

# 324 Disposition Project Code of Record

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
Hanford Field Office under Contract 89303320DEM000030



**P.O. Box 1464**  
**Richland, Washington 99352**

## 324 Disposition Project Code of Record

D. I. Akari  
Central Plateau Cleanup Company LLC (CPCCo)

Date Published  
March 2026

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
Hanford Field Office under Contract 89303320DEM000030

 **CPCCo**  
Central Plateau  
Cleanup Company  
P.O. Box 1464  
Richland, Washington 99352



**APPROVED**  
By Heather Moyer at 9:16 am, Mar 25, 2026

Release Approval

Date

Release Stamp

**TRADEMARK DISCLAIMER**

Reference herein to any specific commercial product, process, or service by tradename, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy.

Printed in the United States of America

Total pages: 14



## Contents

|          |                                                                                  |          |
|----------|----------------------------------------------------------------------------------|----------|
| <b>1</b> | <b>Introduction.....</b>                                                         | <b>1</b> |
| 1.1      | Purpose.....                                                                     | 1        |
| 1.2      | Applicability.....                                                               | 1        |
| <b>2</b> | <b>Code of Record.....</b>                                                       | <b>1</b> |
| 2.1      | Federal Requirements.....                                                        | 1        |
| 2.1.1    | Code of Federal Regulations.....                                                 | 1        |
| 2.2      | Department of Energy Requirements.....                                           | 2        |
| 2.2.1    | DOE Directives.....                                                              | 2        |
| 2.2.2    | Other Applicable DOE Guides, Handbooks, and Standards.....                       | 2        |
| 2.3      | Washington State Requirements.....                                               | 2        |
| 2.3.1    | Washington Administrative Code (WAC).....                                        | 2        |
| 2.3.2    | Other Washington State Requirements.....                                         | 3        |
| 2.4      | National Consensus Codes and Standards.....                                      | 3        |
| 2.4.1    | AASHTO – American Association of State Highway and Transportation Officials..... | 3        |
| 2.4.2    | ACI - American Concrete Institute.....                                           | 3        |
| 2.4.3    | AISC - American Institute of Steel Construction.....                             | 3        |
| 2.4.4    | ANSI – American National Standards Institute.....                                | 3        |
| 2.4.5    | ASCE - American Society of Civil Engineers.....                                  | 3        |
| 2.4.6    | ASME - American Society of Mechanical Engineers.....                             | 3        |
| 2.4.7    | AWS – American Welding Society.....                                              | 4        |
| 2.4.8    | ICC – International Code Council.....                                            | 4        |
| 2.4.9    | IEEE – Institute of Electrical and Electronics Engineers.....                    | 5        |
| 2.4.10   | IES - Illuminating Engineering Society of North America.....                     | 5        |
| 2.4.11   | ISA – Instrument Society of America.....                                         | 5        |
| 2.4.12   | NEMA - National Electrical Manufacturers Association.....                        | 5        |
| 2.4.13   | NFPA – National Fire Protection Association.....                                 | 5        |
| 2.4.14   | NIST – National Institute of Standards and Technology.....                       | 6        |
| 2.4.15   | SMACNA – Sheet Metal and Air Conditioning Contractors Nation Association.....    | 6        |
| 2.4.16   | UL – Underwriters Laboratory.....                                                | 6        |
| 2.5      | Hanford Site Standards and Requirements.....                                     | 6        |
| 2.6      | CPCCO Standards and Requirements.....                                            | 7        |
| 2.7      | Other Design Input References.....                                               | 7        |

