

Review

## Understanding the administrative regulation on occupational health and trend in China

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**Abstract:** With the immense economic growth and social development, China has gained worldwide attention. With the quick growth of industrialization, several international professionals are gaining interest in occupational management system and in the role of the Chinese Government in protecting the worker's health. The Law on Prevention and Control of Occupational Diseases and the Work Safety Law are the two most important laws in China, which highlight the responsibilities of the employer, employee, governmental agencies, authorized occupational health service agency, and other stakeholders. The State Council comprises two departments, namely, the State Administration on Work Safety (SAWS) and the National Health and Family Planning Commission (NHFPC), which are responsible for governing the occupational health work. A series of regulations and standards have been promulgated by the Chinese Government to encourage or instruct the employers to fulfill their responsibility; however, several issues persist related to occupational health work, including administrative, technological, and sociocultural aspects. At present, the Chinese Government wants to enhance the reform in both economic and administrative structures, and the adjustments for modifying and/or improving the occupational health regulatory system are expected. Notably, the occupational health work in China must be altered for better.

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### Introduction

Occupational health and safety is a common topic in China; however, the dramatic economic and social changes occurring over decades in China are unprecedented in human history. In order to adapt to the increasing economic growth and social development, two important laws in China, namely, the Law on Prevention and Control of Occupational Diseases and the Work Safety Law, came into effect in 2002. The implementation of these laws and the role of the Chinese Government in performing its duties to protect the worker's health are of worldwide concern. The Chinese experiences that can be learned or what China should learn from other countries, specifically from the industrialized countries, have been discussed often. It seems that the language is still a barrier and the Chinese laws, regulations, and standards on occupational health cannot be easily accessed or understood in English. This article emphasizes certain basic information regarding this issue.

The Constitution is the fundamental law of China that provides the country's basic system to guarantee the harmony of relation between the country and its people. The Constitution, initially adopted at the Fifth Session of the Fifth National People's Congress on December 4, 1982, includes 4 chapters with 138 items. The following provisions, majorly related to the occupational health and safety, are clearly described: (1) The citizens have rights and duties to work. The State creates conditions for employment, enhances occupational safety and health, improves working conditions, and on the basis of expanded production, it increases remuneration for work and welfare benefits. The State provides necessary vocational training for citizens before they are employed (item 42). (2) Working people have the right to rest. The State expands facilities for working people's rest and recuperation, and prescribes working hours and vacation entitle-

ments for workers and staff (item 43). (3) Citizens have the right for material assistance from the State and society when they become old, ill, or disabled. The State has to implement social insurance, social relief, and medical and health services to which the citizens are both entitled and have a right to (item 45). (4) Women enjoy equal rights along with men in all spheres of life, including the political, economic, cultural, social, and family life. The State has to protect the rights and interests of women, and apply the principle of “equal pay for equal work” to men and women alike (item 48).

Based on the Constitution, the legislation system in China covers several hierarchies. (1) The National People’s Congress or its Standing Committee adopts the laws, such as the Law on Prevention and Control of Occupational Diseases. (2) The State Council promulgates the regulations, such as the Regulations on Prevention of Pneumoconiosis (issued in 1987) and Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used (issued 2002); (3) The departments of the State Council, such as the National Health and Family Planning Commission (NHFPC, formerly Ministry of Health before 2013, website: [www.nhfpc.gov.cn](http://www.nhfpc.gov.cn)) and the State Administration on Work Safety (SAWS, website: [www.chinasafety.gov.cn](http://www.chinasafety.gov.cn)), whose functions are directly related to occupational safety and health, issue the regulations (or rules) based on their duties. (4) The national standards (or criteria) are announced by the departments of the State Council, for example, the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ, website: <http://english.aqsiq.gov.cn/>), NHFPC, and SAWS. (5) At the level of province, or municipality or autonomous region, their People’s Congress or its standing committee can also adopt the local laws according to their specific situation.

## Two Important Laws Related to the Occupational Health and Safety in China

In China, there are two important laws related to the occupational health and work safety, that is, the Work Safety Law of the People’s Republic of China<sup>1)</sup> and the Law of the People’s Republic of China on Prevention and Control of Occupational Diseases<sup>2)</sup>.

