The Eleventh Five-year Plan of Work Safety in China

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Background

On the Sept. 1st, 2004, State Council promulgated Decision of the State Council on Further Enhancing Work Safety. According to the decision it is required to develop the Middle to long term plan for the work safety in China, and decide the annual performance indicators for the national, provincial (regional or city) level, and use the quantify method to control and examine the work safety situations. And based on the Outline of the Eleventh Five-year Plan for National Economic and Social Development (OEFP), State Administration of Work Safety (SAWS) developed the Eleventh Five-year Plan of Work Safety (EFPWS) jointly with National Development and Reform Commission, Ministry of Education, Ministry of Science and Technology, Commission of Science, Technology and Industry for National Defense, Ministry of Public Security, Ministry of Finance, Ministry of Labour and Social Security, Ministry of Land and Resources, Ministry of Construction, Ministry of Railways, Ministry of Communications, Ministry of Agriculture, Ministry of Public Health, State Bureau of Quality and Technical Supervision, Civil Aviation Administration of China etc.

At the end of the year 2004, the development of the EFPWS was started. And with one year long investigation and consult, in the Oct. 2005, the draft plan updated for many times. In the July of 2006, SAWS submit the draft plan to the state council for approval. On the Aug. 18th 2006, State Council promulgated the Eleventh Five-year Plan of Work Safety.

This is the first state level five-year plan special on work safety. It is an important indication for governments to fulfill their obligation of societal administration and public services. The plan includes the situations and problems, guiding ideology and objectives, major tasks, measures to realize the objectives, and the key projects.

1. Work Safety Situations and Problems

Work safety impact the peoples' lives and properties safety, impact the reform and development, and overall social stability, and is the necessary requirement from the Value of Developing Scientifically. Central Committee of the Party and state council attach great importance on the work safety all the time. The fifth Plenary Session of the Sixteenth CPC Central Committee had clearly put forward the value to develop economically, cleanly, and safely, and put the develop safely into the general social modernization strategy. State council has take the work safety as a key work to push economy development be harmonious with work safety, constant meetings have been organized for many times special on work safety, and have implemented series of powerful policies and countermeasures. The state successively implemented series laws and regulations including the Law of the Peoples' Republic of China on Work Safety, reformed and improved the work safety administration and inspection mechanism, carried out series special correction on the key sections or areas, increased the work safety input, developed the incentive economy policy to push work safety, strengthened the administration and inspection etc. law enforcement actions, and strictly investigated and treated the accidents. With joint efforts by all related parties, in the past several years, the work safety situation keeps stable in general, and since the year 2002, the total death of the all accidents emerged a down trend, the accidents caused death in 2005 is 12300 less than it in 2002, whatever, the situation is very serious still.

1.1 Major problems

The major problems of China work safety are:

Firstly, the total accidents number (including the traffic) is huge. In the past 10 years annual accidents happen 700,000 times, more than 120,000 deaths, and 700,000 injuries. In which, annual road traffic accidents is 500,000 times, 90,000 deaths, is about 71% of the accidents and 76% of the deaths; the annual industrial accidents is 16,000 times, 16,000 deaths, is 13% of the total deaths.

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Secondly, the major accidents are a lot. From 2001 to 2005, the major accidents that more than 30 deaths are 73 times, annual are 15 times. The major accidents that more than 10 and less than 30 deaths in one accident are 587 times, annual are 117 times. The special major accidents happened mostly in the coalmines, annual are 8 times and is about 58% of the total special major accidents. The annual major accidents happened in road traffic are same as in the coalmines, 42 times and 36% separately.

Thirdly, the occupational hazards are very serious. Statistics show annual new pneumoconiosis is more than 10,000 cases. So far there are more than 500,000 factories or mines have the occupational hazards in different degree. The workers exposed to the dust, poison and noise are more than 25 million, and the migrant workers are the most suffered group.

Fourthly, the gap China lacks behind the developed countries is big. Since the 1990's, the big accidents that more than more than 3 deaths in one accident is decreased remarkably. But China still faces the major accidents, great number of deaths, and giant number of occupational diseases. Especial in the coalmines and road traffic areas, the gap is even larger. In the recent years, work accidents that cause heavy pollution are increasing. From 2001 to 2005, 50% of the environment pollution accidents are caused by work accidents.

1.2 Major reasons

There are several reasons to the serious work safety situations:

Firstly, the treatment is no correct for many local governments and undertakings to the relation between the economy development and the work safety. Being lack of the enough learning of the importance of the work safety, they focus on the economy development but over look the safety issues, haven't list the work safety in their society and economy development plan or strategy. The Safety First, Prevention Prioritized, and Comprehensive Control haven't implemented, many enterprises haven't take safety actions without the outside pushing.