## Abbreviations and Acronyms

|        |                                                                    |
|--------|--------------------------------------------------------------------|
| AASHTO | American Association of State Highway and Transportation Officials |
| ACI    | American Concrete Institute                                        |
| AISC   | American Institute of Steel Construction                           |
| ANSI   | American National Standards Institute                              |
| ASME   | American Society of Mechanical Engineers                           |
| AWS    | American Welding Society                                           |
| CFR    | Code of Federal Regulations                                        |
| COR    | Code of Record                                                     |
| CPCCo  | Central Plateau Cleanup Company                                    |
| DOE    | U.S. Department of Energy                                          |
| FHA    | Fire Hazards Analysis                                              |
| HDBK   | Handbook                                                           |
| ICC    | International Code Council                                         |
| IEEE   | Institute of Electrical and Electronics Engineers                  |
| IES    | Illuminating Engineering Society of North America                  |
| ISA    | Instrument Society of America                                      |
| NEMA   | National Electrical Manufacturers Association                      |
| NFPA   | National Fire Protection Association                               |
| NIST   | National Institute of Standards and Technology                     |
| RL     | U.S. Department of Energy, Hanford Field Office                    |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association  |
| UL     | Underwriters Laboratory                                            |
| WAC    | Washington Administrative Code                                     |
| WSDOE  | Washington State Department of Ecology                             |
| WSDOT  | Washington State Department of Transportation                      |

## 1 Introduction

### 1.1 Purpose

The Code of Record (COR) documents the codes, standards, and design references governing a project. It captures relevant Federal and state laws, DOE and Hanford Site requirements, and design criteria from national and local building codes that impact the public, worker, environment, or nuclear safety. This document establishes the COR for the 324 Disposition Project, covering the 324 facility cells/vaults removal and 300-296 waste site remediation design activities.

The COR applies to the design, fabrication, and construction of all systems, structures, components, and associated equipment for the 324 Disposition project.

### 1.2 Applicability

The COR governs all design activities for the 324 Disposition Project. It will be maintained under configuration control and updated as needed to reflect changes in code requirements.

If a reference does not specify a version, edition, or issue date, the version effective during contract award will apply.

In cases where codes or standards conflict, the most conservative option is generally preferred. The CPCCo Engineering Design Authority will be consulted to make the final decision.

## 2 Code of Record

### 2.1 Federal Requirements

#### 2.1.1 Code of Federal Regulations

10 CFR 820, *Procedural Rules for DOE Nuclear Activities*

10 CFR 830, *Nuclear Safety Management*

10 CFR 835, *Occupational Radiation Protection*

10 CFR 851, *Worker Safety and Health Program*

10 CFR 1021, *National Environmental Policy Act Implementing Procedure*

29 CFR 1910, *Occupational Safety and Health Standards*

29 CFR 1926, *Safety and Health Regulations for Construction*

40 CFR 61, *National Emission Standards for Hazardous Air Pollutants*

40 CFR 261, *Identification and Listing of Hazardous Waste*

40 CFR 264, *Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities*

49 CFR 173, *Shippers – General Requirements for Shipments and Packages*

49 CFR 393, *Parts and Accessories Necessary for Safe Operation*

## **2.2 Department of Energy Requirements**

### **2.2.1 DOE Directives**

DOE O 205.1B, Chg.3, *Cyber Security Program*

DOE O 414.1D, Chg.2, *Quality Assurance*

DOE O 420.1C, Chg.3, *Facility Safety*

DOE O 430.1B, Chg.1, *Real Property Asset Management*

DOE O 435.1, Chg.1, *Radioactive Waste Management*

DOE O 458.1, Chg. 2, *Radiation Protection of the Public and the Environment*

### **2.2.2 Other Applicable DOE Guides, Handbooks, and Standards**

DOE G 420.1-1A, 2012, *Nonreactor Nuclear Safety Design Guide for use with DOE O 420.1C, Facility Safety*

DOE-G 414.1-3, 2004, *Suspect /Counterfeit Items Guide for Use with 10 CFR 830 Subpart A, Quality Assurance Requirements, and DOE 0414.1B, Quality Assurance*

DOE-EH-0173T-1991, *Environmental Regulatory Guide for Radiological Effluent Monitoring and Environmental Surveillance*

DOE-HDBK-1902-2013, *Electrical Safety Handbook*

DOE-HDBK-1132-1999, *Design Considerations*

DOE-HDBK-1140-2001, *Human Factors / Ergonomics Handbook for the Design for Ease of Maintenance*

