

APPENDIX H

HEALTH AND SAFETY RECORDS

The requirements for records management will be dependent upon the applicable hazards and risks determined for the facility. Examples of the types of records that should be included in the system required by 10 CFR Parts 19, 20, 21, 25, and 70 (as proposed) are listed in Section H1 below. Section H2 lists examples of the types of records that should be established and maintained to provide reasonable assurance that items relied on for safety will be available and reliable to perform their function when needed, as required by 10 CFR §70.64(1), as proposed. Section H2 is organized under the chapter headings of the SRP.

Although Sections H1 and H2 lists examples of records, the lists are not intended to be exhaustive or prescriptive in format. Furthermore, the applicant may choose to organize the records in ways other than shown here.

H1. Examples of Records Required by 10 CFR Parts 19, 20, 21, 25, and 70

1. Audits
2. Access authorization for personnel
3. Administrative procedures with safety implications
4. Air sample data
5. Bioassay data
6. Change control records for material control and accounting program
7. Radiation dose to individuals of the public
8. Radiation exposure history
9. Individual radiation monitoring data
10. Individual radiation monitoring results
11. Individual intakes of radioactive material
12. Radioactive material storage records
13. Planned special radiation exposures
14. Radiation protection (and contamination control) records
15. Radiation training records
16. Radiation work permits
17. Records of cumulative occupational radiation dose
18. Records of receipt, transfer, and disposal of radioactive material
19. Records of radioactive waste disposal
20. Reports of theft/loss of licensed material
21. Results of radiation surveys/calibrations
22. Results of measurements used to calculate radioactive effluents
23. Health and safety compliance records, medical records, personnel exposure records, etc.

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H2. Examples of Records that Should Provide Reasonable Assurance that Items Relied on for Safety Will Be Available and Reliable to Perform their Function (Listed by SRP Section)

1. General Information:

- (1) Construction records;
- (2) Facility and equipment descriptions and drawings;
- (3) Design criteria, requirements, and bases for safety-related structures, systems, or components, as specified by the facility configuration management system;
- (4) Records of facility changes and associated integrated safety analyses, as specified by the facility configuration management system;
- (5) Safety analyses, reports, and assessments;
- (6) Records of site characterization measurements and data;
- (7) Records pertaining to onsite disposal of radioactive or mixed wastes in surface landfills; and
- (8) Specifications for items relied on for safety.

2. Financial Qualifications:

None

3. Protection of Classified Matter:

- (1) Procedures to prevent tampering and loss of classified/sensitive records; and
- (2) Employee access authorization lists.

4. Organization and Administration:

- (1) Administrative procedures with safety implications;
- (2) Change control records for material control and accounting program;
- (3) Organization charts, position descriptions, and qualifications records;
- (4) Health and safety compliance records, medical records, personnel exposure records;
- (5) Quality assurance records (see Section H2.15(1) of this appendix);
- (6) Safety inspections, audits, assessments, and investigations; and
- (7) Safety statistics and trends.

5. Integrated Safety Analysis:

- (1) Integrated safety analysis and revisions and
- (2) Integrated safety analysis summary.

6. Nuclear Criticality Safety:
 - (1) Nuclear criticality control written procedures and statistics;
 - (2) Nuclear criticality safety analyses;
 - (3) Records pertaining to nuclear criticality inspections, audits, investigations, and assessments;
 - (4) Records pertaining to nuclear criticality incidents, unusual occurrences, or accidents; and
 - (5) Records pertaining to nuclear criticality safety analyses.
7. Fire Protection:
 - (1) Fire Hazard Analysis;
 - (2) Fire prevention measures, including hot-work permits and fire-watch records;
 - (3) Records pertaining to inspection, maintenance, and testing of fire protection equipment;
 - (4) Records pertaining to fire protection training and retraining of response teams; and
 - (5) Pre-fire emergency plans.
8. Chemical Safety:
 - (1) Chemical process safety procedures and plans;
 - (2) Records pertaining to chemical process inspections, audits, investigations, and assessments;
 - (3) Diagrams, charts, and drawings;
 - (4) Records pertaining to chemical process incidents, unusual occurrences, or accidents;
 - (5) Chemical process safety reports and analyses; and
 - (6) Chemical process safety training.
9. Radiation Safety:
 - (1) Bioassay data;
 - (2) Exposure records;
 - (3) Radiation protection (and contamination control) records;
 - (4) Radiation training records; and
 - (5) Radiation work permits.
10. Environmental Protection:
 - (1) Environmental release and monitoring records and
 - (2) Environmental Report and Supplements to the Environmental Report, as applicable.