The Work Safety Law of the People’s Republic of China was adopted in 2002, and was amended in 2009 and 2014, respectively. In general, this law handles the safety issues, including accidental poisoning and emphasizes the responsibility of both the employer and employee. It includes 7 chapters with 114 items: (1) General Provisions; (2) Safeguards for Work Safety of Business Entities; (3) Rights and Obligations of Employees; (4) Work Safety Supervision and Administration; (5) Emergency Rescue, Investigation and Handling of Work Safety Accidents; (6) Legal Liability; and (7) Supplemen-

tary Provisions. In Chapters 2 and 4, the responsibility of business entities and the duty of governmental agencies, such as SAWS, are mentioned in detail. In January 2017, the General Office of the State Council announced the 13<sup>th</sup> Five-year Planning of Work Safety, and the SAWS claimed that this law will be amended accordingly.

The Law on Prevention and Control of Occupational Diseases of the People’s Republic of China came into effect in 2002. Thereafter, the Standing Committee of National People’s Congress amended this law twice, in December 2011 and June 2016, respectively, to adjust it to the new administrative and economic situation in China. In the updated version, the administrative roles of the government agencies, in particular NHFPC and SAWS, was readjusted. In general, the SAWS governs the occupational hazards at workplaces and the NHFPC governs the worker’s health. In December 2016, the General Office of the State Council announced the National Program on Prevention and Control of Occupational Diseases (2016-2020); further amendment is expected. This law comprises 7 Chapters with 88 items: (1) General Provisions; (2) Requirements at Design and Construction Stage; (3) Protection and Management during Operation; (4) Diagnosis of Occupational Diseases and Protection of Victims with Occupational Disease; (5) Supervision and Inspection; (6) Legal Liability; and (7) Supplementary Provisions. By this law, the responsibilities of the employer, employee, government agencies, authorized occupational health service agency, and other stakeholders are explained, with an objective to protect the employees from occupational diseases. If the enterprise violates the Law, SAWS may propose penalties of up to 500,000 RMB (ca. 80000 \$), and may even request the local government to order a shutdown.

## Official Lists of the Occupational Hazards and Occupational Diseases

According to the Law on Prevention and Control of Occupational Diseases, NHFPC and SAWS, jointly with other related Departments, are responsible for issuing two important classified catalogs, namely, the Catalogue of Occupational Hazards<sup>3)</sup>; and the Classification and Catalogue of Occupational Diseases<sup>4)</sup>.

The updated Catalogue of Occupational Hazards was issued on November 17, 2015, jointly by the NHFPC, Ministry of Human Resource and Social Security of the People’s Republic of China, SAWS, and All-China Federation of Trade Unions, based on the first version issued in 2002 by the Ministry of Health. In total, there are 6 groups of occupational hazards listed in this updated catalog with open items, including: (1) dusts (51 types); (2) chemicals (374 types); (3) physical agents (14 types); (4) radiation (7 types); (5) biological agents (5 types); and (6) others (3 types, i.e., metal fume, poor work condition in

the underground mine, and scarping process). Under the classified groups of dusts, chemicals, physical agents, radiation, and biological agents, there is an open item at the end to address other agents that have not been mentioned specifically. Therefore, it can be inferred that all occupational hazards have been included; however, unfortunately, in the practice, the enterprises did not consider all agents used/produced at their workplaces.

