

4-10-92

SUBJECT: NUCLEAR SAFETY ANALYSIS REPORT

Effective Date: 4-30-92

1. PURPOSE. To establish requirements for contractors responsible for the design, construction, operation, decontamination, or decommissioning of nuclear facilities to develop safety analyses that establish and evaluate the adequacy of the safety bases of the facilities. The Nuclear Safety Analysis Report (SAR) required by this Order documents the results of the safety analysis.
2. CANCELLATIONS.
  - a. DOE 5480.5, Paragraphs 5l, 7b(3), 7b(4), 7e(3), 8a, and 8h, SAFETY OF NUCLEAR FACILITIES, of 9-23-86.
  - b. DOE 5480.6, Paragraphs 7b(3), 7e(3), and 8c, SAFETY OF DEPARTMENT OF ENERGY-OWNED REACTORS, of 9-23-86.
  - c. DOE 5481.1B, SAFETY ANALYSIS AND REVIEW SYSTEMS (for nuclear facilities), of 9-23-86.
3. SCOPE. The provisions of this Order apply to all Departmental Elements and to covered contractors to the extent implemented under a contract or other agreement. A covered contractor is a seller of supplies or services, involving a DOE-owned or -leased nuclear facility, under a contract or subcontract containing one of four contract clauses as follows: (1) Safety and Health (Government-owned or -leased facility) [DEAR 970.5204-2]; (2) Nuclear Facility Safety [DEAR 970.5204-26]; (3) Radiation Protection and Nuclear Criticality [DEAR 952.223-72]; or (4) another clause whereby DOE elects to require compliance with DOE nuclear safety requirements. The provisions of this Order will be applied to DOE-owned nuclear facilities and operations, excluding: (a) those subject to Nuclear Regulatory Commission (NRC) licensing; and (b) those facilities and activities conducted under Executive Order 12344 and Public Law 98-525; and (c) activities conducted under Section 91 of the Atomic Energy Act of 1954 as amended.
4. REFERENCES.
  - a. DOE 1324.2A, RECORDS DISPOSITION, of 9-13-88, which establishes the Departmental records disposition program.

2

DOE 5480.23

4-10-92

- b. DOE 3790.1A, FEDERAL EMPLOYEE OCCUPATIONAL SAFETY AND HEALTH PROGRAM, of 10-22-84, which establishes the policy and requirements for the occupational safety and health program for Federal employees.
- c. DOE 4700.1, PROJECT MANAGEMENT SYSTEM, of 3-6-87, which establishes the principles and requirements that govern the development, approval, and execution of the DOE Project Management System.

- d. DOE 5000.3A, OCCURRENCE REPORTING AND UTILIZATION OF OPERATIONS INFORMATION, of 5-30-90, which establishes reporting of unusual occurrences with programmatic significance for DOE operations.
- e. DOE 5480.3, SAFETY REQUIREMENTS FOR THE PACKAGING AND TRANSPORTATION OF HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, AND HAZARDOUS WASTES, of 7-9-85, which establishes the subject requirements.
- f. DOE 5480.5, SAFETY OF NUCLEAR FACILITIES, of 9-23-86, which establishes DOE's nonreactor nuclear facility safety program.
- g. DOE 5480.6, SAFETY OF DEPARTMENT OF ENERGY-OWNED NUCLEAR REACTORS, of 9-23-86, which establishes DOE's nuclear reactor safety program.
- h. DOE 5480.22, TECHNICAL SAFETY REQUIREMENTS, of 2-25-92, which establishes DOE's nuclear facility technical safety requirements.
- i. DOE 5480.10 CONTRACTOR INDUSTRIAL HYGIENE PROGRAM, of June 6, 1985, which establishes requirements and guidelines applicable to DOE contract operations for maintaining an effective industrial hygiene program.
- j. DOE 5480.21 UNREVIEWED SAFETY QUESTIONS, of 12-24-91, which establishes the means by which Unreviewed Safety Questions (USQ's) are identified and the means of resolution of USQ's.
- k. DOE 5480.11, RADIATION PROTECTION FOR OCCUPATIONAL WORKERS, of 12-21-88, which establishes radiation protection standards and program requirements to protect workers from ionizing radiation.
- l. DOE 5610.1, PACKAGING AND TRANSPORTING OF NUCLEAR EXPLOSIVES, NUCLEAR COMPONENTS, AND SPECIAL ASSEMBLIES, of 9-11-79, which establishes safety policies and procedures applicable to packaging and transportation of nuclear

DOE 5480.23  
4-10-92

3

explosives, nuclear components, and special assemblies outside of DOE-controlled sites.