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11. Plant Systems:

- (1) Written procedures and statistics for plant systems;
- (2) Safety analyses and management measures for plant systems;
- (3) Records pertaining to inspections, audits, investigations, and assessments of plant systems ; and
- (4) Records pertaining to a description of equipment and facilities design (electrical systems, structures and components, cooling water systems, containment and confinement systems, ventilation systems, etc.).

12. Human Factors:

- (1) Personnel performance trend analyses and
- (2) Human factor improvements.

13. Security and Safeguards:

- (1) Physical protection plans;
- (2) Fundamental nuclear material control plans;
- (3) Transportation plans;
- (4) Records pertaining to granting unescorted access; and
- (5) Records pertaining to material control and accounting of special nuclear material.

14. Emergency Protection:

- (1) Emergency plan(s) and procedures;
- (2) Comments on emergency plan from outside emergency response organizations;
- (3) Emergency drill records;
- (4) Memorandum of understanding with outside emergency response organizations
- (5) Records of actual events;
- (6) Records pertaining to the training and retraining of personnel involved in emergency preparedness functions; and
- (7) Records pertaining to the inspection and maintenance of emergency response equipment and supplies.

15. Management Measures:

- (1) Quality Assurance:
 - (a) Table 1 in Reference 2 contains a list of QA records generated during design and construction of a nuclear power plant that should be maintained as QA records. Although Reference 2 was developed for

- nuclear power plants, the QA record keeping requirements for the design and construction of this facility should be comparable; and
- (b) Appendix A of Reference 3 contains a list of typical procedures for the operation of nuclear power plants. Although Reference 3 was developed for nuclear power plants, the QA record keeping requirements for the operation of this facility should be comparable.
- (2) Configuration Management:
- (a) Safety analyses, reports, and assessments that support the physical configuration of process designs and changes to those designs;
 - (b) Validation records for computer software used for safety analysis or MC&A;
 - (c) ISA documents including facility drawings, specifications, and purchase specifications for items relied on for safety; and
 - (d) Approved, current operating procedures and emergency operating procedures.
- (3) Maintenance:
- (a) Preventive maintenance records, including trending and root cause analysis;
 - (b) Calibration and testing data for items relied on for safety; and
 - (c) Corrective maintenance records.
- (4) Training and Qualification of Plant Personnel:
- (a) Personnel training and qualification record and
 - (b) Procedures.
- (5) Plant Procedures:
- (a) Standard operating procedures and
 - (b) Functional test procedures.
- (6) Audits and Assessments:
- (a) Audits of safety and environmental activities and
 - (b) Assessments of safety and environmental activities
- (7) Incident Investigations:
- (a) Investigation reports;
 - (b) How and when changes recommended by investigation reports are implemented;
 - (c) Summary of reportable events for the term of the license; and

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- (d) Incident investigation policy.
- (8) Records Management:
 - (a) Policy;
 - (b) Material storage records; and
 - (c) Records of receipt, transfer, and disposal of radioactive material.

H3. References

1. Nuclear Regulatory Commission (U.S.), Washington, D.C. "Domestic Licensing of Special Nuclear Material (10 CFR Part 70)," *Federal Register*: Vol. 64, No. 146. pp. 41338–41357. July 30, 1999.
2. Nuclear Regulatory Commission, (U.S.) (NRC), Regulatory Guide 1.28, Rev. 3, "Quality Assurance Program Requirements (Design and Construction)." NRC: Washington, D.C. August 1985.
3. Nuclear Regulatory Commission, (U.S.) (NRC), Regulatory Guide 1.33, Rev. 23, "Quality Assurance Program Requirements (Operation)." NRC: Washington, D.C. February 1978.