned with full-time persons for the control of work safety;" and finally, Chapter III, Article 46 states that employees "shall have the right to criticize, inform against and accuse their work units for the problems existing in work safety" and "shall have the right to refuse to comply with the directions that are contrary to rules and regulations or arbitrary orders for risky operations" (Chinamining.org, 2006c, emphasis added). The Work Safety Law, for the first time, codifies workers' safety interests as statutory rights. The State Council is charged with ensuring compliance without delay and with continually revising its standards based on technological advancements and economic growth.

Administrative Agencies

Responsibility for all industrial health and safety policy and enforcement in China is vested in the SAWS, which reports directly to the State Council (Economist Intelligence Unit, 2007). SAWS was established by the State Council in 2001 and, with a "revolutionary move in China," the agency "separated policymaking and enforcement from mining production" (Tien, 2005: 19). Previously, complete oversight of the mining industry was the responsibility of the Ministry of Fuel Industry and then Ministry of Coal Industry, both of which had the conflicting responsibilities of setting and meeting production quotas as well as safety standards (Wang, 2006). Since 2005, SAWS has had full ministry status, giving it more clout and an "ability to conduct inspections and supervise safety more effectively (Economist Intelligence Unit, 2007)." Within SAWS, the specific State Administration of Coal Mine Safety (SACMS) is dedicated to crafting and enforcing safety regulations for the country's coal mines, which accounted for more than half of all workplace fatalities in 2006 (Economist Intelligence Unit, 2007). SACMS deals exclusively with regulatory compliance and enforcement, and is unique in that it is the only industry-specific agency of its type within SAWS (Tien, 2005).

In 1996, the State Council promulgated the *Regulations For The Implementation Of The Law Of The People's Republic Of China On Safety In Mines* (Mining Safety Regulations) (Chinamining.org, 2006d). The Mining Safety Regulations are a stepby-step standard-setting mechanism addressing each of the major areas outlined by the Mining Safety Law in detail. Beginning with its creation in 2001, "all safetyrelated issues have been formulated and enforced by SAWS" (Tien, 2005: 20). In 2004, SAWS issued the *Rules and Procedures on Mining Safety* and, by 2005, had issued approximately one hundred coal mining-specific announcements, rules and regulations. These mining-specific, micro-level rules can be classified into categories, the first concerning the sources of safety hazards and the second with the implementation of standards (Tien, 2005).

In 2006, the *China Daily* (21 June 2006) reported that the All China Federation of Trade Unions (ACFTU), SAWS and SACMS would "join forces in a campaign to boost migrant workers' health and safety, part of which is to

guarantee the right to refuse risky assignments." Responding to a sense that the government lacks effective control over the industry, "mining safety has become a key political issue for the Communist Party" (Cody, 2007). Accordingly, current Premier Wen Jiabao "has made work safety a key criterion for measuring the job performance of leading government officials" (Economist Intelligence Unit, 2007: 1). The Premier has also urged new regulatory and legislative action, including:

[C]ompulsory allocation of money for safety-related training and facilities, compensation for loss of life or injury at work, installing work safety facilities at all state-owned mines within two years, requiring every employee to go through a safety programme and further reorganization of the coal-mine sector (Economist Intelligence Unit, 2007: 1).

Previously, SAWS Director Li Yizhong announced that workplace fatalities relative to localised GDP would be a factor for assessing local Communist Party officials' performance beginning in 2006 (China Daily, 6 January 2006). In 2006 SAWS completed an audit of work safety training at 149 mining operations and concluded that "much still needs to be done in lifting the safety awareness of both workers and their employers" (Economist Intelligence Unit, 2007: 1). The government also established a Safety Training Centre for Small Coal Mines in Hunan Province and, in 2007, the State Council augmented the Work Safety Law with Regulations on the Investigation and Handling of Reports on Work Safetyrelated Accidents (Economist Intelligence Unit, 2007). These regulations aim to increase accountability and establish a chain of responsibility among responsible companies, supervisors, state business units and officials when accidents do occur (Economist Intelligence Unit, 2007). In 2005, the government closed more than 5000 mines it deemed unsafe (Cisneros, 2007: 22), and the current government pledged to close another 10,000 unsafe mines by the end of 2007 (Schiller, 2007: 4).