- m. DOE 5610.3, PROGRAM TO PREVENT ACCIDENTAL OR UNAUTHORIZED NUCLEAR EXPLOSIONS, of 12-18-80, which establishes safety policies and procedure applicable to activities involving nuclear explosives.
- n. DOE 5483.1A OCCUPATIONAL SAFETY AND HEALTH PROGRAM FOR DOE CONTRACTOR EMPLOYEES AT GOVERNMENT-OWNED CONTRACTOR-OPERATED FACILITIES, of 6-22-83, which establishes requirements and procedures to assure that occupational safety and health standards protect DOE contractor employees in Government owned contractor-operated facilities.
- o. DOE 5700.6C, QUALITY ASSURANCE, of 8-21-90, which establishes DOE's quality assurance program.
- p. DOE 6430.1A, GENERAL DESIGN CRITERIA, of 4-6-89, which contains specific safety guidance.
- q. DOE 4330.4A, MAINTENANCE MANAGEMENT PROGRAMS, of 10-17-90, which establishes maintenance management requirements.
- r. DOE 5480.19, CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES, of 7-9-90, which establishes requirements dealing with the conduct of operation for DOE operators.

- s. DOE 5480.20, PERSONNEL SELECTION, QUALIFICATIONS, TRAINING, AND STAFFING REQUIREMENTS AT DOE REACTORS AND NONREACTOR NUCLEAR FACILITIES, of 2-20-9 which establishes the selection, qualification, training and staffing requirements for personnel involved in the operations, maintenance, and technical support of DOE-owned Category A and B reactors and nonreactor facilities.

5. DEFINITIONS.

- a. Administrative Controls means provisions relating to organization and management, procedures, recordkeeping, assessment, and reporting necessary to ensure safe operation of a facility.
- b. Contractor means any person under contract with the Department of Energy with the responsibility to perform activities in connection with a nuclear facility.
- c. Controlled Document means a document whose content is maintained uniform among the copies by an administrative control system.

4

DOE 5480.  
4-10-92

- d. Department or DOE means the Department of Energy.
- e. Design Basis means the set of requirements that bound the design of system structures, and components within the facility. These design requirements include consideration of safety, plant availability, efficiency, reliability and maintainability. Some aspects of the design basis are important to safety although others are not.
- f. Design Basis Accidents (DBAs) means accidents that are postulated for the purpose of establishing functional requirements for safety significant structures, systems, components, and equipment.
- g. Engineer Safety Features means systems, components, or structures that prevent and/or mitigate the consequences of all potential accidents including the bounding design basis accidents.
- h. Hazard means a source of danger (i.e., material, energy source, or operation with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation)).
- i. Hazardous Materials means any solid, liquid, or gaseous material that is explosive, flammable, corrosive, or otherwise physically or biologically threatening to health. Oil is excluded from this definition.
- j. Item is an all-inclusive term used in place of any of the following: appurtenance, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, or support systems.
- k. Nonreactor Nuclear Facility means those activities or operations that involve radioactive and/or fissionable materials in such form and quantity that a hazard potentially exists to the employees or the general public. Include activities or operations that:
  - (1) Produce, process, or store radioactive liquid or solid waste, fissionable materials, or tritium;
  - (2) Conduct separations operations;
  - (3) Conduct irradiated materials inspection, fuel fabrication,

decontamination, or recovery operations;

(4) Conduct fuel enrichment operations; or

DOE 5480.23  
4-10-92

5

(5) Perform environmental remediation or waste management activities involving radioactive materials.

Incidental use and generating of radioactive materials in a facility operation (e.g., check and calibration sources, use of radioactive sources in research and experimental and analytical laboratory activities electron microscopes, and X-ray machines) would not ordinarily require the facility to be included in this definition. Accelerators and reactors and their operations are not included.

