

## Thoughts on the Standardization Construction of the Safe Broadcasting System at Shanxi Radio and Television Station (Postprint)

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### Abstract

Ensuring safe broadcasting of radio and television constitutes the lifeline of the broadcasting industry, representing both the fundamental mission and central task of radio and television technical operations. Radio and television programs exhibit characteristics of rapid transmission, extensive coverage, and significant influence during dissemination; once broadcast, they become irreversible and promptly attract widespread attention from the general public as well as across various sectors. Any incident compromising safe broadcasting will directly impact national political security, information security, and cultural security. This paper examines the standardization construction of the safe broadcasting system at Shanxi Radio and Television Station, with the objective of advancing analytical discussions regarding measures for safeguarding broadcast security.

### Full Text

#### Preamble

#### Reflections on the Standardized Construction of Safe Broadcasting Systems at Shanxi Radio and Television Station

**Abstract:** Ensuring safe broadcasting is the lifeline of radio and television, as well as the fundamental task and central focus of broadcasting technology work. Radio and television programs are characterized by rapid dissemination, wide coverage, and significant influence during transmission. Once broadcast, programs cannot be reversed and quickly attract widespread attention from the public and various sectors. Any safe broadcasting accident will directly impact national political security, information security, and cultural security. This paper analyzes and discusses measures to guarantee broadcasting safety through reflections on the standardized construction of safe broadcasting systems at Shanxi Radio and Television Station.

**Keywords:** Radio and television; Safe broadcasting; Standardization

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## 1. Correctly Grasping the Situation and Trends of Radio and Television Safe Broadcasting

Ensuring safe broadcasting is the most important and urgent political task and mission of the broadcasting system, as well as a severe test of its guarantee capabilities. Safe broadcasting work faces three major threats: first, major technical accidents and incidents; second, the impact of major natural disasters on safe broadcasting; and third, deliberate sabotage. The establishment of emergency response mechanisms for safe broadcasting is a key consideration for broadcasting departments, as extreme emergencies, once they occur, will have a tremendous impact on radio and television stations, especially central and provincial stations. Therefore, it is essential to strengthen the standardized construction of radio and television safe broadcasting systems, ensuring that institutions, personnel, systems, measures, supervision, and assessment are all in place to create favorable conditions and environments for safe broadcasting work.

In recent years, Shanxi Radio and Television Station has continuously improved its safe broadcasting guarantee capabilities. Facing the increasingly severe safe broadcasting situation under high-tech conditions, the station has significantly enhanced its safe broadcasting level through increased investment, improved systems, established institutions, and perfected technology. The safe broadcasting dispatch command and management mechanism, as well as the early warning information release system, have become increasingly sophisticated, with emergency response plans for safe broadcasting formulated, marking a shift from key prevention to safe operation and accelerating the construction of a safe operation guarantee system. However, compared with the requirements of broadcasting industry development, the actual progress of advanced provinces in safe broadcasting system construction, and the requirements of the State Administration of Radio and Film Order No. 62 and its implementation rules, Shanxi Station still has gaps in standardized and institutionalized construction. These are mainly manifested in three aspects: First, the rapid transformation of broadcasting communication modes presents new challenges for safe broadcasting guarantee work. With the promotion and application of high-tech such as digitalization, networking, and intelligence in the broadcasting field, safe broadcasting resources have increased rapidly, safe broadcasting has extended from within the system to outside the system, the boundaries of safe broadcasting have become blurred, and the guarantee chain has been lengthened, with broadcasting coverage grad-

ually expanding and influencing more people. Second, traditional management methods still fall short of the actual requirements of safe broadcasting guarantee work. Some broadcasting units have not effectively integrated their systems with actual conditions, resulting in weak specificity and operability, and emergency plan drills have not yet formed a long-term mechanism. Third, the lag in safe broadcasting team building has adversely affected guarantee work. Some technical personnel lack solid theoretical foundations and professional skills, relying more on experience and intuition in their work. While they can implement tasks step-by-step, they are theoretically unclear, practically inexperienced, and innovatively stagnant in safe broadcasting guarantee work in the digital, networked, and intelligent era.

## 2. Overall Approach to Standardized Construction of Safe Broadcasting Systems

For the current and future period, the overall approach to standardized construction of safe broadcasting systems at Shanxi Radio and Television Station is as follows: take ensuring no safe broadcasting accidents during major events, important programs, and key time periods as the highest goal; take building a first-class safe broadcasting guarantee system as the work orientation; take ensuring four aspects of safety—content, transmission, facilities, and personnel—as the main tasks; and take continuously improving the command and dispatch system, emergency response system, technological innovation and guarantee system, early warning information release system, monitoring and supervision system, safe broadcasting training system, safe broadcasting institutional system, and accountability system as the 抓手 (key measures). Based on current realities and future perspectives, the station will introduce enterprise QC quality control concepts and promote transformative and leapfrog development of safe broadcasting work through three measures: standardized construction, standardized management, and prudent response, bringing the construction of safe broadcasting systems onto a standardized and institutionalized track.