Secondly, the general work safety infrastructure is poor. With the economy rapid development, the traditional extensive economic development method hasn't been changed essentially. Enterprises haven't input enough into work safety, work safety is lack behind seriously, and especial in some old industries and small and middle sized enterprises, the process are out of date, the equipments are aging and shabby, work safety management level is low. Major hazards installations are in big number and distributing widely, no effective monitoring and control systems are available. Many big potential dangers threatening the peoples' safety haven't been corrected effectively.

Thirdly, the work safety responsibilities haven't been shouldered. Many undertakings haven't fulfilled their legal obligations, they have no safety management systems, lack of training, input is in short etc. There are some enterprises even violate the laws or regulations purposely, regardless the workers life safety. Many government leaders, especial the county and town level, have poor safety awareness, haven't take enough considerations on work safety, and some of them even breach their duty, misconduct, take fraudulent practices, connive and refuge the illegal actions.

Fourthly, many weaknesses exist in the work safety administration chain. Supervision and inspection methods are absent, the law enforcement is loose, the work safety supervision and inspection are lacking of authority and effectiveness, and the investigation and punishment for the violators is soft. Some sectional work safety management has been weakened, lacking of the inspection organizations or supervision methods. In some regions, local inspection organization and law enforcement ability building is slow, especial in the grass root inspection power even worse, there are some counties haven't established the work safety inspection organization as yet. The joint law enforcement mechanism haven't come into been, the composition of the forces haven't been reached.

Fifthly, work safety lack of the technical support. The work safety laws and regulations need continuous improvement and the technical standards need update. Information exchange is low, the nation wide work safety information exchange network hasn't come into been as yet. Technical support is weak, the work safety science and technology infrastructure is poor and the input is far from enough, the transform rate of the technical results is low. Dissemination and education work is lacking behind, and the training methods and content is out of date. Emergency rescuer systems is imperfect, equipments are drop behind, and awareness is poor, accidents response ability is bad.

1.3 Situations and challenges

Firstly, the conflict between the extensive economy development and the work safety is outstanding as yet. With the rapid economy development the economies develop in the extensive way is hard to be essentially changed in short time. The high-risk industries, such as mining, construction, hazards chemical and firecrackers etc. the work safety level could not be improved in short time. Rapid economy development intensified the need for the coal, electricity, gas and transportation; work safety will face more serious and new challenges.

Secondly, the consistence of the employees increases the difficult on work safety management. China is during the rapid urbanization period, big amount of redundant labours are transferring from the rural country to the towns. There are many new occupations and migrant workers; the work safety training can't meet the new changes. A lot of employees are lack of safety skills and self protection awareness can't fit to the work safety requirements, so the work safety management difficulties are increased.

Thirdly, the risk transfer put forward higher requirement for work safety. With the economy globalization acceleration, many high-risk industries are transferred from developed countries into China. And in China, they are transferred from the rich regions to poor ones, from big enterprises to small ones, form urban to rural country etc. The risk transferring increased the accidents possibility; it is a new and serious challenge for work safety.

In conclusion, to improve the work safety situation, we need to solve not only the traditional problems but also the new ones. It is necessary to know the work safety is a long term, tough, complicated and urgent work, we should closely combined with the economy structure adjustment, from the macro point of view, focus on the key issues, set practical phase objectives, take effective methods, curb the accidents increase and high frequency trend.

2. Guiding ideology and objectives

2.1 Guiding ideology

Taking the Deng Xiaoping's theory and ' The Three Representatives' as guiding ideology, following the scientific development value to drive overall situation, be stick to the safety first principle, prevention prioritized, and take comprehensive control methods, treat the obvious and root causes at the same time, pay more attention on the removal of the root causes, keep the renovation mechanism, strengthen the safety management, start from the peoples' life and property protection, curb the major accidents, decrease the injury and death, promote the safety culture, improve the safety legislation, fulfill the safety obligation, depend on the safety technology, increase the safety input, establish the long term effective mechanism, push development safely.

2.2 General objectives

Till the year 2010, establish a mature work safety inspection system; gradually form a normative and perfect order in work safety law enforcement; generally build perfect work safety legal and standard systems, technical support systems, information exchange systems, training systems, dissemination and education systems, and the emergency response systems; compared with the year 2005, the accident resulted death per 100 million GDP decrease 35%, industrial accidents caused death per 100,000 workers decrease 25%, major accidents that is more than 10 deaths in one accident decrease 20%, the occupational hazards serious situations is under effective control, the work safety situations improved better.

2.3 Objectives in major sections or areas

Compared with 2005, in 2010:

Coalmines: death per 1 million ton coal decrease 25% or more, major accidents that is more than 10 deaths in one accident decrease 20% or more.

Non-coalmines: the general death decrease 10%.

Hazards chemicals: the general death decrease 10%.

Firecrackers: the general death decrease 10%.