- l. Nuclear Facility means reactor and nonreactor nuclear facilities.
- m. Program Secretarial Officer (PSO) means the heads of DOE offices with responsibility for specific DOE nuclear facilities. These include the Assistant Secretaries for Nuclear Energy, and Defense Program and the Directors of Energy Research, Civilian Radioactive Waste Management, Environmental Restoration and Waste Management, and New Production Reactors.
- n. Reactor means, unless it is modified by words such as containment, vessel or core, the entire reactor facility, including the housing, equipment, a associated areas devoted to the operation and maintenance of one or more reactor cores. Any apparatus that is designed or used to sustain nuclear reactions in a controlled manner, including critical and pulsed assemblies research, test, and power reactors, is defined as a reactor. All assemblies designed to perform subcritical experiments that could potentially reach criticality are also to be considered reactors. Critical assemblies are nuclear devices designed and used to sustain nuclear reactions. Critical assemblies may be subject to frequent core and lattice configuration change and may be used frequently as mockup of reactor configurations.
- o. Risk means the quantitative or qualitative expression of possible loss that considers both the probability that a hazard will cause harm and the consequences of that event.
- p. Safety Analysis means a documented process: (1) to provide systematic identification of hazards within a given DOE operation; (2) to describe and analyze the adequacy of measures taken to eliminate, control, or mitigate identified hazards; and (3) to analyze and evaluate potential accidents and their associated risks.

6

DOE 5480.  
4-10-92

- q. Safety Analysis Report (SAR) means that report which documents the adequacy of safety analysis for a nuclear facility to ensure that the facility can be constructed, operated, maintained, shut down, and decommissioned safely and in compliance with applicable laws and regulations.
- r. Safety Basis means the combination of information relating to the control hazards at a nuclear facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely.
- s. Technical Safety Requirements (TSRs) means those requirements that define the conditions, safe boundaries, and the management or administrative controls

necessary to ensure the safe operation of a nuclear facility and to reduce potential risk to the public and facility workers from uncontrolled release of radioactive materials or from radiation exposure due to inadvertent criticality. A TSR consists of operating limits, surveillance requirements, administrative controls, use and application instructions, and the bases thereof.

6. POLICY. It is the policy of the Department that nuclear facilities and operations be analyzed to identify all hazards and potential accidents associated with the facilities and the process systems, components, equipment, or structures and to establish design operational means to mitigate these hazards and potential accidents. The results of these analyses are to be documented in SARs. The identified hazards and the SARs are to be approved by DOE.

7. RESPONSIBILITIES AND AUTHORITIES.

a. The Secretary's Responsibilities and Authority. Many provisions in this Order permit and/or necessitate the exercise of discretion and/or judgment in carrying out the requirements of the Order. In those instances, the determination as to whether, in the exercise of such discretion and/or judgment, the requirements of this Order were complied with rests initially with the relevant Departmental authority and, ultimately, with the Secretary.

The Secretary retains the sole and final authority to determine what actions are necessary to comply with this Order. Further, the Secretary retains the authority to suspend any and all requirements under this Order whenever the Secretary deems it necessary. This authority may be delegated by the Secretary as appropriate.

DOE 5480.23  
4-10-92

7

b. Program Secretarial Officers (PSOs) or their designees in the line organization shall:

- (1) Require that contractors prepare and update Safety Analysis Reports for each nuclear facility and nuclear operations under their jurisdiction (unless exempted) that establishes and evaluates the adequacy of the safety basis of the facility in accordance with the provisions of this Order.
- (2) Review and approve Safety Analysis Reports and revisions thereto for all nuclear facilities and operations. The PSO shall issue a Safety Evaluation Report that documents the bases upon which the approvals have been made.
- (3) Assure that all commitments made in the approved Safety Analysis Report are carried out by the contractors for the nuclear facilities and nuclear operations.
- (4) Perform the following functions:
  - (a) Issue permanent exemptions to the requirements of this Order for nonreactor nuclear facilities under his/her cognizance where the hazards are of a low magnitude (i.e. hazard Category 3 facilities). These permanent exemptions must be formally approved and must include an adequate basis justifying the action and ensure, that with proper controls, worker and public health and safety are not affected by the consequences of any postulated DBAs. These permanent exemptions may be granted by the responsible PSO only after obtaining the concurrence of the Office of Nuclear Safety (NS-1), Office of Environment, Safety and Health (EH-1), and Office of Nuclear Energy (NE-1).

- (b) Formally request, after obtaining the concurrence of NS-1 EH-1, and NE-1, the Secretary of Energy to grant permanent exemptions to the requirements of this Order for hazard Category 1 and hazard Category 2 facilities under his/her cognizance.
- (c) Grant temporary exemptions to the requirements of this Order for any activity under his/her cognizance, up to one year duration. Prior to approval, NS-1 and EH-1 shall also be in a timely manner in order to discharge their assigned responsibilities.

