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1-2 INTRODUCTION

1-2.1 Purpose

This Hanford Site Hoisting and Rigging Manual (HSHRM) describes the operation, inspection, maintenance, and repair requirements for cranes, hoists, fork trucks, slings, rigging hardware, and hoisting equipment at the U.S. Department of Energy's (DOE) Hanford Site. Occasionally, lifting is performed with equipment other than cranes, hoists, and fork trucks; when using any equipment for material handling, follow the equipment manufacturer's instructions.

EXAMPLE: *Excavation equipment, such as a backhoe, may have a hook installed on the bucket. It is acceptable to use such equipment for hoisting and rigging if the manufacturer provides instructions for such use. The manufacturer's instructions should include load capacity information.*

See Footnote 1 for examples of equipment not within the scope of HSHRM.¹ When using rigging devices/hardware in conjunction with the equipment not covered by this HSHRM for the purpose of raising, lowering, or otherwise lifting material, the rigging devices/hardware and their use shall comply with the applicable HSHRM sections.

1-2.2 Scope

This HSHRM supports the objectives of the DOE Hanford Field Office (DOE-HFO) by controlling hoisting and rigging (H&R) activities in a safe and cost-effective manner.

This HSHRM is intended to be a user's guide to requirements, codes, laws, regulations, standards, and practices that apply to DOE-HFO contractors at the Hanford Site. This HSHRM is applicable to subcontractors that handle/lift government owned, furnished, or fabricated items for the Hanford Site as invoked by contract documents.

Hoisting and rigging work is required by law and DOE to be in compliance with the *Occupational Safety and Health Administration* (OSHA) standards (29 Code of Federal Regulations (CFR) 1910, *Safety and Health Standards*, or OSHA 29 CFR 1926 Subpart CC, *Cranes and Derricks in Construction*) and ASME B30 Standards. Work involving critical and special/engineered lifts shall follow this HSHRM. As a minimum, acceptability of equipment and rigging shall be verified by the DOE-HFO contractor and critical lift procedures shall be reviewed and approved by the responsible DOE-HFO contractor.

NOTE: *Refer to OSHA 29 CFR 1926, Subpart R, Steel Erection, for special hoisting and rigging requirements relating to steel erection.*

¹For example, the following types of equipment are not within the scope of this HSHRM: elevators, dumbwaiters, escalators, moving walks, conveyor systems, drill and pump setting rigs, tree trimming and tree removal work, manipulators, specially insulated hoists for handling high-voltage lines, door- and hatch-opening equipment, vehicle-mounted elevating and rotating aerial devices, elevating work platforms, aerial lifts, and earth-moving and excavation equipment. Although not within the scope of this HSHRM, this equipment shall be maintained in a safe condition (Reference OSHA 29 CFR 654, *Duties of Employers and Employees*, also known as the "OSHA General Duty Clause"). Consult applicable equipment manufacturer information, OSHA, and/or ASME standards to ensure safe condition and use of the equipment.

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The following ASME B30 standards shall be implemented as applicable. Table 1 shows the ASME standards and their titles. ASME standards addressed and implemented in this HSHRM as applicable have an assigned chapter indicated in the third column, with a link to that chapter.