The updated Classification and Catalogue of Occupational Diseases was issued on December 31, 2013, jointly by the NHFPC, Ministry of Human Resource and Social Security of the People's Republic of China, SAWS, and All-China Federation of Trade Unions, based on the first version (the Catalogue of Occupational Diseases) issued in 2002 by both former Ministry of Health and former Ministry of Labor and Social Security. There are 10 groups of occupational diseases listed in this catalog, namely: (1) pneumoconiosis (12 types) and other occupational respiratory diseases (6 types); (2) occupational skin diseases (8 types); (3) occupational eye diseases (3 types); (4) occupational otorhinolaryngologic and oral diseases (4 types); (5) occupationally chemical poisonings (59 types); (6) occupational diseases caused by physical agents (7 types); (7) occupational radiation-induced diseases (10 types); (8) occupational infectious diseases (5 types); (9) occupational cancers (11 types); and (10) others (3 types). Under the groups of pneumoconiosis, skin disease, chemical poisonings, and radiation-induced diseases, there are open items at end to address other issues that have not been mentioned specifically, such as any issue about other chemicals that has direct causal relationships between the occupational exposure and occupational diseases. According to this classification, at present the typical work-related diseases, such as the musculoskeletal diseases (e.g., low back pain or tendonitis from repetitive motion work), cardiovascular disease from long working hours, and psychiatric diseases from psychological stress, cannot be diagnosed as occupational diseases.

### Diagnosis of Occupational Diseases

The Law on Prevention and Control of Occupational Diseases states that an occupational disease must be diagnosed by the qualified medical doctors in the authorized hospitals after an application is submitted with respect to the suspected case. The diagnosis must be based on: (1) the worker's employment records, (2) the qualified records of qualitative and quantitative exposure to occupational hazards at workplaces, and (3) the clinical manifestation and results of auxiliary examinations. To instruct the implementation of this work, the Ministry of Health issued the revised Regulation on Diagnosis and Appraisal of Occupational Diseases (No 91)<sup>5</sup> on January 9, 2013, based on the first version issued on March 28, 2002. Meanwhile, several national criteria or guidelines in prin-

ciple have been announced, such as the general guideline for diagnosis of occupational diseases (GBZ/T265); diagnosis of pneumoconiosis (GBZ70); pathological diagnosis criteria of pneumoconiosis (GBZ25); diagnosis of occupational skin diseases—general guideline (GBZ18); diagnosis of occupational malignant tumor (GBZ94); diagnosis of occupational acute chemical poisoning—general rules (GBZ71); diagnostic criteria of occupational radiation sickness—general guideline (GBZ112); and a series of diagnostic criteria for specific agent or disease. Herein, the single character of G, B, Z, and T is the first character of alphabetic writing in Chinese and indicates the national, standard, occupational, and recommendation, respectively.

### More Requirements for Employers than Providing Health and Safety Workplaces

Apart from ensuring the safety and health workplaces, the Law on Prevention and Control of Occupational Diseases requires the employers to at least: (1) report the occupational hazards to the SWAS; (2) prepare the report of preassessment of the occupational hazards while the company is planning to construct; (3) prepare the report of effectiveness assessment of facilities against the occupational hazards and organize the acceptance testing of these facilities at the prerunning stage; (4) entrust the authorized occupational health service agency to carry out the monitoring of occupational hazards at workplaces; and (5) entrust the authorized medical institute to carry out occupational health surveillance. The data reporting (to the SAWS) of environmental monitoring at workplaces must be provided by the authorized agency. The SAWS or NHFPCT mentions the requirements of the authorized agency or medical institute, including professionals, instrument, or working space, etc. Both NHFPC and SAWS have issued a series of regulations, standards, or technical procedures to ensure that the aforementioned work is properly implemented.

The hygienic standard for the design of industrial enterprises (GBZ1)<sup>6</sup> announced by the Ministry of Health in 2010 is the primary guideline for employers to design their plants, including requirements of the location; building (plane and vertical layout); prevention/control of dusts, toxic chemicals, heatstroke and cold, noise and vibration, ionizing and nonionizing radiation; lighting and illumination; microclimate at worksite; auxiliary room and/or facilities; and emergency rescue. The occupational exposure limits for hazardous agents in the workplaces—part 1: chemical hazardous agents (GBZ2.1)<sup>7</sup> and part 2: physical agents (GBZ2.2)<sup>8</sup> present the critical values of the occupational exposure limits (OELs), in which (current valid version announced in 2007) 339 chemicals, 47 types of dusts, and 2 biological agents (*Beauveria bassiana* and *subtilisin*) have been included. The concept of

MAC (maximum allowable concentration), PC-TWA (permissible concentration-time weighted average), and PC-STEL (permissible concentration-short term exposure) is similar to the concept used by ACGIH<sup>9)</sup>.