8

DOE 5480.  
4-10-92

- (5) Provide guidance and assistance to field organizations in applying the graded approach for the facility, and the performance of safety reviews, appraisals, etc., to assure contractor compliance with the provisions of this Order.
- (6) Conduct appraisals to assure contractor compliance with this Order.
- (7) Transmit the results of the actions taken above to the responsible program managers and field organizations with any necessary or appropriate instructions as to subsequent action to be taken, with a copy to the Office of Nuclear Safety and the Office of Environment, Safety and Health depending on the nature of the issue being addressed.
- (8) Keep the Office of Nuclear Safety and the Office of Environment, Safety and Health, advised of nuclear safety or nonnuclear, occupational safety and health problems, deficiencies, needs, and actions taken under this Order.
- (9) Designate an individual(s) to be responsible for bringing to the attention of the contracting officer each procurement falling within the scope of this Order. Unless another individual is designated, the responsibility is that of the procurement request originator (the individual responsible for initiating a requirement on DOE F 4200.33).
  - (a) Procurement request originators (the individuals responsible for initiating a requirement on DOE F 4200.33) or such other individuals as designated by the cognizant PSO shall bring the attention of the cognizant contracting officer to the following:
    - (1) each procurement requiring the application of this Order
    - (2) requirements for flowdown of provisions of this Order
    - (3) subcontract or subaward, and
    - (4) identification of the part or other portions of this Directive with which the awardee, if different, a sub-awardee, is to comply.
  - (b) Contracting officers, based on advice received from the procurement request originator or other designated individual shall apply applicable provisions of this Order to awards within its scope. For awards, other than management and operating contracts, this shall be by incorporation or reference using explicit language

in a contractual action, usually bilateral. All paragraph of this Order shall be applied to contractors excluding Paragraph 7.

- (10) Designate in writing the design, construction, or operations contractors that will be responsible for preparing a safety analysis report for each nuclear facility or nuclear operation.

c. DOE Field Office Managers or Field Program Managers shall:

- (1) Review and make recommendations to the PSO relative to the adequacy of all new SARs, as well as all revisions to existing SARs.
- (2) Oversee contractor preparation and review of safety analyses, including nuclear criticality, hazards classification, safety evaluations and changes thereto consistent with this Order and other DOE Orders.
- (3) Keep appropriate Headquarters program organizations, the Director Office of Nuclear Safety, and the Field and Area Offices advised of nuclear safety problems, deficiencies, and needs of actions taken under this Order.
- (4) Designate an individual(s) to be responsible for bringing to the attention of the contracting officer each procurement falling within the scope of this Order. Unless another individual is designated, responsibility is that of the procurement request originator (the individual responsible for initiating a requirement on DOE F 4200)
  - (a) Procurement request originators (the individuals responsible for initiating a requirement on DOE F 4200.33) or such other individuals(s) as designated by the cognizant PSO shall bring to the attention of the cognizant contracting officer the following: (1) each procurement requiring the application of this Order, (2) requirements for flowdown of provisions of this Order to any sub-contract or sub-award, and (3) identification of the paragraphs or other portions of this Directive with which the awardee, or, if different, a sub-awardee, is to comply.
  - (b) Contracting officers, based on advice received from the procurement request originator or other designated individuals shall apply applicable provisions of this Order to awards falling within

its scope. For awards, other than management and operation contracts, this shall be by incorporation or reference to explicit language in a contractual action, usually bilateral. All paragraphs of this Order shall be applied to contracts excluding Paragraph 7.

d. Director of the Office of Nuclear Safety (NS-1), acting as the independent element responsible for nuclear safety oversight of line management for the Department, shall:

- (1) Monitor and audit the implementation of all aspects of this Order to nuclear safety, including field organization and contractor performance

- (2) Review documentation such as Technical Safety Appraisals, implementation schedules, TSRs, SARs and program office and site reports, and on-site activities;
  - (3) Identify circumstances that are indicative of deteriorating or poor performance that may warrant further action;
  - (4) Concur with requests for permanent exemptions from the requirements of this Order.
- e. Director, Naval Nuclear Propulsion Program: Executive Order 12344, statute prescribed by P.L. 98-525 (42 U.S.C. 7158, Note) establishes the responsibility and authority of the Director, Naval Nuclear Propulsion Program (who is a Deputy Assistant Secretary for Naval Reactors within the Department) for facilities and activities which comprise the Program, a joint Navy-DOE organization. These executive and legislative actions establish the responsibility of the Director as including the safety of reactors and associated naval propulsion plants, the control of radiation and radioactivity associated with naval nuclear propulsion plants, and the operating practices and procedures applicable to naval nuclear propulsion plants. Accordingly, the provisions of this Order do not apply to the Naval Nuclear Propulsion Program.
- f. Assistant Secretary for the Office of Defense Programs (DP-1): A safety analysis is required for weapons program activities and facilities, but not for operations involving the assembly, disassembly, and testing of nuclear explosives, or devices nor those aspects of these facilities relating specifically to such operations covered by DOE 5610.3.