Construction: the general death decrease 10%.

Special equipments: death per 10,000 special equipments controlled under 0.8.

Fire: death per 100,000 people controlled under 0.1.

Road traffic: death per 10,000 vehicles controlled under 5.0.

Water transportation: death and where about is unknown decrease 10%.
Rail way transportation (include out side the rail way): death decrease 10%.
Civil aviation: Major accidents per 1 million flying hours controlled under 0.3.
Agricultural machine: death decrease 10%.
Fishing watercraft: death decrease 10%.

3. Major tasks

3.1 Curb the major coalmine accidents

To curb the major coalmine accidents, strengthen the periodic inspections, key inspections, and special inspections. Strictly control the entrance safety limit for coalmine operation; harshly strike the illegal mine construction and operation actions. Strengthen the potential dangers identification and correction, stop the identified unsafe mines and increase management power. Push the coalmines resource be integrated, regulate the mine develop order, adjust and improve the middle and small mines, push the coalmine industries reform and recompose, build large size coal base. Try to change the small coalmines in three years, solve the poor work situations, remove the outstanding unsafe phenomenon including frequent accidents, low level management, production in a mass, small and illegal mining etc.

Strictly implement the 'three simultaneous system' which including the safety facilities should be simultaneous planed, simultaneous constructed, and simultaneous operated with the major facilities. Collect safety prevention fee, establish risk guaranty found, and establish the top leaders and managers' onsite visit system. Push the coalmine safety management standardization activities, improve their safety management level, eliminate the out of rule operation, out of regulation command, and break the labour laws phenomenon. Strengthen the forecast, prevention and control to the gas, fire, and water etc major hazards. Special attention should be paid to the gas treatment, push the principle of 'drainage gas before the coal excavate', increase the gas drainage rate, in 2010 the gas drainage should arrive 10 billion cubic meters, gas drainage in coalmines should reach 40%, encourage and support the gas comprehensive utilization. The gas monitoring and control systems should be equipped for the pit coalmines, establish digital monitoring and control network. Try to decrease the gas caused accidents in big extent, especial the major gas accidents that will cause 50 deaths in on accident. Improve the ventilation, fire prevention, dust cleaning etc. equipments, and push other equipments or facilities renovation. Carry out the disaster prevention and comprehensive utilization for the coal wasting piles.

3.2 Deepen the special correction and inspection in the key sections and areas

Deepen the special correction for the non-coalmines, hazards chemicals, firecrackers, and population dense public places. Strengthen the safety inspection and special correction for the road traffic, water transportation, railway, civil aviation and urban light railway. Solve the safety distance that can meet the requirements. Strictly implement the safety permission system for the sections or areas including the non-coalmines, hazards chemicals, firecrackers, construction, civil explosives etc. Remove the process and equipments, which can't meet safety standards. Shut down the enterprises, which destroy the resources, contaminate the environment and can't meet the safety conditions.

Non-coal mine: through combination, recompose, share alteration etc. styles, push the resource integration, shut down the illegal non-coal mines, push the non-coalmines upgrade the scale, operate in a normative and intensive way, the number of the non-coal mines should decrease 15% in two years. The key actions should be taken for the earth pressure, water hazard, heat hazard, high sulfur pit fire and the blowout disasters. Strengthen the safety inspection for the offshore oil exploration and mining. For the mining waste pile store that designed content is more than 10 billion cubic meters or the major dam is over 60 meters, the safety monitoring and control systems are compulsive been built.

Hazards chemicals: improve the inspection coordination mechanism for the hazards chemical safety, and fulfill the supervision obligations. Following the territoriality principle, every region should strength the site planning for the hazards chemical productions and business units, to those units that threatening public safety and drinking water, key corrections actions should be taken such as 'treatment, limit production volume, change products, move out or shut down' etc. Carry out the risk assessment and safety planning for the chemical industry park, make the layout reasonable, and improve the regional safety level. Strict monitoring and control should be implemented for the production, storage and transportation of the liquid chlorine, liquid ammonia, liquefied petroleum gas, and severe poisoning solvent etc hazards materials. Gradually establish real time monitoring and control systems for the hazards chemicals production, storage and transportation equipments. Spread the utilization of the safety monitoring and control equipment for the hazards chemical

transportation vehicles, realize the remote and dynamic monitoring and control for the road transportation of the hazards chemicals.

Firecrackers: Regulate the firecrackers production and business units; push the firecrackers production industrialization, implement the permeation system for the firecrackers business, transportation and sell. Strengthen every safety inspection for every step in from the manufacturing, transportation, storage, and to the firing off etc.

Civil explosives: Develop new products, process, equipments, and technologies for the civil explosives. Change the traditional manufacture methods, and continuously improve the autoimmunization and the safety prevention level. Optimize the products structure and the production layout, regulate the production and circulation, and remarkably improve the safety management level.

