Transport Security Management

WINS Academy

CONTENTS

WHO THIS MODULE IS FOR

The target audience for this module consists of individuals employed by organisations with responsibilities for the safe, secure shipment of nuclear material. Examples include those who prepare nuclear material for transport (e.g. producers, suppliers, distributors and consignors), those who transport nuclear material (e.g. shippers and carriers), those who take delivery of a shipment (e.g. receivers, consignees), and those who provide operational support (e.g. escort and guard force personnel). The audience may also include freight forwarders and customs brokers, field service providers, response force personnel, customs and border crossing personnel, transport competent authorities and nuclear regulators.

KEY ISSUES

The transport of nuclear material may be undertaken across multiple modes of transport (e.g. road, rail, air, inland waterway, sea), across national boundaries, require adherence to national legal and regulatory frameworks, and involve numerous stakeholders, many of whom may change as the transport proceeds. Consequently, ensuring effective and secure transport of nuclear material requires careful planning, communication and coordination.

This elective module addresses some of the key issues that organisations could face when planning and implementing the transport of nuclear material. In doing so, it recognises that the context in which each transport takes place will vary from State to State. Therefore, the purpose of the module is not to establish standards but to provide insight into the principles that support the secure transport of nuclear materials and to ask informed questions that will prompt reflection and further inquiry. The content is based upon practical experience, research and best practice as identified from WINS' broad membership, relevant workshops, and experts in the field. The content is also consistent with the IAEA Nuclear Security Series of guidance.

KEY LEARNING OBJECTIVES

By the end of the course, learners will understand the key role and modes of transport in the nuclear industry, management practices that support security and the threat environment. They will also have a clear grasp of the fundamental principles of security in transport, categorisation of nuclear material and measures against both theft and sabotage. Learners will know how to undertake emergency preparedness, guarding and response, as well as cybersecurity and transport planning.

- The important role of transport in the nuclear fuel cycle
- The key modes of transport for shipping nuclear material
- The international and national framework for secure transportation of nuclear material
- The roles that international and national stakeholders play in preparing for and managing the secure transport of nuclear material
- The types of nuclear materials that may be transported, the threats to and vulnerabilities of the material during transport, and specific actions that can be taken to prevent theft of nuclear material and sabotage of the nuclear material during transport
- How to plan, develop and implement an effective transport security system according to a graded approach based on the level of risk posed by the material being transported
- How to create a transport security plan
- How to prepare for and respond to a security incident
- How to contribute effectively to transport security within your organisation

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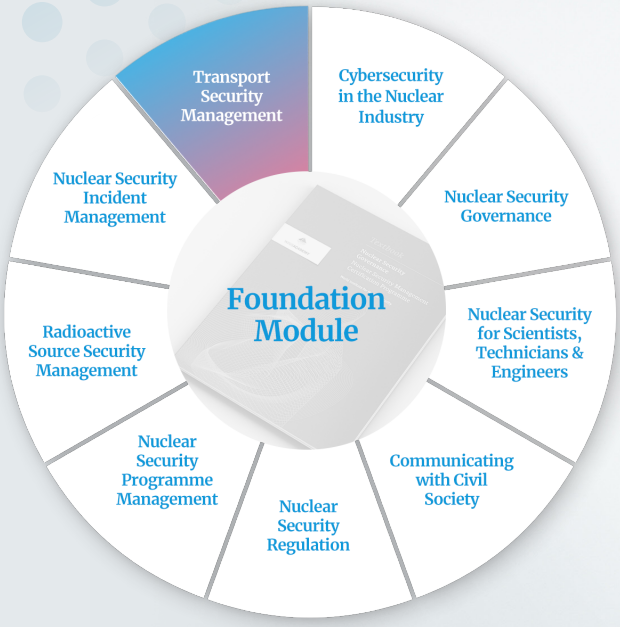

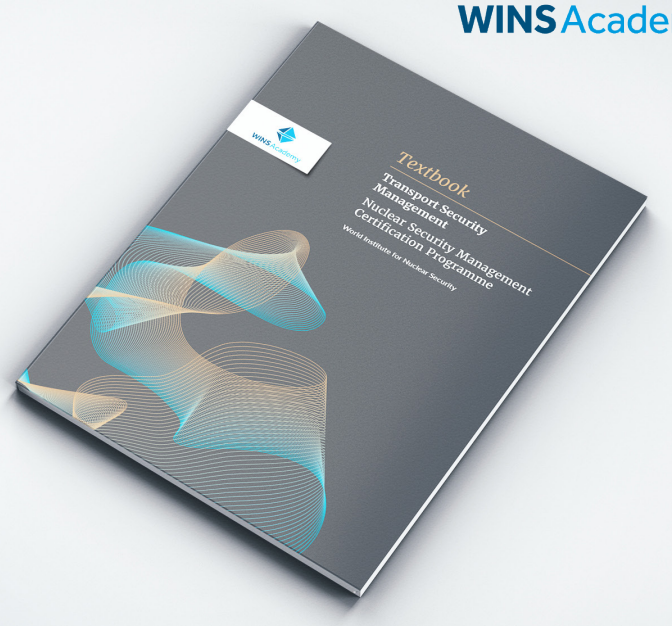

OUTLINE

UNIT 1: INTRODUCTION TO TRANSPORTATION IN THE NUCLEAR INDUSTRY

1.1 The Role of Transport in the Nuclear Fuel Cycle
1.2 Transport Modes
1.3 The International Framework

UNIT 2: SUPPORTING SECURITY MANAGEMENT PRACTICES

2.1 Leadership and Management for Security
2.2 Organisational Culture
2.3 Competence Management
2.4 Nuclear Supply Chain Management
2.5 Workforce Trustworthiness

UNIT 3: THREAT ENVIRONMENT AND NUCLEAR MATERIAL CATEGORISATION

3.1 Understanding Threats to Nuclear Material Transports
3.2 Threat Assessments, Design Basis Threat and Representative Threat Statements
3.3 Nuclear Material Categorisation for Protection

UNIT 4: FUNDAMENTAL PRINCIPLES OF SECURITY IN TRANSPORT

4.1 Common Security Principles and Functions
4.2 Vulnerability Analysis
4.3 Common Requirements
4.4 Safety and Security Interfaces

UNIT 5: MEASURES AGAINST THEFT OF NUCLEAR MATERIAL AND SABOTAGE OF NUCLEAR MATERIAL IN TRANSPORT

5.1 Security Measures that are Independent from the Mode of Transport
5.2 Security Measures that are Specific to the Mode of Transport
5.3 Security Measures Based on Potential Radiological Consequences

UNIT 6: EMERGENCY PREPAREDNESS, GUARDING AND RESPONSE

6.1 Contingency Planning for Transport
6.2 Training and Exercising
6.3 Role of Response Force
6.4 Rules of Engagement – Conflict Management
6.5 Response Force Training and Exercising

UNIT 7: CYBERSECURITY AND INFORMATION ASSURANCE

7.1 Fundamentals of Cybersecurity and Information Assurance
7.2 Cyber Risk Management
7.3 Preparation for and Response to Cybersecurity Incidents

UNIT 8: EXECUTION OF A TRANSPORT OPERATION

8.1 Key Planning Activities
8.2 Transport Security Plan
8.3 Before and After Execution