DOE-HDBK-1169-2003, *Nuclear Air-Cleaning Handbook*

DOE-STD-1020-2016, *Natural Phenomena Hazards Analysis and Design Criteria for Department of Energy Facilities*

DOE-STD-1027-1992, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*

DOE-STD-1269-2022, *Air Cleaning Systems in DOE Nuclear Facilities*

DOE-STD-1066-2016, *Fire Protection*

DOE-STD-1090-2020, *Hoisting and Rigging*

DOE-STD-1098-2017, *Radiological Control*

DOE-STD-3030-2015, *Specification for HEPA Filters Used by DOE Contractors*

DOE-STD-3025-2022, *Quality Assurance Inspection and Testing of HEPA Filters*

## **2.3 Washington State Requirements**

### **2.3.1 Washington Administrative Code (WAC)**

WAC 173-303, *Dangerous Waste Regulations*

WAC 173-400, *General Regulations for Air Pollution Sources*

WAC 173-460, *Controls for New Sources of Toxic Air Pollutants*

WAC 173-480, *Ambient Air Quality Standards and Emission Limits for Radionuclides*

WAC 212-80, *Fire Sprinkler System*

WAC 246-247, *Radiation Protection – Air Emissions*

WAC 296-155, *Safety Standards for Construction Work*

### **2.3.2 Other Washington State Requirements**

WSDOE 18-10-044, 2019, *Stormwater Management Manual for Eastern Washington*

WSDOT M41-10, 2024, *Standard Specifications for Road, Bridge, and Municipal Construction*

WSDOT M22-01, 2024, *Design Manual*

WA7890008967, 2010 Rev. 8C, *Hanford Facility Resource Conservation and Recovery Act Permit*, as amended

## **2.4 National Consensus Codes and Standards**

### **2.4.1 AASHTO – American Association of State Highway and Transportation Officials**

AASHTO LRFDBDS, 2024, *LRFD Bridge Design Specifications 10<sup>th</sup> Edition*

### **2.4.2 ACI - American Concrete Institute**

ACI-301, *Specifications for Structural Concrete*

ACI-318, 2019, *Building Code Requirements for Structural Concrete*

### **2.4.3 AISC - American Institute of Steel Construction**

AISC-325, 2017, *Steel Construction Manual 15<sup>th</sup> Edition*

ANSI/AISC-360, 2016, *Specification for Structural Steel Building*

### **2.4.4 ANSI – American National Standards Institute**

ANSI A13.1, 2020, *Scheme for the Identification of Piping Systems*

ANSI N13.1, 1999, *Sampling and Monitoring Releases of Airborne Radioactive Substances from the Stacks and Ducts of Nuclear Facilities*

### **2.4.5 ASCE - American Society of Civil Engineers**

ASCE 7, 2016, *Minimum Design Loads for Buildings and Other Structures w/Supplement 1*

### **2.4.6 ASME - American Society of Mechanical Engineers**

ASME AG-1, 2023, *Code on Nuclear Air and Gas Treatment*

ASME B&PV Code, Sections II, V, VIII, IX

ASME BTH-1, 2023, *Design of Below-the Hook Lifting Devices*

ASME B1.1, *Unified Inch Screw Threads*

ASME B1.20.1, *Pipe Threads, General Purpose (NPT)*

ASME B30.1, 2026, *Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries*

ASME B30.2, 2022, *Overhead and Gantry Cranes (Top Running)*

ASME B30.5, 2025, *Mobile and Locomotive Cranes*

ASME B30.7, 2021, *Winches*

ASME B30.9, 2025, *Slings*

ASME B30.10, 2024, *Hooks*

ASME B30.16, 2022, *Overhead Underhung and Stationary Hoists*

ASME B30.17, 2020, *Cranes and Monorails (With Underhung Trolley and Bridge)*

ASME B30.20, 2025, *Below the Hook Lifting Devices*

ASME B30.26, 2026, *Rigging Hardware*

ASME B31.3, 2024, *Process Piping*

ASME B36.10, 2022, *Welded and Seamless Wrought Steel Pipe*

ASME B36.19, 2022, *Welded and Seamless Wrought Stainless Steel Pipe*

ASME N511, 2017, *In-Service Testing of Nuclear Air Treatment, Heating, Ventilating, and Air-Conditioning Systems*