The Judiciary

Significantly, in 2007 the Supreme People's Court (SPC) issued an interpretation of the *Criminal Law of the People's Republic of China*, stating that mine operators and supervisors are subject to three years of imprisonment if they violate mining or safety laws resulting in the death of more than one miner. If an accident kills more than three miners, responsible owners or supervisors who have violated mining or safety laws are subject to seven years imprisonment. Additionally, under the SPC Interpretation, mine owners, controllers or regulators may be subject to prison terms for failing to report, misreporting or delaying the reporting of mine accidents. Finally, the SPC Interpretation reiterated that it is illegal for government officials to own interests in mines, a problem discussed in more detail below (Economist Intelligence Unit, 2007).

Under the Chinese system of government, the judicial branch has little authority to review official government actions or legislation. Specifically, Chinese courts do not have the authority to review laws passed by the legislature or administrative

actions taken by SAWS or SACMS in implementing the Mining Safety Law, Coal Law or Work Safety Law.

The US Mine Safety Legal Regime

Like China, the USA has a sophisticated system of mining safety laws. The US government is divided into legislative, executive and judicial branches. The legislative branch, the US Congress, generally passes macro-level laws. Standard setting, implementation, compliance monitoring and enforcement are typically tasked to administrative agencies with specific statutory authorities. Under the Constitution of the United States of America (Article II, \S 3), the President, as the head of the Executive Branch, is directed to "take care that the laws be faithfully executed." Over time, this has been interpreted as giving the Executive Branch control over the management and operation of most administrative agencies that are established by Congress. The Federal Judiciary, operating a system of US Courts, has the power to review the actions of administrative agencies to ensure that they comply with statutory responsibilities and goals. With the exception of the USA and PRC are very similar.

Congressional Legislation

The first modern national law on coal mine safety was the Federal *Coal Mine Health* and *Safety Act of 1969* (Coal Act) (33 USC. §§ 801 *et. seq.*). The Coal Act was an interim measure and Congress quickly amended it with the Federal *Mine Safety and Health Act of 1977* (Mine Act). The Mine Act stated its purposes as:

(1) to establish interim mandatory health and safety standards and to direct the Secretary of Health and Human Services and the Secretary of Labor to develop and promulgate improved mandatory health or safety standards to protect the health and safety of the Nation's coal or other miners; (2) to require that each operator of a coal or other mine and every miner in such mine comply with such standards; (3) to cooperate with, and provide assistance to, the States in the development and enforcement of effective State coal or other mine health and safety programs; and (4) to improve and expand, in cooperation with the States and the coal or other mining industry, research and development and training programs aimed at preventing coal or other mine accidents and occupationally caused diseases in the industry (33 USC. \S 801[g]).

In addition to dictating some broad standards for key aspects of mine safety (33 USC. $\S\S$ 841, *et seq.*), the Mine Act established a framework for setting detailed mandatory safety standards on a permanent basis (33 USC. \S 811), set requirements for inspections, investigations and recordkeeping (33 USC. \S 813), set procedures for the issuance of citations and orders (33 USC. \S 814), and established an enforcement procedure (33 USC. \S 815). The Mine Act, on the whole, significantly increased Federal oversight of the mine safety and related enforcement powers. The Mine Act remains the most important piece of national legislation concerning coal mine safety.

The ongoing establishment and evaluation of detailed standards and day-to-day compliance and enforcement activities are tasked to the Executive branch.

Administrative Agencies

In 1910, Congress created the Bureau of Mines, "whose primary roles were to investigate accidents, advise industry, conduct production and safety research and teach courses in accident prevention, first aid and mine rescue" (US Department of Labor, 2007a: 1). In 1973, Congress created the Mining Enforcement and Safety Administration (MESA), tasked with governing safety and health enforcement responsibilities previously held by the Bureau of Mines.

Subsequent to the passage of the Mine Act, Congress moved the MESA from the Department of the Interior to the Department of Labor and changed its name to the Mine Safety and Health Administration (MSHA). Today, the MSHA is responsible for implementing and enforcing the Mine Act. The MSHA lists its primary statutory responsibilities as:

[I]nvestigating mine accidents, complaints of retaliatory discrimination filed by miners, hazardous condition complaints, knowing or willful (criminal) violations committed by agents of mine operators, and petitions for modification of mandatory safety standards; developing improved mandatory safety and health standards; assessing and collecting civil monetary penalties for violations of mine safety and health standards; and reviewing for approval mine operators' mining plans and education and training programs (US Department of Labor, 2007b: 1).