Construction: Improve the legal systems for construction engineering, further optimize the construction site safety inspection mechanism, strengthen the inspection team building, and fulfill the work safety obligations. Strengthen the dynamic safety permission certification administration for the construction enterprises, and regulate the accidents investigation and treat mechanism. Establish the safety inspection systems for the construction engineering, and improve the safety credit and punishment system for the construction enterprises and individual personals. Strengthen the special correction on the falling from high place, collapse etc. accidents that happen frequently. Supervise and urge the key regions and enterprises develop and implement the accidents prevention measures.

Special equipments: Establish perfect law and standards system, dynamic inspection system, safety obligation system, safety assessment system and emergency rescuer system for the especial equipments safety. Strengthen the grass root inspection ability and improve their inspection situations. Strictly control the safety entrance threshold for special equipments. Continuously carry out special correction on the gas container, pressured pipeline, power plant boiler, pressured tank car for hazards chemicals, hoist machines, and the out of date boilers and lifts etc. Support the ability building for a series state owned test organizations for special equipments.

Electricity: Establish and improve the emergency systems for the large area electricity lack out accidents, improve the response ability for power system emergencies. Keep the ‘unified distribution, classified management’ principle, strengthen the power distribution and management, and strengthen the cooperation and coordination between different power nets. Conduct safety assessment for the enterprises that access the power net. Intensify the work safety related knowledge and technical training. Push the electricity generation develops forward in the high and new science and technology direction. Strengthen the hydropower plan and reservoir dam safety management, and improve the registration and periodical test for the dams. Improve the dependability of the power management and supervision mechanism, and make the safety be an organic part of the power dependability.

Fire fighting: Develop and implement fire-fighting plan for the urban and rural areas, strengthen the fire-fighting infrastructure, equipment and ability building. Fulfill the fire prevention obligation. Improve special fire-fighting ability, and prevent the secondary disaster during the fire emergency response. Strengthen the fire monitoring for the under construction engineering and population dense public site. Strengthen the prevention in the urban and rural places, identify and eliminate the safety problems in time. Establish social training systems for fire safety, and improve the fire safety awareness for the common peoples. Make good use of the social organizations and market mechanism, and establish fire-fighting medial services organizations and implement certified fire-fighting professional system, so form a benign mechanism for fire fighting and insurance mutual encourage.

Road traffic: Improve the provincial, city, county, and village (town) four level safety organizations and coordination mechanism. Develop ‘safe and fluency county and district’ campaign. Strengthen the motor vehicle test system, establish and improve the motor vehicle calling back, safety certification, technical assessment, compulsive reject, driver training, test, and certification systems. Establish safety audit system for the road design and building. Strengthen road transportation enterprises regulation and management, and continuously curb the overload and over size transportation. Establish the travel record meter and global position system to match the safety management systems.

Water transportation: Strengthen the inspection and help ability, and the vessel base building. Accelerate the help vessel renovation. Push the new vessel that have higher safety functions, gradually limit the motor boat that still use the oars, eliminate the cement build vessels, and gradually implement vessel mould

standardization in some key water area. Establish ship routing system in key water areas along the sea border and in the internal rivers. Speed up the internal river vessel transportation management system building, carry out the specific correction for the ferries and the boats, and stop the illegal crossing ferry transportation. Establish very high frequency communication systems and vessel auto identification systems that cover the near seashore area and the Changjiang river arterial transportation lines, improve the communication net and the matching facilities for the search and rescuer in the land, and build the combat readiness communication systems for the water transportation safety.

Railway transportation: Strengthen the ministry and the bureau two levels safety inspection organization and team construction. Accelerate the level crossing changed into flyover crossing. Strengthen safety management for the motor vehicle, hazards chemicals and special goods transportation. Establish comprehensive safety supervision system that includes monitoring, information exchange, early warning and emergency rescuer functions for the trunk and busy lines. Establish safety monitoring and control equipments in other trunk lines. So primarily form vehicle safety monitoring and control systems for the railway. Gradually establish comprehensive mobile telecommunication system and multifunctional railway vehicle safety guarantee system for the whole railway.

Civil aviation: Establish and improve civil aviation safety management systems, aircraft flying inspection, aircraft airworthiness regulation, and airline security systems etc. Strengthen the safety facilities building for the airports, implement level II/III operation in the busy airports. Accelerate the aviation control facilities building; improve the flight flow volume, the command and monitoring ability in rural places. Build security monitoring and control, and response systems for the airports. Strengthen the air accidents investigation, safety science research, and technical test abilities building. Establish and improve training base for the flying, on board services, air control, air security etc. Establish comprehensive air safety information system, realize civil aviation safety information unified management.