ASME NQA-1, 2008, *Quality Assurance Requirements for Nuclear Facility Applications*

ASME NQA-1a, 2009, *Quality Assurance Requirements for Nuclear Facility Applications, Addenda to NQA-1-2008*

ASME STS-1, 2021, *Steel Stacks*

#### **2.4.7 AWS – American Welding Society**

AWS A2.4, 2020, *Standard Symbols for Welding, Brazing, and Nondestructive Examination*

AWS D1.1, 2025, *Structural Welding Code Steel*

AWS D1.2, 2014, *Structural Welding Code - Aluminum*

AWS D1.4, 2018, *Structural Welding Code - Reinforcing Steel*

AWS D1.6, 2017, *Structural Welding Code Stainless Steel*

AWS D14.1, 2005, *Welding of Industrial Mill Cranes and Other Material Handling Equipment*

AWS QC-1, *Specification for AWS Certification of Welding Inspectors*

#### **2.4.8 ICC – International Code Council**

ICC, 2021, *International Building Code*

#### **2.4.9 IEEE – Institute of Electrical and Electronics Engineers**

IEEE STD-141, 2013, *IEEE Recommended Practice for Electric Power Distribution for Industrial Plants*

IEEE STD-142, 2007, *IEEE Recommended Practice for Grounding of Industrial and Commercial Power Systems*

IEEE STD-242, 2001, *IEEE Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems*

IEEE 1584, 2018, *Guide to Performing Arc Flash Hazard Calculations*

IEEE C2, 2017, *National Electrical Safety Code*

#### **2.4.10 IES - Illuminating Engineering Society of North America**

IES, 2011, *The Lighting Handbook*, 10<sup>th</sup> Edition

#### **2.4.11 ISA – Instrument Society of America**

ISA5.1, 2024, *Instrumentation Symbols and Identifications*

ISA5.2, 1992, *Binary Control Logic Diagrams for Process Operations*

ISA5.3, 1983, *Graphic Symbols for Distributed Control/Shared Display Instrumentation, Logic and Computer Systems*

ISA5.4, 1991, *Instrument Loop Diagrams*

ISA5.5, 1985, *Graphic Symbols for Process Displays*

#### **2.4.12 NEMA - National Electrical Manufacturers Association**

ANSI/NEMA 250, 2020, *Enclosures for Electrical Equipment (1000 Volts Maximum)*

ANSI/NEMA ICS 1, 2022, *Industrial Control and Systems: General Requirements*

ANSI/NEMA ICS 7, 2020, *Industrial Control and Systems: Adjustable-Speed Drives*

ANSI/NEMA MG 00001, 2024, *Motors and Generators*

#### **2.4.13 NFPA – National Fire Protection Association**

NFPA 1, 2024, *Fire Code*

NFPA 13, 2025, *Standard for the Installation of Sprinkler Systems*

NFPA 24, 2025, *Private Service Mains and Their Appurtenances*

NFPA 30, 2024, *Flammable and Combustible Liquids Code*

NFPA 70, 2023, *National Electrical Code*,

NFPA 70E, 2018, *Standard for Electrical Safety in the Workplace*,

NFPA 80A, 2022, *Recommended Practice for Protection of Buildings from Exterior Fire Exposures*

NFPA 90A, 2024, *Standard for the Installation of Air-Conditioning and Ventilating Systems*

NFPA 90B, 2024, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*

NFPA 91, 2026, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Particulate Solids*

NFPA 101, 2024, *Life Safety Code*

NFPA 220, 2024, *Standard on Types of Building Construction*

NFPA 241, 2022, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*

NFPA 400, 2025, *Hazardous Materials Code*

NFPA 701, 2023, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*

NFPA 780, 2026, *Standard for the Installation of Lightning Protection*

#### **2.4.14 NIST – National Institute of Standards and Technology**

NIST Technical Note 1297, 1994, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result*

ANSI/NIST Z540, 1994, *Calibration Laboratories and Measuring and Test Equipment-General Requirements*