Secondary activities of the MSHA include:

[M]aintaining the National Mine Health and Safety Academy to train inspectors, technical support personnel, and mining industry personnel; approving and certifying certain mining products for use in underground coal and gassy metal and nonmetal mines to ensure they do not cause a fire or explosion; providing technical assistance to mine operators in meeting the requirements of the Mine Act; providing assistance to mine operators in improving their education and training programs; cooperating with states in the development of mine safety and health programs; making grants to states in which mining takes place; and overseeing rescue and recovery operations (US Department of Labor, 2007b: 1).

The MSHA is responsible for developing mine safety policy and standards, then enforcing them under the direction of the president and confined by its statutory authorities. Because different politicians have different agendas and constituents, administrative agencies tend to vary in their rigour under different presidents. For example, in a 1 March 2006 Congressional hearing on mine safety, Representative Major R. Owens criticised the Bush Administration for reducing MSHA staff and budgets, delaying the passage of new regulations and failing to enforce existing regulations.

The Judiciary

Under the Administrative Procedure Act (APA, 5 USC. \S 701, et seq.), which broadly governs the creation and operation of administrative agencies like the MSHA, final agency actions may be challenged in Federal courts. In recent decades, two very important judicial doctrines have developed in this area. The first, commonly referred to as "Chevron deference," essentially states that where an agency's statutory authority is not clear, courts should defer to the agency with respect to its interpretation of that authority.⁴ The second doctrine, known as "hard look review," essentially states that when reviewing final agency actions or policy making, courts should examine the record underlying the decision in close detail to ensure that the agency used "reasoned analysis" and did not rely on factors Congress did not intend it to, fail to consider an important aspect of the decision, offer an explanation contrary to the evidence on the record or reach an entirely implausible decision.⁵

In effect, the APA and subsequent Supreme Court jurisprudence have established a system whereby the MSHA must make a careful record of all evidence and factors it considers, reasoning it employs and conclusions of fact it reaches in the process of making final decisions on mine safety policy, standards and enforcement. As a result, when the MSHA acts, it must do so cautiously and only after thorough consideration of alternatives to its particular action.

Explaining the Safety Gap

Both the Chinese and US governments have established comprehensive and sophisticated mining laws that establish standards, compliance and enforcement procedures and provide heavy penalties for violation of worker safety laws. Both governments also dedicate significant resources to mine safety research, development and engineering. Chinese mines, overall, appear to be becoming safer since 2000 and the current government seems committed to further improving mine safety. However, the PRC's fatality to production ratio was nearly 40 times that in the USA in 2006, and the PRC still accounts for the vast majority of world-wide coal mining deaths each year. Several factors contribute to this discrepancy, and underlying each of them is the incentive to run Chinese mines at maximum capacity due to the strong demand for coal. Technical factors identified include difficult mining conditions due to particularly gaseous coal deposits, a lack of qualified mine inspectors and a shortage of mining engineering capability (Tien, 2005; Wang, 2006). The role of the Federal Judiciary branch in the USA also ensures that, at the very least, its agencies support their standards with subjective criteria and implement statutory mandates. However, larger legal problems and challenges create a lack of adequate enforcement and implementation of otherwise sound mining law.

Illegal Mines and Corruption

The SACMS directives and regulations discussed above apply to all licensed mines in the PRC. However, a significant portion of the PRC's coal production comes from small, unlicensed, illegal mines, sometimes referred to as "black pits." According to

the *China Labour Bulletin* (2007a: 1), "black pits are the result of years of unbridled expansion, defying repeated banning orders, with new mines opening after every batch of closures." Another report states that approximately 20,000 of China's 28,000 mines are "small, privately owned, and less well-policed ventures" (McLaughlin, 2006: 7). According to Tien (2005), writing in *Mining Engineering*, which published a comprehensive study of Chinese mine safety in 2005, illegal mines contributed more than 30% of the PRC's total coal production in 2003. For perspective, that is 570 Mt, an amount larger than any country other than the PRC or the USA produced in total during 2006 (World Coal Institute, 2007).