Agriculture machine: Focus on the legal system and grass root administration system building, and improve the safety administration system for the agriculture machines. Regulate the machines, such as tractor, and drivers management, improve the registration and annual test rate. Strengthen registration, certification and license for the tractors and combine harvester machines, and regulate the safety test, the drivers training and test work. Pay more attention for the key harvest seasons. Establish agriculture machine safety information system, strengthen the agriculture machine supervision and test facilities building, improve the accidents investigation abilities, and carry out dissemination and education for safety operation, such as ‘safe agriculture machine’ campaign etc.

Fishing watercraft: Strengthen the safety test for the fishing watercrafts, utensils used in boats, and fishing machineries. Gradually implement the fishing watercraft reject systems. Establish the training base for the sailors training, and carry out special compulsive safety training for the ocean and international fishing sailors. Strengthen safety infrastructure building for the fishing harbor, set safety monitoring and control equipments, and establish ocean fishing watercraft dynamic information management systems. Guarantee the navigation mark for the fishing is used soundly, and add more necessary marks. Equip the boat for fishing law enforcement, improve the help equipments, and improve their emergency treatment ability.

3.3 Implement major hazards installations monitoring and control, and major potential hazards treatment

Carry out general investigation on major hazards installations all over China, and establish dynamic monitoring, inspection and early warning systems for them. Strengthen the supervision and guidance for the major hazards installations registration, filing, test, assessment, monitoring and supervision. Push the enterprises to establish safety management and control for major hazards installations.

Carry out major potential hazards registration, filing, assessment, classification, treatment and following supervision in the mines, chemicals, construction, special equipments and transportation and fire fighting etc sections or areas. Correct the major optional hazards in the dangerous sections of the highway, level crossing in the railway, urban light way, mine waste store, exhausted area, high pressure and high content of sulfured hydrogen gas field, and storage areas. Strengthen the major fire hazards corrections in population dense public place and urban public infrastructures.

3.4 Strictly carry out occupational health inspection

Establish and improve the coordination and major issues reporting mechanisms for occupational health work, clarify obligations to related departments, and fulfill monitoring and management responsibilities. Accelerate the on site inspection team building, recruit more people, budget more fund, equip more special monitoring and test facilities. Carry out occupational recording, establish all China occupational hazards

reporting and recording systems, and implement the permission system on occupational health. Strengthen inspection and check for the serious hazards sections including mining, construction, building materials, metallurgy, chemistry, machine, light industry and textile industry etc. Strengthen investigation and treatment on the occupational health accidents.

3.5 Strengthen work safety inspection ability

Strengthen work safety administration organizations at all level, build the law enforcement team ability, and ensure the work safety authorities have enough staff, facilities and equipments. Establish and improve all China unified work safety information exchange system, realize the resource sharing. Establish special technical support centers, and form the technical support system. Speed up the work accident emergency rescuer system building, gradually cover emergencies in mines, hazards chemicals, road traffic, maritime affairs, railway, civil aviation, fire fighting, nuclear industry, construction, special equipment and fishing etc sections or areas. Integrate current resources, adapt the layout, improve the dissemination and education, and build training bases. Build work safety experts and make full use of them.

3.6 Accelerate the work safety legislation

Develop the work safety law and regulation development plan. Further improve the Law of the Peoples' Republic of China on Work Safety and the matching regulations. Organize the laws and regulations updating on the mine, transportation, hazards chemicals, firecrackers, and special equipments etc. Develop and improve rules on the safety facilities 'three simultaneous system', work accidents emergency rescuer, accidents investigation, and certified safety engineers. Develop and modify the technical standards and codes on the accident prevention and control, major hazards installations, area safety plan, safety inspection management, emergency management and treatment etc. and construct the work safety technical standards systems.

3.7 Push the research, development, and spread of the work safety technologies

Integrate the work safety science and technology resources, establish state base for work safety science and technology renovation, research and development, the result transfer, form a new mechanism that make the enterprises principle part, combine the industries with the colleges and academies. Try to find break on the major accidents cause, mechanism, and evolvement laws on coalmines, hazards chemicals etc key sections or areas, renovate the work safety theory, and gradually establish work safety theory systems. Strengthen the potential hazards identification and treatment research for the coalmine, non-coalmine, hazards chemicals, special equipments, construction, and transport etc. key sections and areas. Carry out research on road traffic safety basic theories, traffic accident cause and mechanism, prevention science and application technology, and traffic safety facilities, and related technical standards. Push research on early warning and control for the gas, flood, and dynamic disaster for the mine. Carry out research and development for the fire, explosion, and poison leakage etc. major industrial accidents prevention, control, and emergency rescuer. Conduct the work safety inspection related technology development, and renovate the work safety inspection methods. Encourage and support advanced and practicable safety technology application, carry out pilot projects, and improve the work safety science and technology level.