## 3. Main Countermeasures for Standardized Construction of Radio and Television Safe Broadcasting Systems

### 3.1 Taking Standardized Construction as the Main Line, Building a QC Management System for Safe Broadcasting

The promulgation and implementation of the *Regulations on Safe Broadcasting Management of Radio and Television* (State Administration Order No. 62) and its implementation rules provide a standard basis for safe broadcasting. Based on the station's actual conditions and drawing on beneficial practices from domestic and international safe broadcasting, the station will build a safe broadcasting quality management system using Order No. 62 and its implementation rules as standards, clarifying quality objectives and emphasizing process control to continuously optimize management processes, improve management

methods, and enhance management efficiency.

First, strengthen organizational leadership in establishing the safe broadcasting quality management system. The provincial station will establish a dedicated leadership group for safe broadcasting standardized construction, responsible for overall planning, coordination, promotion, and supervision of the standardized system construction. An office composed of station leaders, department heads, and relevant broadcasting institution leaders will handle specific matters during the standardization process. The station will strive for government support, increase investment, and secure dedicated funds to ensure funding sources. Second, formulate a standardized construction plan for the safe broadcasting system. According to the specific requirements of Order No. 62 and its implementation rules, the station will commission professional consulting institutions to provide consultation and training, hire quality experts as consultants, and provide full-process technical support and guidance for the safe broadcasting management system. Together with the leadership office, consulting institutions, and expert consultants, the station will carefully analyze the current status of safe broadcasting management and scientifically formulate the *Implementation Plan for Standardized Construction of Safe Broadcasting Systems* based on actual conditions, determining overall goals and implementation steps. Third, promote the implementation of safe broadcasting system standardization. Based on a thorough analysis of the overall situation of safe broadcasting responsible units and departments, the station will selectively target several responsible units and departments, apply QC process methods and systematic management approaches, conduct centralized research through questionnaires, on-site inspections, and focused discussions, and analyze and evaluate identified problems and deficiencies. On this basis, according to broadcasting industry characteristics and the specific circumstances controlled by each unit (such as different processes, risk natures, and types), the station will build a framework for the station-wide safe broadcasting management system and gradually promote standardized construction.

### **3.2 Taking Clear Rights and Responsibilities as the Leverage, Improving the Safe Broadcasting Institutional System**

To achieve standardized management of safe broadcasting work, it is essential to continuously improve various systems. Order No. 62 and its implementation rules issued by the State Administration constitute the supreme law for safe broadcasting, and building a station-wide standardized management system is an advanced approach to strengthening safe broadcasting management. During the construction of the station-wide standardized management system, the station must continuously establish and improve the safe broadcasting institutional system based on Order No. 62 and its implementation rules, ensuring the order is implemented, the standardized management system runs through all processes, and all safe broadcasting systems are targeted, practical, and operable. The station must use institutional norms to promote management standardization

and institutional implementation to drive management execution, avoiding blind and follow-the-trend approaches to safe broadcasting work. The station must comprehensively screen and filter existing systems, remove outdated provisions, draw on mature experiences, and formulate and improve corresponding systems for each link—production, broadcasting, transmission, and reception—achieving organic integration of personnel and tasks and assigning safe broadcasting responsibilities to every position and individual, ensuring everyone has tasks and responsibilities. The focus is to maintain effective long-standing systems and methods while revising outdated provisions and processes according to technological progress and evolving situations. The station must continue to improve systems such as leadership shift duty during important guarantee periods, duty shifts, operation and maintenance, equipment inspection, safe broadcasting regular meetings, safe broadcasting rewards and punishments, safe broadcasting training, and emergency coordination. Through institutional construction, the station will ensure full coverage of safe broadcasting awareness, systems, and behaviors.