Illegal mines are typically in remote, rural townships, and run through a system of corruption. The investment costs to run an illegal mine include capital outlays for equipment and human resources, but more importantly "soft" investments used to pay regular "tributes" to authorities from the local to the national level (*China Labour Bulletin*, 2007a). Government officials, including SAWS Director Li Yizhong, acknowledge this problem. In late 2006, Li Yizhong stated that local officials "act as the protective umbrella of illegal activities" at illegal mines and that "[t]here is corruption behind these accidents. Some local governments develop countermeasures against the policy of the governments of higher levels" (Johnson, 2006: F4). Such corruption may involve pay-offs to safety inspection teams and, in many documented instances, illegal ownership of a stake in the mine by local authorities (Johnson, 2006: F4). However, these pay-offs do not displace profits. The PRC's state-controlled *Outlook Weekly* magazine reported in 2005 that the profit margin on a small, politically connected mine can reach 3000% (Magnier, 2005: 4).

As discussed above, the Supreme People's Court issued an Interpretation of the *Criminal Law of the People's Republic of China* in early 2007, that reiterated that it is illegal for government officials to own interests in mines (Economist Intelligence Unit, 2007). That Interpretation came less than a year after a Communist Party commission reported that more than 4800 government officials acknowledged that they owned shares in coal mines worth \$91 million, despite regulations against such ownership (Johnson, 2006: F4). Thus, it appears that the best efforts of the National People's Congress, the Standing Committee, the State Council, and SAWS/SACMS are being undermined at the local level such that effective enforcement cannot be achieved with respect to small, unlicensed mines.

Labour Organisation and Worker Participation in Safety Regulation

The treatment of trade unions is a glaring difference between the Chinese and US legal systems. In the USA, the right to organise is largely unchecked, and the United Mine Workers of America (UMWA) has been the "major bargaining agent throughout the coal industry" since 1890 (Curran, 2003: 31). For example, the UMWA generally acts as miners' "exclusive representative for dealing with the operator over terms and conditions of employment, which by law include workplace safety and health" (Collyer, 1993: 620). Additionally, under the power of judicial review (discussed below), the UMWA often sues the MHSA or other agencies for failure to implement safety laws or otherwise comply with the law. The UMWA has a powerful lobby in Washington, D.C., which has been instrumental in passing the mining laws discussed above. Additionally, the strength of the UMWA allows

workers and Union representatives to effectively police the implementation or lack of implementation of safety regulations at specific mine sites.

In the PRC, historically there has been a right to organise, but only under the umbrella of the ACFTU mentioned above. The ACFTU has its origins in the *Trade Union Law of the People's Republic of China* (Trade Union Law), adopted by the Seventh National People's Congress in 1992, and amended by the Standing Committee in 2001. Article 2 of the amended Trade Union Law establishes the ACFTU as the parent of any trade unions created in the PRC. That is, under the Trade Union Law any trade union in the PRC must be established as a sub-unit of the ACFTU. While some labour activists argue that a right to unionise exists as part of international law, the PRC ratified the International Covenant on Social, Economic and Cultural Rights in 1997 with an express reservation that the Covenant's guarantee of such a right was subject to the conditions of the Trade Union Law (United Nations Treaty Collection, 2007).

Labour activists argue that the Trade Union Law does not actually convey a right to organise, because the ACFTU is a "front for the Communist Party," that union officials are "obedient children of Party leaders and bosses," and that "[t]he ACFTU constitution clearly stipulates that it is led by the Party" (*China Labour Bulletin*, 2007c). As an example, the *China Labour Bulletin* (2007c) cites a survey carried out in 2005, which concluded that, in the city of Shenyang, more than 98% of union chairpersons were Party officials. The ACFTU has made headlines by unionising workers within Wal-Mart and McDonald's (*China Labour Bulletin*, 2007c), but has done little to help the plight of the migrant workers who produce the PRC's coal.⁶