3.8 Strengthen work safety training

Strengthen training for all level inspectors, safety managers in all sections, law enforcement staff, and coal mine safety inspectors. Further push safety training for the city and county level government leaders. Strengthen training for major leaders, safety management staff, and special operation persons in high-risk enterprises. Conduct training performance check for the small and middle size enterprises. Attach more importance for the migrant farmer workers' training in the mine, chemical, and construction industries. Strengthen the building for the training outline, check standards, training material, and test bank.

3.9 Push work safety dissemination and education

Develop the work safety dissemination and education plan, gradually establish the work safety dissemination and education system, and form a dissemination and education net covering all China. Promote the work safety culture, encourage and support to develop the safety science popularization documents, sound and video products etc. safety culture materials. Bring the work safety related laws into the people law popularization plan, and add the safety knowledge into middle and primary education. Strengthen the work safety in special education, occupational education, enterprises' education, and social dissemination, so to improve the general safety quality of the people.

Establish mechanism to hear the public voice and push the public supervision, encourage the people claim the safety law violation actions. Propagandize work safety through newspapers, broadcasters, televisions, and Internet etc medias, and promote the safety culture, safety legal system, safety obligations, safety science, and safety input etc.

3.10 Strengthen the work safety intermediate services building

Foster and develop the intermediate services on risk assessment, safety certification, test, training, and consult etc. and establish the work safety work safety intermediate services system. Strengthen the supervision and management to the intermediate services, regulate their practices, push to form the self principle mechanism, push the service specialization, socialization, and normative, and improve the service level and quality. Further improve the work safety professional system for the intermediate services, make full use of the certified safety engineers and other certified professions.

4. Measures to realize the objectives

During the 'eleventh five year' period, more efforts should be paid on the policy guidance, capital input, inspection force, fulfill the safety obligation, strengthen the safety awareness, and ensure the objectives and major tasks be achieved.

4.1 Make the work safety a part of the society and economy development plan

Work safety is an important part of the society and economy sustainable development, all level governments and related departments should compile the work safety plan, put the work safety in the important place, properly treat the relations between the work safety issues and the economy and society development. It is necessary to ensure the work safety plan be implemented, establish the performance indicators, and list these indicators, major tasks, and key projects in the statistics system for the all level governments society and economy development plan, so can plan as a whole for the work safety and economy and society development in a harmony way.

4.2 Fulfill the work safety obligations

Strengthen the obligation system for the local government leaders, make them fulfill the inspection functions, all level leaders' post achievements assessment will consider the work safety performance as a key indicator. Strengthen the undertakings to shoulder the major obligations on work safety, make the Legal Representative of undertakings as the first person who take all work safety responsibilities, so to ensure the input in work safety is enough, all prevention methods are in post. Fulfill the work safety administration organizations' inspection obligations. Work safety comprehensive administration department should supervise the local government and related authorities to implement accidents prevention actions. Departments under the state council should fulfill their supervision or inspection obligations in their matching sections or areas. The Supervisory Organs have the obligation to supervise the work safety administration organizations and the staff. Make full use of the trade unions, youth leagues, non-government organizations, and community and grass root organizations to supervise the work safety.

4.3 Strict work safety laws enforcement

Strictly implement the major work accidents responsibilities trace and punish systems, severe strike the violators who defy the laws, disregard the supervision or inspection, and ignore the life safety. Motivate all government functions, including the public security, procuratorate, court, and the principle inspection organs, establish a mechanism that under the government unified lead, departments joint action, punish those illegal actions such as duty breaching, misconduct, and corruption etc. and include the work safety principle violation treatment into the anti corruption work for coalmine industries etc. Improve the discloser and award system for the work safety problems, establish the mechanism to channel the report for the work safety law violation actions and accidents, and set a nation wide unified hot line for the complains. Strictly implement the work safety condition permission system and the 'three simultaneous system' for the construction projects. Implement the threshold system for the work safety equipments, facilities, and personal protection equipments, eliminate these processes and equipments that can't meet the work safety requirements.

4.4 Implement the economy incentive policies for work safety

Properly improve the enterprises' cost on the resource, safety, science and technology, and labor insurance. Following the requirements of the state council, improve the paid utilization system for the mine resource, develop and implement resource tax methods for the coalmines as soon as possible. Establish and implement the work safety risk guaranty fee system, establish the work safety fee raise system for the high-risk industries including the mine, construction, hazards chemicals, and the firecrackers etc. Accelerate the employment injury insurance, especial in the high-risk industries, such as mine, construction, gradually increase the compensation standards for the injured employees, and really protect the workers legal rights. Establish the combination between the employment injury insurance and the accidents prevention, using the economy lever of the premium difference between industries and the rate fluctuation for individual undertakings, push them strengthen accidents prevention, study and arrange certain amount fund for the accident prevention from the accumulated employment injury insurance fund. Encourage and push the commercial insurance operation in the work safety accidents and responsibilities. Implement favorite policy for the work safety equipments and gas drainage.