### **3.3 With the Purpose of Improving Response Capacity, Perfecting the “Safe Broadcasting Emergency Response Plan”**

The *Safe Broadcasting Emergency Response Plan* is the fundamental basis for safe broadcasting emergency management. Currently, all levels of safe broadcasting management departments and responsible units at the station have generally formulated *Safe Broadcasting Emergency Response Plans*, but many of these plans are copied from superior plans with weak specificity and operability, insufficient drills, and ineffective exercise results. The next focus is to organize each unit to revise the *Emergency Response Plan*, primarily absorbing good experiences and practices from emergency work, incorporating new ideas and approaches from emergency management, and improving the plan’s framework, organizational structure, responsibilities, and response procedures based on actual conditions. Simultaneously, the station will implement a regular revision system for the *Emergency Response Plan*, truly ensuring revisions every three years or at any time under special circumstances. The station must increase drill frequency for the *Emergency Response Plan*, formulate exercise schemes based on the plan, conduct rehearsals for possible safe broadcasting accidents to improve emergency response capabilities, transform the plan into productive safe broadcasting capacity, and identify deficiencies for further revision through drills. Based on the *Emergency Response Plan*, the station will formulate the *Safe Broadcasting Emergency Response Measures* to detail responsibilities of each unit and department during different accidents, refine response procedures, and clarify coordination mechanisms and methods.

### **3.4 Taking Improving Compliance Rate as the Guide, Strengthening the Technical Support System for Safe Broadcasting**

Order No. 62 and its implementation rules provide detailed provisions for the configuration of basic technical systems such as broadcast centers, television centers, cable television networks, and optical fiber transmission networks, while implementing hierarchical management of technical systems according to safe broadcasting responsibility levels. For many years, the station's radio and television technical system has suffered from severe funding shortages, with low compliance and classification rates for facilities and equipment. According to national regulations and guided by digitalization, networking, and informatization, the station must increase technical system transformation efforts following the principle of phased investment and implementation, striving to bring the station's technical systems into compliance within three years to achieve leapfrog development.

First, strengthen transformation around key departments. The station will focus on technical system upgrades for key departments such as the broadcast control center, satellite earth station, cable network front-end and trunk lines, and Shanxi Audio-Visual Network, enabling these departments with heavy safe broadcasting tasks and significant influence to achieve compliance first. Second, strengthen transformation by focusing on key links. Master control, signal sources, transmission, and power supply have enormous impacts on safe broadcasting. The station must allocate limited funds wisely, focusing technical transformation on these links, especially upgrading UPS systems and switchers in broadcasting rooms. Third, strengthen transformation by focusing on key areas. Combined with the upcoming station-wide high-definition production and broadcasting network transformation project, the station will prioritize transforming signal source switching, monitoring and early warning systems, machine room environments, and lightning protection facilities, increasing renovation efforts for key areas such as broadcasting rooms, network optical cable trunk lines, and optical nodes to improve safe broadcasting capabilities.

### **3.5 Taking Full-Service Supervision as the Goal, Establishing a Safe Broadcasting Monitoring and Supervision System**

Shanxi Station has initially established a safe broadcasting monitoring and supervision system, but its monitoring and supervision capabilities are insufficient to effectively monitor and supervise the station's existing various forms of radio and television programs. According to State Administration requirements, the station must promptly establish a unified radio and television supervision platform integrating technical monitoring, program supervision, audio-visual supervision, and safe broadcasting dispatch command, improving technical systems, working mechanisms, and business processes, accelerating infrastructure construction for technical monitoring and content supervision, and establishing a docking mechanism with administrative department supervision platforms.

The specific approach is to integrate existing technical resources and build a unified, efficient, comprehensive supervision platform capable of monitoring the station's radio and television broadcast content, quality, and safety; monitoring new media such as converged media centers, news centers, IPTV broadcasting systems, and mobile APPs; and commanding and dispatching station-wide broadcasting resources during emergencies. Starting in 2019, through a combination of applying for special fiscal funds and self-raising funds, the station will integrate scattered monitoring platforms to build a centralized monitoring and supervision platform.

### **3.6 Focusing on Improving Professional Quality, Strengthening Team Building for Safe Broadcasting**

Safe broadcasting work is an intelligence-, technology-, capability-, and labor-intensive industry. With continuous application of new technologies, rapid development of the industry, and increasing safe broadcasting tasks, it is imperative to conduct regular, standardized, and institutionalized training to timely update knowledge and master new technologies and skills. Therefore, the station plans to formulate medium- and long-term technology training plans, focusing on training in high-definition television, 5G, next-generation broadcasting network technology, converged media construction and operation management knowledge, and relevant professional implementation rules of Order No. 62. The station will organize annual technical training sessions for newly appointed department heads, technical heads, and new safe broadcasting position personnel; regularly conduct safe broadcasting emergency plan drills and training; and require main technical heads from all departments to participate in at least one technical training activity organized by the State Administration or Provincial Administration annually. The station aims to enhance the initiative and enthusiasm of broadcasting technology workers in diligent study and dedication, improve the political literacy and professional capabilities of safe broadcasting personnel, and cultivate a safe broadcasting team with fine work styles, strict discipline, political qualification, strong technical skills, dedication, and combat effectiveness.

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*Note: Figure translations are in progress. See original paper for figures.*

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