

## Safety Monitoring Agency of Hazardous Goods, Supervision Approaches, and Data Collection

Peng Jianhua China Academy of Transportation Science

May, 2016





- Safety Monitoring Agency of Hazardous
  Goods and Its Responsibilities
- 2 Supervision Approaches and Data Collection of Dangerous Goods Transported by Road
- **Supervision Approaches and Data Collection of Dangerous Goods Transported by Sea**





# Safety Monitoring Agency of Hazardous Goods And Its Responsibilities 'Multi sectoral supervision, mutual cooperation, close collaboration'

#### **Transportation Department:**

supervision of road and waterway transportation of hazardous goods

#### **Railway Department:**

supervision of railway transportation of hazardous goods

#### **Civil Aviation Department:**

supervision of air transportation of hazardous goods

#### **Postal Department:**

investigation and punishment of posting and delivering of hazardous goods

#### **Safety Supervision Department:**

comprehensive safety supervision



Public Security Agency: road traffic safety management

**Quality Inspection Department:** supervision of hazardous goods and their packaging

#### **Environmental protection department:**

environmental management

**Health Department:** organizing and coordinating medical rescue

#### **Industrial and Commercial Administrative**

**Department:** issuance of business license

#### **Nuclear Safety Supervision Department:**

nuclear and radiation safety supervision



## Safety Monitoring Agency of Hazardous Goods And Its Responsibilities

#### The inter ministerial conference of safety supervision of hazardous chemicals

- •Founded in 2007, hold a regular meeting every six months
- •Consisting of 16 departments, State Administration of Work Safety serve as the leading organization
- •Review all relevant proposals to strengthen safety supervision of hazardous chemicals, coordinate and solve the major problems in safety supervision of hazardous chemicals, organize and carry out joint law enforcement, special rectification and supervision

The people's governments at or above the county level shall establish a coordination mechanism for safety supervision of hazardous chemicals





- •Qualification of enterprises
- •Technical standards of vehicles
- •Qualification of employees
- •Supervision on the validation of their qualifications and the operation of the carriers, vehicles and employees

#### Supervision of the various links in the road transport of dangerous goods

- •Classification
- •Consignment
- •Carriage
- •Loading and unloading
- Transportation





#### Dynamic supervision of dangerous goods transport vehicle

- •Enterprise monitoring, government supervision, network control
- •Enterprises monitor and manage dangerous goods transport vehicle and driver operation in real time
- •Dangerous goods transport vehicle install satellite positioning device in the factory
- •The monitoring platform of road dangerous goods transportation enterprises access the national network control system of key operating vehicles
- •Enterprises arrange for full-time monitoring personnel. Each access to 100 vehicles equipped with 1 person, the minimum of not less than 2 persons.



## Dynamic supervision of dangerous goods transport vehicle

- •To prevent speeding, fatigue driving and driving without following the designed route in dangerous goods transportation
- •Road transport management agency appraise the work of dynamic supervision of dangerous goods transport enterprises
- •Traffic management department of public security agency can use the traffic violation information recorded by the road transport vehicle dynamic monitoring system as the basis for law enforcement
- •If a traffic accident happened, road transport enterprises should accurately provide vehicle dynamic monitoring data





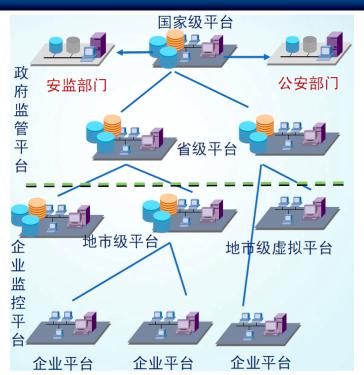


National network control system of key operating vehicle









#### Data:

- •Dynamic information of vehicle
- •Related information of enterprise, driver, vehicle