4.5 Increase the work safety input

All level peoples' government should allocate capital for work safety related issues including the major accidents prevention, potential hazards correction, administration and inspection ability building, safety infrastructure building, public or social benefit dissemination, training and education, advanced safety science and technology pilot and spread etc. Guarantee facilities, equipments, and the expense for the work safety administration and inspection. Increase the input for the road safety management, facilities, awareness building, and law enforcement equipments. The state supports the major potential hazards correction and safety technology renovation in the coalmine and other key industries. The undertakings must increase input for the potential hazards correction and safety technology renovation. So form a joint input mechanism form the state, local region, undertakings, and the society.

4.6 Implement the strategy of rise safety by science and education

Strengthen the culturing for safety technology and management special competent personals, support and encourage personals of related majors be cultured in safety direction. Establish all level work safety experts team, and make full use of them. While the state develop the scholarship for the tough majors, take into consideration of the high-risk, poor working environment, labor intense major including coalmine, and encourage the enterprises set directional study scholarship or fellowship in the universities. Strengthen occupational education in the mine and other high-risk industries. Strengthen the safety-engineering subject building, and try to list it as the national grade one subject. All level peoples' government should provide financial support for the work safety science and technology expense, and list the work safety related major basic theory, public benefit, common interest, and key technology in the national or local science and technology development plan. Combining the national basic science and technology platform building, consider the safety science and technology result transfer and spread platform as a part.

4.7 Strengthen the international cooperation

Further strengthen international cooperation with foreign governments, international organizations, and non-government organizations on occupational safety and health, continuously expand the cooperation channel, cooperation style, form a panorama, multi level, high quality cooperation, try to improve the cooperation or communication level, actively participate global or regional cooperation.

Track the work safety development trend in the world, strengthen international information exchange and personal training, and learn the good work safety experiences form the foreign countries. Do well for the propagandize out side, make full use of the foreign capital, technology, specialists, and management resources, push the advance technology induction, digestion, and independent renovation.

5. Key projects

During the 'eleventh five year' period, with the full use of the market-oriented mechanism, with the government guidance, strengthen the work safety input, make the key projects and the engine, and drive the 'eleventh five year' plan implemented in the all faces.

5.1 Coal mine accidents prevention and major hazards treatment

Gas prevention is the key point. Add ventilation shaft and special air-return way for the poor ventilation, safety level low, and high likelihood of the coal and gas outburst mines. Rebuild the wired motor transportation systems for the coal and gas outburst mines, and use the explosion prevention storage cell drive vehicle or belt conveyor. For these mines that occurred the gas movement but not escalated into outburst, rebuild the wired motor vehicle, add underground cave, take comprehensive outburst prevention measures including pre-assessment for the outburst risk, prevention measures, effect test, and safeguard measures etc. Equip the gas monitoring systems for all under ground coalmines, and realize net connection. Establish fire prevention engineering for flammable coal bed with the top-coal caving method. Establish and improve the dust comprehensive prevention system for the mines. Carry out water hazard prevention and treatment for the mining have the risk of water bursting from Ordovician limestone, or mining above confined aquifer in the north of China. Improve the power supply system for the small coalmines.

5.2 Major potential hazards correction

Record all major potential hazards, and establish the date base. Based on the assessment and classification, decide the key potential hazards that need different level governments, related authorities or undertakings to correct. Also based on the classification, conduct periodical check and correction for facilities or sites that have major potential hazards, including the urban public infrastructure, population dense place, subway, Petrolia chemical enterprises, special equipments, hazards chemical storehouse, dangerous sect of the road, level crossing of the railway. Treat the waste mine store pile that pose big risk or have safety problems, and remove the hazards chemical plant or storage business that can’t meet the safety distance in the urban region.

5.3 General investigation, safety monitoring and control for the major hazards installations

Carry out general investigation and record for the major hazards installations in the storage tank (zone), warehouse (zone), producing site, special equipment, waste mine pile etc. and establish state, provincial, city, and county four level data base for them. Build major hazards installation monitoring and control, and early warning centers including one state level, several provincial, city, county and level ones. Gradually form four level dynamic supervision, monitoring and control, and early warning systems.

Establish different level dynamic monitoring and control platform and net system for hazards chemical transportation by the road. Establish track and management system for the hazards chemical transportation by the railway in the trunk lines including Jin-hu, Jin-guang, Jin-ha (and Jin-qin), Jin-jiu (and Jin-shen), Long-hai, Zhe-gan (and Hu-hang) etc. Establish three levels safety track system for the hazards chemical transportation by the railway. Establish dynamic safety monitoring and command platform for the urban light train. Establish light aid monitoring and control system for the busy airports aviation. Build security monitoring, control and response system for the scaled airports. Equip the safety monitoring and control instruments for 1177 fishing preparing ports, and build dynamic monitoring and control systems for the ocean fishing vessels.