DOE 5480.23  
4-10-92

1

- g. Assistant Secretary for Environment, Safety and Health (EH-1), acting as an independent element responsible for nonnuclear and occupational safety and health oversight of the line organizations for the Department, shall monitor and audit all aspects of the implementation of this Order related to nonnuclear and occupational safety and health, including line and field organization and contractor performance for these areas.
8. REQUIREMENTS. A contractor, as designated in writing by the PSO, who is responsible for the design, construction, or operation of DOE nuclear facilities shall be required to perform a safety analysis that develops and evaluates the adequacy of the safety basis for each such facility. The safety basis to be analyzed shall include management, design, construction, operation, and engineering characteristics necessary to protect the public, workers, and the environment from the safety and health hazards posed by the nuclear facility or nonfacility nuclear operations. All contractors shall be held responsible for adhering to assumptions and commitments set forth in the safety analysis. Contractors shall be required to prepare, and shall submit to DOE for its approval, SARs documenting safety analyses for each DOE nuclear facility under their cognizance. Contractors responsible for conducting one or more nonfacility nuclear operations are required to maintain up-to-date analyses of the safety of such operations and analyses documented in a format that is auditable by DOE. Attachment I provides guidance in greater detail than the requirements of this Order.
- a. Graded Approach for the Level of Analysis.
- (1) Justification for the level of analyses and documentation for each hazard considered shall be provided as part of the plan and schedule submitted in accordance with paragraph 9(b)(2) of this Order. The level of analysis and documentation for each facility must be commensurate with:

commensurate with.

- (a) The magnitude of the hazards being addressed;
- (b) The complexity of the facility and/or systems being relied on to maintain an acceptable level of risk; and
- (c) The stage or stages of the facility life cycle for which DOE approval is sought.

12

DOE 5480.  
4-10-92

- (2) This application of the graded approach is specific for the SAR.

b. Scope and Content of Safety Analysis Reports

- (1) SARs shall define the safety basis, document the logic of its derivation, demonstrate adherence to the safety basis, and justify its adequacy.
- (2) Each SAR required by this Order shall include thorough documentation of the assumptions employed in the safety analysis.
- (3) A SAR shall include the results of the safety analysis that identify the dominant contributors to the risk of the facility so that the vulnerabilities can be better managed. The safety analysis report shall address the following topics:
  - (a) Executive summary;
  - (b) Applicable statutes, rules, regulations, and Departmental Orders;
  - (c) Site characteristics;
  - (d) Facility description and operation, including design of principal structures, components, all systems, engineered safety features, and processes;
  - (e) Hazard analysis and classification of the facility;
  - (f) Principal health and safety criteria;
  - (g) Radioactive and hazardous material waste management;
  - (h) Inadvertent criticality protection;
  - (i) Radiation protection;
  - (j) Hazardous material protection;
  - (k) Analysis of normal, abnormal, and accident conditions, including design basis accidents; assessment of risks; consideration of natural and manmade external events; assessment of contributory and causal events, mechanisms, and phenomena; and evaluation of the need for an

analysis of beyond-design-basis accidents; however, the SAR is to exclude acts of sabotage and other malevolent acts since these actions are covered under security protection of the facility.

- (l) Management, organization, and institutional safety provisions;
- (m) Procedures and training;
- (n) Human factors;
- (o) Initial testing, inservice surveillance, and maintenance;
- (p) Derivation of TSRs;
- (q) Operational safety;
- (r) Quality assurance;
- (s) Emergency preparedness;
- (t) Provisions for decontamination and decommissioning; and
- (u) Applicable Facility design codes and standards.

c. Hazard Classification for Nuclear Facilities and Operations. Contractors shall be required to perform a hazard analysis of their nuclear activities and classify their processes, operations, or activities in accordance with the following requirements:

- (1) Classification Categories. The consequences of unmitigated release of radioactive and/or hazardous material shall be evaluated and classified by the following hazard categories:
  - (a) Category 1 Hazard. The hazard analysis shows the potential for significant offsite consequences.
  - (b) Category 2 Hazard. The hazard analysis shows the potential for significant onsite consequences.
  - (c) Category 3 Hazard. The hazard analysis shows the potential for only significant localized consequences.