To instruct regarding the work on the assessment of occupational hazards, the SAWS issued several industrial standards for production safety, such as the general principles for assessment of occupational hazards (AQ/T 8008)<sup>10)</sup>, guidelines for preassessment of occupational hazards in a construction project (AQ/T 8009)<sup>11)</sup>, guidelines for effect-assessment to control the occupational hazards in the construction project (AQ/T 8010)<sup>12)</sup>, technical guidelines for facility design to control the occupational hazard in the construction project (AQ/T 4233)<sup>13)</sup>, and specification of occupational hazards monitoring at the workplace (AQ/T4269)<sup>14)</sup>. Meanwhile, the national standards issued by the NHFPC (or former Ministry of Health), such as the general principle for assessment of occupational hazards (GBZ/T227) and the specification of air sampling for hazardous substances monitoring in the workplace (GBZ159)<sup>15)</sup> are still valid. Herein, AQ and T are the initial characters of alphabetic writing in Chinese and they indicate safety and recommendation, respectively.

To ensure work on the occupational health surveillance, the NHFPC issued the revised Regulation on Occupational Health Examination (No 5)<sup>16)</sup> on March 26, 2015, based on the first version issued on March 28, 2002. Besides, the NHFPC issued the national standards in 2014, such as technical specifications for the occupational health surveillance (GBZ188)<sup>17)</sup> and guideline of identification of contraindication to job placement (GBZ/T260).

### **Supervision on the Occupational Health Work by SAWS and NHFPC**

SAWS performs classified supervision and management. To supervise the occupational health work of employers, the SAWS issued several regulations based on the Law on Prevention and Control of Occupational Diseases, such as regulation on reporting of occupational hazards (No 48)<sup>18)</sup>; administrative regulation on supervision on occupational health work at workplace (No 47)<sup>19)</sup>; management catalog of risk classification of occupational hazards in construction project (2012 version)<sup>20)</sup>; and administrative regulation on supervision on occupational health surveillance work of employer (No 49)<sup>21)</sup>, in which the duties of employers are mentioned in detail. According to the management catalog of risk classification of occupational hazards in construction project (2012 version), the risk of the occupational hazards in the construction project are classified into three groups, that is, common, less severe, and severe. The enterprises, with a severe risk of occupational hazards, or with more than 100 staff employed, must set up a specific unit to handle the occupa-

tional health work.

To supervise the authorized occupational health service agency, SAWS issued the temporary management methods of occupational health service agency (No 50) in 2012<sup>22)</sup>, in which the requirements of human resources, instrument, internal control system, and the service quality assurance system of the authorized agency are clearly stated. Similarly, the NHFPC issued regulations on the authorized medical institutes that provide the service of occupational health surveillance and/or diagnosis of occupational diseases. Such items can be noted in the Regulation on Occupational Health Examination (No 5)<sup>16)</sup> and the Regulation on Diagnosis and Appraisal of Occupational Diseases (No 91)<sup>5)</sup>.

### **Updated Development**

The National Program on Prevention and Control of Occupational Diseases (2016-2020)<sup>23)</sup> was announced by the General Office of the State Council in December 2016 to strengthen the work on prevention and control of the occupational diseases and to furthermore ensure the workers' occupational health rights and interests. This document covers five aspects, including: (1) the situation and difficulty of the present work on prevention and control of occupational diseases; (2) general requirements; (3) main tasks; (4) safeguard measures; and (5) supervision and assessment. The document revealed that annually about 30,000 cases of occupational diseases were reported and were mainly distributed in the coal, chemical, nonferrous metals, and light industries. The employers did not fulfill their responsibility and duty required by the Law and did not provide the workers with healthy working environment and appropriate protective equipment. The occupational health work, such as monitoring of the occupational hazards and health surveillance, were not completely implemented. The right and interest of the migrant workers and temporary-employee or dispatched workers were not well-ensured. The capability of both occupational health supervision and service was relatively lower, the national data of occupational health work was incomplete, and the monitoring ability of some hazards was insufficient. The new occupational hazards appear due to the broad application of new technology, procedure, instrument, and materials. The document pointed out that the main task should cover the following points, including the source control; implementing enterprise's major responsibility; reinforcement of supervision and law enforcement; improvement of service for prevention and control; implementing the measures of social aid and social security, promoting information of preventive and control measures, launching health education and health promotion; and strengthening the application of scientific research results.