ANSI/NIST 800-53, 2005, *Security and Privacy Controls for Information Systems and Organizations*

#### **2.4.15 SMACNA – Sheet Metal and Air Conditioning Contractors Nation Association**

ANSI/SMACNA 002, 2011, *Rectangular Industrial Duct Construction Standards*

ANSI/SMACNA 005, 2013, *Round Industrial Duct Construction Standards*

ANSI/SMACNA 006, 2020, *HVAC Duct Construction Standards – Metal and Flexible*

#### **2.4.16 UL – Underwriters Laboratory**

UL 508, 1999, *Standard for Industrial Control Equipment*

UL 508A, 2013, *Standard for Industrial Control Panels*

UL 586, 2017, *Standard for Safety, High Efficiency, Particulate, Air Filter Units*

### **2.5 Hanford Site Standards and Requirements**

DOE-0336, Rev. 4, *Hanford Site Lockout/Tagout Procedure*

DOE-0344, Rev. 4-7, *Hanford Site Excavating, Trenching, and Shoring Procedure*

DOE-0359, Rev. 5-1, *Hanford Site Electrical Safety Program*

DOE/RL-92-36, Rev. 2, Rel. 1, *Hanford Site Hoisting and Rigging Manual*

DOE/RL-2001-36, Rev. 2, *Hanford Sitewide Transportation Safety Document*

DOE/RL-2005-84, Rev. 0, *Engineering Evaluation/ Cost Analysis #2 for the 300 Area*

DOE/RL-2004-77, Rev. 3, *Removal Action Work Plan for 300 Area Facilities*

DOE/RL-2014-13-ADD1, Rev. 1, *Remedial Design Report/Remedial Action Work Plan for 300-FF-2 Soils*

DOE-HRD-SH-51953, Rev. 0-0, *Hanford Radiological Health and Safety*

ECF-324 BLDG-17-0086, Rev. 1, *Total Effective Dose Equivalent Calculation for D4 of the 324 Facility*

HNF-S-0552, Rev. 8, *Procurement Specification for Standard, Nuclear Grade, High Efficiency Particulate Air Filters (For ASME AG-1 Compliant Filters)*

HNF-36174, Rev.8, *Hanford Fire Protection Design Requirements*

0087180, 2013, *Hanford Site 300 Area, Record of Decision (ROD) for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1*

## **2.6 CPCCO Standards and Requirements**

CPCC-00015, *Fire Hazards Analysis for the 324 Building (FHA)*

CPCC-00070, *Type IP-1 Packaging Compliance Checklist*

CPCC-00072, *Standard DOT 7A Type A Packaging Compliance Checklist*

CPCC-00175, *Central Plateau Cleanup Company Radiological Control Manual*

CPCC-00870, *Safety Basis Step-Out Criteria for the 324 Facility*

CPCC-01126, *300 Area Health and Safety Plan*

CPCC-324DP-26-00001, *Fire Protection Functional and Operating Requirements for 324 Disposition Project*

CPCC-324DP-26-00002, *324 Disposition Project Radiological Options Analysis*

CPCC-324DP-26-00003, *Functional Design Requirements for 324 Disposition Project*

ERDF-00003, *Supplemental Waste Acceptance Criteria for the Environmental Restoration Disposal Facility*

ERDF-00011, *Environmental Restoration Disposal Facility Waste Acceptance Criteria*

## **2.7 Other Design Input References**

ARPM IP-2, 2024, *Hose Handbook*

FM Global, 2010, *Approval Guide*

CPCC-MP-QA-599, *Quality Assurance Program*

CPCC-PRO-EN-097, *Engineering Design and Evaluation (Natural Phenomena Hazard)*

CPCC-PRO-QA-259, *Graded Approach*

CPCC-PRO-OP-40126, *Equipment and Piping Labeling*

CPCC-PRO-RP-1622, *Radiological Design Review Process*

*CPCC-STD-EN-52736, Design, Inspection, Testing and Repair of ASME-Coded Pressure Systems and Pressure Relief Devices*