Rural farmers and other unskilled labourers, who have left their homes in search of work as the PRC transitions toward a market economy, are known as migrant workers, and thought to number more than 200 million (*China Labour Bulletin*, 2005). Many of these workers are illiterate, unskilled and unaware of their limited right to organise under the ACFTU (*China Labour Bulletin*, 2005). The *China Labour Bulletin* (2004a) blames the failure of the ACFTU to organise migrant mine workers on a malfunctioning system of labour law protection. The proposition is that organised labour is what gives laws like the Mining Safety Law, Coal Law and Work Safety Law their "teeth" (*China Labour Bulletin*, 2004a). That is, a strong union becomes an enforcer of the laws, and would allow workers to exercise their rights to refuse dangerous assignments, to report safety violations, to take part in the establishment of safety standards and to proper training and safety supervision as established under these laws. The *China Labour Bulletin* (2004b) argues that "[t]he problem is not a lack of work-safety laws or regulation, but rather the political will to enforce them on the ground." Put simply,

China Labour Bulletin believes that unless workers are allowed to set up *independent* trade unions and worker safety committees, the health and safety of workers, in particular those working in high-risk industries such as coal mines, cannot be effectively protected (emphasis added).

The China Labour Bulletin (2006a) argues that the non-democratic structure of the ACFTU constructively denies workers a meaningful right to organise, while

providing the government with a safety net – it can always claim that Chinese workers *do* have a right to organise. The organisation argues that without properly functioning unions, workers cannot safeguard their basic legal rights no matter how comprehensive the regulatory scheme is. A functioning Chinese mining union that included rural migrant workers would allow miners to "organize their own safety teams and take part directly in safety supervision," as they do in the USA (*China Labour Bulletin*, 2006b). Unsurprisingly, the American UMWA union has come out in strong support of non-union Chinese miners. In 2005, the president of the UMWA asked the Executive and Legislative branches of the US Federal government to "pressure the Chinese government on behalf of its miners" and to push towards unionisation (Lambrecht, 2005a: A01).

Conclusion

While the PRC is still the world's deadliest country for coal miners, annual statistics show that it is improving. However, annual coal mine fatalities and the fatality to production ratio in the PRC still dwarf statistics from all other major coal producers. The USA produces the second largest amount of coal on an annual basis but experiences relatively few fatalities, with a significantly lower fatality to production ratio.

The PRC and the USA are not easy to compare, particularly considering the highly developed economy of the USA and relative underdevelopment in the PRC. Citing US safety statistics as a baseline for the PRC seems somewhat inappropriate, given that the USA also struggled with mine safety while it was developing. However, when compared to the third largest coal producer, a country that is less developed than the PRC, the Chinese coal mine safety record is still grim.

Both the USA and the PRC have comprehensive and sophisticated legal regimes that deal with coal mine safety in great detail. Both governments appropriate huge amounts of money into mine safety research and mine engineering. Both have specific administrative agencies to promulgate, revise and enforce safety standards on all aspects of mining. However, the PRC's laws are failing to prevent thousands of deaths a year.

While there is a notable systemic difference between the two regimes, the lack of judicial review of administrative regulations and actions in the PRC, US courts tend to be highly deferential to administrative agencies when they exercise judicial review. Rather than this difference, critics of the PRC record point to a culture of corruption and illegal mines as the root cause of the discrepancy. Mine operators shirk what appear to be sound safety laws due to the political influence or payments of owners and operators. In many cases, government officials have direct ownership stakes in illegal mines.

Moreover, unskilled and illiterate migrant workers are eager to take jobs in a mine, and are powerless to voice safety concerns or establish safety protocols themselves. Labour advocates argue that the solution to the PRC's mine safety problems lies in the formation of a properly functioning system of labour law that allows workers the right to meaningful organisation, participation in safety regulation and the right to strike. Until adequate unions are established for migrant mine workers, they will be powerless to act as an enforcement mechanism

for the laws that are meant to protect them. Organised, they would be the first level of enforcement and involved in the further promulgation of mining safety standards.