National network control system of key operating vehicle

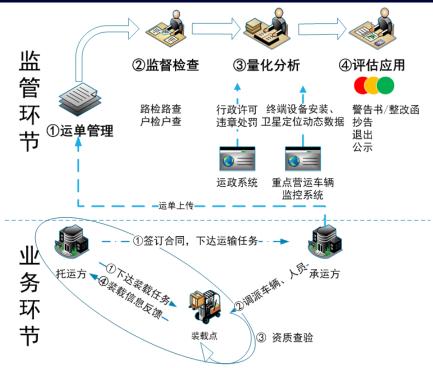


#### Electronic waybill of dangerous goods transported by road

- •A pilot project was launched in Beijing, Jiangsu, Zhejiang, Sichuang, Chongqing and shaanxi since 2015
- •Be able to effectively solve the problem of the enterprise 'monitoring but not controling', 'affiliating but not managing' vehicles and personnel
- •To promote the implementation of source responsibility of consignor, crack down on illegal consignment
- •The business process data, satellite positioning data, transportation data are comprehensively analyzed by means of information technology, the tight combination of static management and dynamic supervision is realised.
- •Once an accident happened, decision-support and rescue can refer to electronic waybill







The overall process of electronic waybill management of dangerous goods transported by road



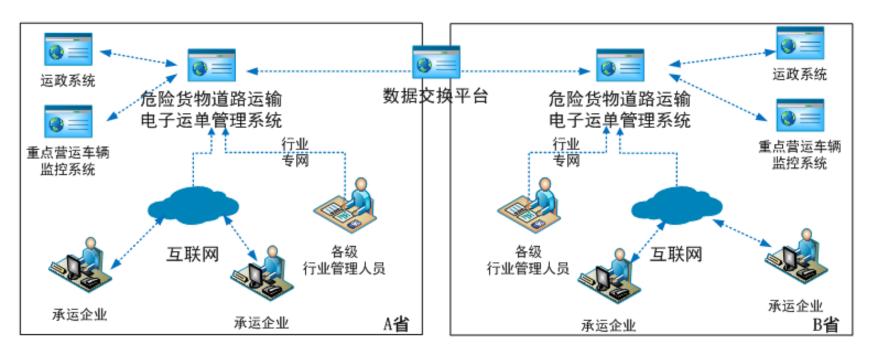




运单	鱼编号:					272
托运方	单位名称 联系电话			收货方	単位名称 联系电话	
装货地点				运输目的地		
装货日期				预计到达日期		
	单位名称					
承运方	经营许可证号			联系电话		
	车辆信息	车牌号码 道路运输证号		挂车信息	<u>车牌号码</u> 道路运输证号	
	驾驶员	姓名 从业资格证号		押运员	姓名 从业资格证号	
		联系电话		17年以	联系电话	
货物信息	联合国编号	危险货物名称	类/项别	包装类别	規格	数量(吨/立方)
应急处置措施:						
托运方声明:						
以上危险货物信息真实、完整;有关危险货物的分类、包装、标记及相关操作符合国家相关政策						
法规及标准规范的要求。 负责人签字: 日期:						
装载完成声明:						
以上危险货物已装载完成;货物包装完好,装载操作符合国家相关政策法规及标准规范的要求。 负责人签字: 日期:						
承运方声明:						
承诺在运输过程中遵守《道路运输车辆功态监督管理办法》、《道路危险货物运输管理规定》等 政策法规及标准规范的要求。 负责人签字: 日期:						

The electronic waybill format of dangerous goods transported by road





The electronic waybill management system of dangerous goods transported by road



#### Electronic waybill of dangerous goods transported by road

Enterprise can fill out the electronic waybill information through the computer, mobile phone APP software, and check the content of electronic waybill before the generation of it. If self-check does not pass, it is unable to generate electronic waybill, and vehicles can't perform transport task. The main contents of self-check include:

- •Whether vehicle satellite positioning device is normal
- •Whether the vehicle running track is normal during the last transportation mission
- •Whether the operating range of the vehicle road transport license is in conformity with the carriage of goods
- •Whether the vehicle is inspected annually
- •Whether drivers and guards have the effective dangerous goods road transport qualification certificate After self-check, enterprise upload electronic waybill information to administration department system, and print paper documents or write IC card.





