

WELCOME TO THE LECTURE ON CONTROL OF PLANT ACTIVITIES

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OSART EXPECTATIONS AND RESULTS IN THE CONTROL OF PLANT ACTIVITIES

OBJECTIVES OF PRESENTATION

- GENERAL PRINCIPLES
- CORPORATE ORGANIZATION
- PLANT ORGANIZATION
- EFFECTIVE SUPERVISION
- QUALITY ASSURANCE
- REGULATORY REQUIREMENTS
- INDUSTRIAL SAFETY
- SITE ACCESS CONTROL
- OSART EXPERIENCE

GENERAL

1. THERE IS NO ONE DEFINITIVE ORGANIZATIONAL STRUCTURE
2. THERE ARE ELEMENTS OF ORGANIZATIONAL STRUCTURE WHICH ARE COMMON TO MANY ORGANIZATIONS
3. THEY MAY BE ASSEMBLED IN A VARIETY OF WAYS

ELEMENTS OF ORGANIZATIONAL STRUCTURE

- ORGANIZATION AND ADMINISTRATION
- OPERATION
- MAINTENANCE
- ENGINEERING SUPPORT
- RADIATION PROTECTION
- CHEMISTRY
- TRAINING AND QUALIFICATION
- OPERATING EXPERIENCE
- EMERGENCY PREPAREDNESS
- OUTAGE MANAGEMENT

COMMON FUNCTIONS OF EACH ELEMENT

- EFFECTIVE IMPLEMENTATION
- EFFECTIVE CONTROL
- KNOWLEDGE
- TRAINING
- QUALIFICATION
- PERFORMANCE

ORGANIZATION AND ADMINISTRATION FUNCTIONS

- IMPLEMENT POLICIES AND DIRECTIVES
- ENSURE HIGH STANDARDS
- MONITOR STATION ACTIVITIES
- LEADERSHIP BY EXAMPLE
- MANAGE HUMAN RESOURCES
- ENSURE PERSONNEL SAFETY
- ENSURE NUCLEAR SAFETY
- ENSURE QUALITY
- CONTROL PLANT CONFIGURATION

CORPORATE FUNCTIONS

- POLICY MAKING
- EXECUTIVE DECISION MAKING
- SUPPORTING
- REVIEWING

ASSIGNMENT OF RESPONSIBILITIES MUST BE CLARIFIED

- TRAINING
- RADIATION PROTECTION
- CHEMISTRY
- EMERGENCY SUPPORT
- OPERATIONAL SUPPORT
- TECHNICAL SUPPORT
- QUALITY ASSURANCE

PLANT ORGANIZATION AND MANAGEMENT

- SAFETY POLICY
- LINES OF AUTHORITY
- CLEAR REPORTING RELATIONSHIPS
- GOALS AND OBJECTIVES
- EFFECTIVE SELECTION AND PROMOTION
- CONFORMITY AND CONSISTENCY
- PROCEDURAL POLICY
- TRACKING COMMITMENTS
- EFFECTIVE SUPERVISION

REGULATORY INTERFACE

- GOOD LIAISON
- MUTUAL RESPECT
- RESPONSIBILITIES UNDERSTOOD
- RESPONSIBILITIES ASSIGNED
- INTERFACE CONTROLLED
- OTHER GOVERNMENT BODIES

SITE ACCESS CONTROL

- PREVENTION OR CONTROL OF :
 - INTRUSION
 - THEFT OF NUCLEAR MATERIALS
 - INTERNAL OR EXTERNAL SABOTAGE
 - HEALTHY RELATIONSHIP WITH OTHER PLANT STAFF

SAFETY FUNDAMENTALS

OBJECTIVES

1. GENERAL NUCLEAR SAFETY - ESTABLISH AND MAINTAIN DEFENCES AGAINST RADIOLOGICAL HAZARDS
2. RADIATION PROTECTION - ALARA PRINCIPLES AND MITIGATION AGAINST RADIOLOGICAL CONSEQUENCES OF ACCIDENTS
3. TECHNICAL SAFETY - ACCIDENT PREVENTION AND MITIGATION AND ASSURANCE OF LOW RADIATION FOR ALL ACCIDENTS.

PRINCIPLES

1. GOVERNMENT LEGISLATIVE AND STATUTORY FRAMEWORK
2. OPERATING ORGANIZATION HAS PRIME RESPONSIBILITY
3. INDEPENDENT REGULATORY BODY
4. EST. POLICIES, CLEAR RESPONSIBILITIES AND COMMUNICATIONS
5. QUALITY ASSURANCE PROGRAMMES

PRINCIPLES (cont.)

6. TRAINED AND AUTHORIZED STAFF
7. HUMAN PERFORMANCE CONSIDERATIONS
8. EMERGENCY PLAN IMPLEMENTED
9. SITE SELECTION ADEQUATE TO ENSURE SAFETY
10. PLANT DESIGN ADEQUATE TO PREVENT ACCIDENT
11. DESIGN INCLUDES DEFENCE IN-DEPTH PRINCIPLES

PRINCIPLES (cont.)

12. TECHNOLOGIES PROVEN OR QUALIFIED
13. MAN-MACHINE INTERFACE // HUMAN FACTORS
CONSIDERED
14. ALARA DESIGNED FOR SITE PERSONNEL AND
ENVIRONMENT
15. SAFETY ASSESSMENT AND INDEPENDENT
VERIFICATION OF DESIGN
16. REGULATORY APPROVAL BEFORE START-UP

PRINCIPLES (cont.)

- 17. OPERATIONAL LIMITS AND CONDITIONS ESTABLISHED
- 18. STAFFING ADEQUATE
- 19. ENGINEERING AND TECHNICAL SUPPORT AVAILABLE
- 20. PROCEDURES ESTABLISHED
- 21. INCIDENT REPORTING AND FEEDBACK SYSTEM

PRINCIPLES (cont.)

- 22. WASTE GENERATION KEPT AT MINIMUM
- 23. ALARA DESIGNED FOR DECOMMISSIONING
- 24. ROUTINE ANALYSIS FOR SAFE INSTALLATION AND OPERATION
- 25. SYSTEMATIC SAFETY RE-ASSESSMENTS