Notes

- ¹ The USA did not import a significant amount of coal in 2006 and, therefore, was not included on the World Coal Institute's list of top ten importers.
- ² In reporting fatality data, the *China Labour Bulletin* cites official statistics from China's State Administration of Coal Mine Safety, a division of SAWS. Note that these official statistics have been questioned and some think that the government significantly under-reports fatalities. The *China Labour Bulletin* is a Hong Kong-based non-profit organisation that acts as an advocate for Chinese workers.
- ³ In this article, unless stated otherwise, all dollars are US dollars.
- ⁴ See Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.,467 U.S. 837 (1984) and its progeny.
- ⁵ See Motor Vehicle Mfrs. Assn. v. State Farm Mut., 463 U.S. 29 (1983) and its progeny.
- ⁶ Tellingly, a comprehensive economic history of the Chinese coal industry since the establishment of the PRC in 1949 makes no mention of the All China Federation of Trade Unions or unions at all (Thompson, 2003).

References

- *China Labour Bulletin* (2004a) "Perspectives on Work: Labor Unrest and Denial of the Right to Organize in China," 26 November, http://www.china-labour.org.hk/public/contents/article?revision%5fid= 3959&item%5fid=3958 (downloaded 25 November 2007).
- *China Labour Bulletin* (2004b) "Safety Standards in Chinese Mines, What Are the International Standards?," 21 December, http://www.china-labour.org.hk/public/contents/article?revision%5fid=4037&item%5fid=4036 (downloaded 25 November 2007).
- *China Labour Bulletin* (2005) "Mainland Media Calls for Migrant Workers to Uphold Their Rights by Forming Official Unions," 1 June, http://www.china-labour.org.hk/public/contents/news?revision% 5fid=9124&item%5fid=9123 (downloaded 25 November 2007).
- *China Labour Bulletin* (2006a) "China's Draft Labour Contract Law: Without Freedom of Association, Will Chinese Workers be Any Better Off?," 11 August, http://iso.china-labour.org.hk/public/contents/ article?revision_id=38983&item_id=38982 (downloaded 25 November 2007).
- China Labour Bulletin (2006b) "Deconstructing Deadly Details from China's Coal Mine Safety Statistics,"
 January, http://www.china-labour.org.hk/public/contents/news?revision%5fid=19324&item%5fid=19316 (downloaded 25 November 2007).
- *China Labour Bulletin* (2007a) "A Journey Into the Black Heart of Shanxi," 6 June, http://www.china-labour.org.hk/public/contents/article?revision%5fid=45414&item%5fid=45412 (downloaded 25 November 2007).
- China Labour Bulletin (2007b) "Coal Mine Accidents," undated, http://www.china-labour.org.hk/public/ contents/article?revision%5fid=46527&item%5fid=46526 (downloaded 25 November 2007).
- China Labour Bulletin (2007c) "Is the All China Federation of Trade Unions Merely a Front for the Communist Party and Enterprise Management?," 24 August, http://www.china-labour.org.hk/public/ contents/article?revision%5fid=49073&item%5fid=49072 (downloaded 25 November 2007).
- Chinamining.org (2006a) "Coal Law of the People's Republic of China China Mining," 21 July, http:// www.chinamining.org/Policies/2006-07-21/1153463988d135.html (downloaded 25 November 2007.
- Chinamining.org (2006b) "Law of the People's Republic of China on Safety in Mines China Mining," 7 August, http://www.chinamining.org/Policies/2006-08-07/1154932041d472.html (downloaded 25 November 2007).
- Chinamining.org (2006c) "Law of the People's Republic of China on Work Safety China Mining," 7 August, http://www.chinamining.org/Policies/2006-08-07/1154931087d471.html (downloaded 25 November 2007).
- Chinamining.org (2006d) "Regulations for the Implementation of The Law of the People's Republic of China on Safety in Mines," 7 August, http://www.chinamining.org/Policies/2006-08-07/1154929995d467.html (downloaded 25 November 2007).
- Cisneros, R. (2007) "Non-Chinese Businesses Drive Changes in Safety, Regional Differences Lead to Inconsistent Enforcement of Rules," *Business Insurance*, 26 March, p. 22.

Cody, E. (2007) "Hopes Dwindle for 172 Miners Missing in China," *The Washington Post*, 20 August.
Collyer, R. (1993) "Rights of Mine Access for Miners' Representatives: Has a Walk Around the Mine Become a Run Around the Law?" *West Virginia Law Review*, 95, 617, pp. 617-61.