#### Electronic waybill of dangerous goods transported by road

- Supervision and inspection: law enforcement officers supervise and inspect electronic waybill by entering the number of paper documents, scanning the two-dimensional code of paper documents or read IC cards, etc.
- Credit management: Based on data indicators such as driver total safety mileage (waybill automatic cumulative), traffic accidents, and illegal operation, the credit management system for dangerous goods transport drivers is established.
- Comparative analysis between electronic waybill and dynamic supervision of dangerous goods transport vehicle: effectively identify illegal activities, such as waybill is not in use (there is satellite positioning data but not waybill data), vehicle is not online unnormal (there is waybill data but not satellite positioning data).





#### Electronic waybill of dangerous goods transported by road

- Statistical analysis of dangerous goods: the types, quantity, distribution and flow direction of dangerous goods are statistical analyzed, in order to carry out targeted personnel training and emergency rescue drill.
- Classification appraisal: conduct classified supervision of illegal activities and enterprises, in accordance with the red (the problem is serious), yellow (there is a certain problem), green (safety management is good)
- Interprovince data interchange: upload electronic waybill of dangerous goods to national transport & logistics platform, in order to realize information sharing and data searching
- Data reporting: relevant statistical data(such as quantity of waybill, flow direction of dangerous goods) of provinces is automatically report to ministerial system in accordance with the unified data format



Ship

ship/shore interface

Shore





Maritime department: Responsible for safety supervision of the vessels carrying dangerous goods

Port authority: Responsible for safety management of dangerous goods in port



#### Safety conditions audit of port construction project

- •Without safety conditions audit, it shall not begin the port construction project
- •Before safety conditions audit, construction unit should entrust a safety evaluation agency to carry out safety evaluation of the port construction project
- •In the course of safety conditions audit, port authority shall invite maritime department to take part in and listen to the opinions of the relevant departments
- •The construction unit shall draw up the design of safety facilities for port construction projects. It is audited in the approval of port construction project preliminary design. Safety facilities should be completed with the main project at the same time, and pass the special inspection. Without acceptance, it is not allowed to operate dangerous goods in port.





#### **Operation management of dangerous goods in port**

- The vessel carrying dangerous goods enter or exit a port
  - vessel report maritime department notify port authority
- loading or unloading dangerous goods in port
  - port operator report port authority notify maritime department





Information system of port safety supervision and emergency management in Jiangsu province

- •Operator information module: including information such as port operator, personnel, management system, safety facilities and equipments.
- •Safety approval module: including information such as safety conditions audit of port construction project, special inspection of safety facilities, port operation certificate of dangerous goods, operation application and management of dangerous goods in port.
- •Safety record module: including information such as record and query of safety evaluation agency, record management of port safety evaluation report, port major hazard, and emergency plan.
- •Self inspection and supervision management: including information such as port safety inspection record, safety issue record and rectification
- •Emergency management module: including information such as distribution of major hazards based on GIS platform, information management of emergency plan, resource, training and drill, accident records, statistics and query.





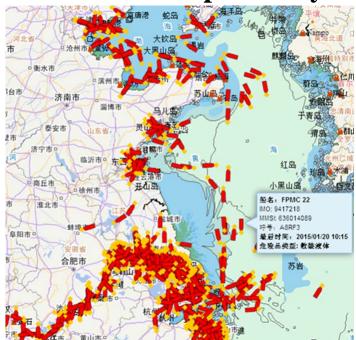
#### Maritime safety management of dangerous goods

- •In VTS controlling area, vessels should report to VTS center, and accept the instructions of maritime law enforcement officers. Maritime department should tag and track vessels carrying dangerous goods. If the ship is sailing, anchoring and operating illegally, maritime department should send out a warning, and take corresponding measures.
- •When vessels carrying bulk liquid dangerous goods engaged in ship to ship transfer operation outside the port area, vessels or their owner, operator, manager should apply for approval to the maritime department. Maritime department should issue a navigational warning of the area where vessels engaging in ship to ship transfer operation.





AIS information service platform http://www.ais.msa.gov.cn/hsj/portal/ais\_cbxx.page



#### Data:

- •Vessel information
- •Dangerous goods information
- Navigation path





# THANKS