5.4 Key technical support centers

Relying on the current science institutions and universities, establish national or provincial research centers for the work related accidents prevention, investigation and identification, the research and development base for the work safety engineering in the China Academy of Safety Science and Technology, and series of safety test base that can meet the supervision and inspection functions. Improve the traffic safety research center and other national key laboratories under the Ministry of the public security, and establish road safety management training base. Equip study and experiment instruments, and improve the science and technology ability on fire fighting. Improve the national level major accident technical identification centers, and equip the detection and investigation teams in 32 provinces and 333 cities or regions. Establish 18 specialized training bases in 18 railway bureaus. Establish and improve road safety base on management net, emergency response, safety research, training and education, test and experiment etc. Establish safety technical analyses and identification laboratory for the civil aviation, and establish training base for the flight, on board service, air control, air security etc. Improve the construction accidents analyses center and work safety test center. Improve national test and technical research center for special equipments, and 20 key test bases. Establish the fishing equipment test base and 17 provincial sailors training bases. Establish the agricultural machine safety inspectors training base.

5.5 Work safety information system

Build and improve national comprehensive supervision and inspection system, and realize the information joint exchange and sharing among the work safety administration organizations and the member departments of the state council work safety committee. Improve the road traffic rapid report system, and the road traffic accident emergency rescuer information platform. Gradually establish the railway whole line mobile comprehensive information system. Build and improve the water transportation safety supervision system, and spread the vessel dynamic management system. Build aviation comprehensive safety management information system major focus on the aircraft safety, flight standards management, aircraft airworthiness management, airport safety management, aviation security management, and traffic safety management in the space etc. Relying on the public security net building, establish the case management system for all China major accidents that caused by the breach of duty. Establish all China construction safety comprehensive management systems, and spread the remote monitoring system for the construction sites. Establish and improve the dynamic monitoring and management net system for the special equipment safety. Establish agricultural machine safety comprehensive management system.

5.6 Facilities and equipments for the work safety administration and inspection

Equip and improve the law enforcement use vehicles and on site inspection equipments for the work safety administration and inspection organizations in the provincial, city, and county level. Add and renovate equipments for the provincial and regional coalmine inspection organs, and build office for the new organs. Improve the urban fire stations, and equip them on standards. Take the special fire brigade over city (regional) as the equip focus. Build perfect infrastructure for the ministry and bureau level safety inspection, construction safety administration, special equipment inspection, agricultural machine safety supervision and fishing safety supervision organs. Improve the safety management and law enforcement equipments for the provincial road transport management organizations. Build air control facilities for civil aviation, and renovate the lading system in the airport.

5.7 Work accidents emergency rescuer system

Build national work accidents emergency rescuer center, improve work accidents emergency rescuer platform in provincial and city level. Build national special emergency command platforms for the mine, chemicals, fire fighting, maritime affairs, railway, civil aviation, nuclear power industry, tourist, electric power, construction, special equipment, agricultural machine, fishing, medical emergency etc. Build and improve national comprehensive and regional special rescuer bases and teams. Build national work accident emergency rescuer command system, national and provincial emergency training and exercise bases.

5.8 Science renovation and technology pilot

Carry out technical renovation on coalmine major hazards prevention and treatment, typical hazards prevention and control in non-coalmine, chemical accident monitoring, control and emergency response, dynamic monitoring and early warning for major hazards installations, occupational hazards prevention and control, major accidents investigation, analyses, and simulation, integrality management and risk test for the special equipments, accidents and security for major underground engineering, major accident emergency management, transportation safety and emergency preparedness, work safety basic theory and major accidents mechanism etc. Build pilot engineering for the gas comprehensive prevention and treatment, coalmine safety monitoring and information system, major hazards installation monitoring and control, petrol chemical equipment integrity, transport safety monitoring, quality and safety performance test and identification for large size public building, urban life line security etc.

5.9 Legislation, standards and safety culture

Develop, update work safety related regulations, codes, and technical standards. Build places for work safety exhibition, experience simulation, movie, and library etc. and establish national and local dissemination and education bases. Carry out the traffic safety popularization campaigns in the theme of ‘protect life, safe driving’. Disseminate safety knowledge column in television, broadcaster, and Internet etc. media. Build several safe communities, periodically dissemination and education campaigns such as ‘safety month’, ‘safety for 10,000 miles journey’, ‘safety and health cup’ competition, and ‘youth safety pilot post’ etc. Popularize safety culture, compile related personals training outline, training materials, test bank and check standards etc.

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