Curran, D. (2003) Dead Laws for Dead Men: The Politics of Federal Coal Mine Health and Safety Legislation, Pittsburgh: University of Pittsburgh Press.

Economist Intelligence Unit (2007) "Country Briefing, China Regulations: Fewer Accidents, But Still Much Room For Improvement," 22 August, p. 1.

Hutzler, C. (2007) "World's Coal Use Has a Deadly Price," The Associated Press, 11 November.

- Johnson, T. (2006) "Corruption Deters Mine Safety Efforts," Contra Costa Times, 26 December, p. F4. Lambrecht, B. (2005a) "China Signals New Urgency in Cutting Coal-Mining Risks," The St. Louis Post-Dispatch, 3 March, p. A01.
- Lambrecht, B. (2005b) "China Tries to Make Its Coal Mines Safer," *Charleston Sunday Gazette-Mail*, 13 March, p. 5.

Magnier, M. (2005) "Cost of China's Coal: Miners' Lives," The Los Angeles Times, 16 August, p. 4.

McLaughlin, K. (2006) "In China: Energy Needs v. Mine Safety," *Christian Science Monitor*, 26 January, p. 7.

National Advisory Council of India (2007) "Presentation on Coal Sector," 17 October, http://nac.nic.in/ concept%20papers/coal_sector_review_17oct07.pdf (downloaded 28 November 2007).

- Peerenboom, R. (2007) China Modernizes: Threat to the West or Model for the Rest, Oxford: Oxford University Press.
- People's Daily Online, The (2007) "The State Council," http://english.peopledaily.com.cn/data/organs/ statecouncil.shtml (downloaded 25 November 2007).
- Schiller, B. (2007) "Coal Keeps Towns Alive at Deadly Cost," Toronto Star, 25 August, p. 4.
- Thompson, E. (2003) The Chinese Coal Industry: An Economic History, London: RoutledgeCurzon.
- Tien, J. (2005) "Health and Safety Challenges for China's Mining Industry," *Mining Engineering*, 57, 4, 1, pp. 15-23.
- United Nations Treaty Collection (2007), "Multilateral Treaties Deposited with the Secretary-General-TREAY I-IV—4.asp," http://www.unhchr.ch/html/menu3/b/treaty4_asp.htm (downloaded 25 November 2007).
- United States Department of Labor (2007a) "Mine Safety and Health Administration, Fact Sheet 95–2 Injury Trends in Mining," http://www.msha.gov/INFO/FactSheets/FCT2.HTM (downloaded 25 November 2007).
- United States Department of Labor (2007b) "Mine Safety and Health Administration's Statutory Functions," http://www.msha.gov/INFO/INF1.HTM (downloaded 25 November 2007).
- United States Department of Labor (2007c) "Mine Safety and Health Administration, Coal Fatal Alert Bulletins and Investigation Reports," http://www.msha.gov/fatals/fabc.htm (downloaded 24 November 2007).
- Wang, S. (2006) "Regulating Death at Coalmines: Changing Mode of Governance in China," Journal of Contemporary China, 15, 46, pp. 1-30.
- World Bank (2007a) "GNI per capita, Atlas method and PPP," http://siteresources.worldbank.org/ DATASTATISTICS/Resources/GNIPC.pdf (downloaded 24 November 2007).
- World Bank (2007b) "Population 2006," http://siteresources.worldbank.org/DATASTATISTICS/ Resources/POP.pdf (downloaded 24 November 2007).
- World Bank (2007c) "Total GDP 2006," http://siteresources.worldbank.org/DATASTATISTICS/ Resources/GDP.pdf (downloaded 24 November 2007).
- World Bank (2007d) "Data Country Classification," http://web.worldbank.org/WBSITE/ EXTERNAL/DATASTATISTICS/0,,contentMDK:20420458 ~ menuPK:64133156 ~ pagePK:64133150 ~ piPK:64133175 ~ theSitePK:239419,00.html (downloaded 24 November 2007).

World Coal Institute (2007) "Coal Facts," http://www.worldcoal.org/pages/content/index.asp?PageID= 188 (downloaded 24 November 2007).

Yardley, J. (2007) "Chinese Dam Projects Criticized for Their Human Costs," *The New York Times*, 19 November.

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