- (2) Inventory of Hazardous Materials. The hazard analysis shall be based on an inventory encompassing all radioactive and nonradioactive hazardous materials that are stored, utilized, or may be formed within a nuclear facility.
- (3) Evaluation of Potential Releases. The hazard analysis shall identify energy sources or processes that might contribute to the generation or uncontrolled release of hazardous materials. The hazard analysis shall estimate the consequences of accidents in which the facility or process and/or materials in the inventory are assumed to interact, or be released in a manner to produce a threat or challenge to the health and safety of individuals on site and off site.
- (4) Submission of Hazard Analysis to DOE. The hazard analysis shall be submitted to DOE for approval in accordance with the safety analysis plan and schedule required by paragraph 9(b)(2) of this Order.

d. Document Control. Contractors with the primary responsibility for the design

- u. Document control. Contractors with the primary responsibility for the design, construction, operation, or decommissioning of DOE nuclear facilities must maintain such document control as may be necessary to ensure that all use SARs and their supporting documentation designated by DOE or the contract authorized users, including DOE line management and the Department's safe oversight groups, have current editions.

## 9. IMPLEMENTATION REQUIREMENTS.

### a. Approval of Safety Analysis Reports for New DOE Nuclear Facilities.

- (1) Contractors shall be required to obtain PSO approval of Preliminary Safety Analysis Reports (PSARs) prior to undertaking procurement materials and components, construction, and preoperational testing of DOE nuclear facilities. DOE may authorize, in writing, limited activities of this type without approval of a PSAR. PSARs shall document the adequacy of the safety basis for a new nuclear facility and provide assurance that the facility can be constructed, operated, maintained, and shut down safely and in compliance with applicable laws and regulations.
- (2) Contractors shall be required to submit Final Safety Analysis Reports (FSARs) to the PSO for approval and

DOE 5480.23  
4-10-92

1

authorization to operate DOE nuclear facilities. FSARs shall document the adequacy of the safety basis and provide assurance that the facility can be operated, maintained, and shut down safely and in compliance with applicable laws and regulations.

- (3) The PSO may direct, in writing, that the PSAR and FSAR for a facility be merged into a single FSAR that meets the requirements of paragraphs 9a(1) and 9a(2) of this paragraph. The PSO may also direct, in writing, that a SAR be submitted in stages.

### b. Preparation and Submittal of Upgraded Safety Analysis Reports for Existing Nuclear Facilities.

- (1) Contractors responsible for the operation of DOE-owned nuclear facilities that are scheduled to submit a Safety Analysis Report within 12 months after the date of issuance of this Order, shall implement a program to upgrade, as necessary, the safety analyses to reflect the requirements of this Order. The upgraded safety analysis shall provide assurance that the facility can be operated, maintained, and shut down safely and be in compliance with applicable laws and regulations. Upgraded SAR's shall be submitted to the PSO for approval in accordance with the plan and schedule required by paragraph 9(b) (2) of this Order.
- (2) Plan and Schedule for Safety Analysis Reports. Each contractor responsible for submitting a SAR shall be required to submit to the PSO, for its review and approval, an overall plan and schedule for completing this effort. For existing facilities or operations, the plan and schedule shall be submitted to the Department for approval by 6 months after the date of issuance of this Order. This submission shall describe the need for upgrading the SAR and shall include a preliminary assessment of facility hazards, the basis for the plan and schedule, and level of detail proposed, bases for interim operations or restrictions on interim operations, and administrative control during the upgrade process. Once a submitted plan and schedule is approved by DOE, the contractor shall comply with the plan and schedule.

including any DOE modifications. The plan and schedule submitted contractor shall be considered approved 180 days after submittal, including any modifications made or directed by DOE during or aft this period, unless it is approved by DOE at an earlier date. App plans and schedules may be changed, but such changes must be appr the same manner as initial plans and schedules.

16

DOE 5480.  
4-10-92

- c. Periodic Updates of Safety Analysis Reports. Contractors shall be require to review and update as necessary, SARs annually, pursuant to this Order ensure that the information in each SAR is current and remains applicable Revisions shall be submitted to the PSO at least annually and shall refle all changes implemented up to 6 months prior to the filing of the updated The DOE approval of any Unreviewed Safety Question pursuant to DOE 5480.2 amendments to the TSRs, and the material submitted by the contractor to t PSO in support of these approvals shall be considered an addendum to the until the information is incorporated into the SAR as part of the next an update.

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