The National Program on Prevention and Control of

Occupational Diseases (2016-2020) stated that the specific planning goals in 2020 include: (1) more than 85% enterprises reporting their occupational hazards to the government, 80% enterprises carrying out the monitoring of hazards at workplaces, 90% workers occupationally exposed to hazards getting occupational health surveillance, 95% leader and managers in the enterprises receiving the training on occupational health, and 90% medical radiographers getting personal dose monitoring; (2) at least, within a county, one hospital being authorized as medical institute that provides service of occupational health surveillance, and within a city, one hospital as the medical institute that provides service of occupational disease diagnosis; (3) 90% counties (or districts) carrying out the supervised monitoring of important occupational hazards, 90% suspected or confirmed cases with the occupational diseases being reported to the government and the information on occupational health work being shared among different departments; (4) 80% workers getting employment injury insurance, and establishment of effective link-up of primary medical insurance, critical illness insurance, medical assistance, social charity, commercial insurance, and employment injury insurance.

The National Program on Prevention and Control of Occupational Diseases (2016-2020) required that the local government should draft their planning according to this document, define the periodical goals and tasks, and strengthen the supervision and direction to ensure the achievement of goals. The National Program states that SAWS and NHFPC should organize the supervision and assessment at appropriate time, and the final assessment should be carried out in 2020 and the results should be reported to the State Council.

In July 11, 2017, the SAWS announced the 13<sup>th</sup> Five-year (2016-2020) Planning on Governing Occupational Hazards<sup>24</sup>, which was drawn up according to the Work Safety Law of the People's Republic of China, the Law of the People's Republic of China on Prevention and Control of Occupational Diseases, the National Program on Prevention and Control of Occupational Diseases (2016-2020), and the 13<sup>th</sup> Five-year Planning of Work Safety. This document described the work issues in governing the occupational hazards, such as the weak capability of governing the occupational hazards, low awareness of occupational hazards, failure of some enterprises with respect to work in the field of occupational health, appearance of new hazards, inharmonious supervision system, and insufficient science and technology supporting strength. The document required more work on supervision by the local government to push the enterprises to fulfill their responsibility and duty. The documents pointed out that the separation of supervision duties for both safety and occupational health within SAWS led to lower supervision efficiency. Thus, SAWS is planning to comprehensively integrate these supervision duties, and efforts toward this

change have been announced in another SWAS document titled "the Guidance on promotion of integration of supervision on safety and occupational health (No 74)" on June 22, 2017<sup>25</sup>.

## Conclusion

In summary, in China laws, regulations, and standards or technological guidelines on occupational health exist, though it seems that improvement is required regarding the integrity and the systematic approach. The critical problem is that the enterprises did not strictly follow the requirements. The supervised monitoring data revealed that the occupational hazards level in some enterprises was not compliant with the national OELs and worse than the reported results by the enterprises themselves. Some workers suspected with occupational diseases, especially the diseases with long-term latency time, for example, pneumoconiosis, could not be diagnosed since there were no available qualified records regarding the occupational exposures. The media timely reported that the pneumoconiosis cases from one village suffered the economic and medical problem and needed help. Terribly, fewer illegal employers in the small scale industries with high occupational hazards hired the migrant workers in short period after knowing the latency of chronic occupational disease, just like pneumoconiosis. Therefore, more work should be carried out in China in the field of occupational health. The foreign investment companies should introduce the concepts yielding good experiences at their homeland in China and push the occupational health work toward betterment. Of course, China should learn more from the outside countries wherein the economy is growing and governmental administrative structure and function are reforming.

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