Table1: ASME Standards and Applicable HSHRM Chapters

ASME Standard	ASME Standard Title	HSHRM Chapter
B30.1-2020	<i>Jacks, Industrial Rollers, Air Casters, and Hydraulic Gantries</i>	Reserved
B30.2-2022	<i>Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist)</i>	Chapter 2-2
B30.3-2019	<i>Tower Cranes</i>	Reserved
B30.4-2020	<i>Portal and Pedestal Cranes</i>	Reserved
B30.5-2021	<i>Mobile and Locomotive Cranes</i>	Chapter 2-5
B30.6-2020	<i>Derricks</i>	Reserved
B30.7-2021	<i>Winches</i>	Reserved
B30.8-2020	<i>Floating Cranes and Floating Derricks</i>	Reserved
B30.9-2021	<i>Slings</i>	Chapter 2-9
B30.10-2019	<i>Hooks</i>	Chapter 2-10
B30.12-2021	<i>Handling Loads Suspended from Rotorcraft</i>	Reserved
B30.13-2022	<i>Storage/Retrieval (S/R) Machines and Associated Equipment</i>	Reserved
B30.14-2021	<i>Side Boom Tractors</i>	Reserved
B30.16-2022	<i>Overhead Underhung and Stationary Hoists</i>	Chapter 2-16
B30.17-2020	<i>Cranes and Monorails (With Underhung Trolley or Bridges)</i>	Chapter 2-17
B30.18-2021	<i>Stacker Cranes (Top or Under Running Bridge, Multiple Girder with Top or Under Running Trolley Hoist)</i>	Reserved
B30.19-2021	<i>Cableways</i>	Reserved
B30.20-2021	<i>Below-the-Hook Lifting Devices</i>	Chapter 2-20
B30.21-2019	<i>Lever Hoists</i>	Chapter 2-21
B30.22-2023	<i>Articulating Boom Cranes</i>	Reserved
B30.23-2022	<i>Personnel Lifting Systems</i>	Chapter 2-23
B30.24-2018	<i>Container Cranes</i>	Reserved
B30.25-2018	<i>Scrap and Material Handlers</i>	Reserved
B30.26-2020	<i>Rigging Hardware</i>	Chapter 2-26
B30.27-2019	<i>Material Placement Systems</i>	Reserved
B30.28-2020	<i>Balanced Lifting Units</i>	Reserved
B30.29-2018	<i>Self-Erecting Tower Cranes</i>	Reserved
B30.30-2019	<i>Ropes</i>	Chapter 2-30
B30.31-202x	<i>Self-Propelled, Towed, or Remote Controlled Hydraulic Platform Transporters (under development)</i>	Reserved
B30.32-2022	<i>Unmanned Aircraft Systems (UAS) used in the Inspection, Testing, Maintenance and Lifting Operations (under development)</i>	Reserved
BTH-1-2021	<i>Design of Below-the-Hook Lifting Devices</i>	Chapter 3-3
PASE-2019	<i>Portable Automotive Service Equipment (PASE)</i>	Chapter 3-2

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Other equipment not specifically addressed in this manual, may be within the scope of this manual (see Chapter 3-7, *OSHA 29 CFR 1926, Subpart CC, Cranes and Derricks in Construction*).

Forklifts, when equipped with a hoist or a hook and a rotating upper structure, fall within the requirements of a mobile crane.

Rigging equipment addressed in this HSHRM shall comply with applicable ASME and OSHA requirements. When equipment is used in a manner other than intended by the manufacturer, written authorization/approval shall be obtained from the manufacturer. The equipment shall be labeled for its intended use, and the statement “Not to be used for lifting service” shall be attached to the device. The equipment shall be maintained and inspected per the manufacturer’s instructions. Rigging equipment used for other purposes than its original design shall not be returned to lifting service.

1-2.3 Implementation

Contractors shall comply with OSHA, ASME, this HSHRM, and manufacturers’ requirements. Users of this HSHRM are responsible to implement all applicable requirements. If standards conflict, the user shall adhere to the standard containing the most stringent requirements. In most cases, ASME standards provide the most comprehensive information.

This HSHRM does not intend to require retrofitting of existing equipment. However, when any hoisting or rigging equipment is modified, its performance requirements shall be reviewed relative to the requirements within the current HSHRM. The need to meet the current requirements shall be evaluated by a qualified person selected by the owner (user).

1-2.4 Background

Revision 1 of the HSHRM was a rewrite of the original *Hanford Hoisting and Rigging Manual* (WHC-CM-6-4), issued in August 1988 for DOE Richland Operations (RL) contractors. Similar to that original manual, Revision 1 of HSHRM was prepared with input from the Hanford H&R Committee, with representatives from various RL contractors and trade unions, with overview by RL. Unlike the original *Hanford Hoisting and Rigging Manual*, Revision 1 of the HSHRM was issued by RL.

In 2024, the Hanford H&R Committee undertook an effort to reorganize the HSHRM into a modular structure and publish as Revision 2. Also in 2024, the DOE RL and Office of River Protection (ORP) field offices merged into the DOE Hanford Field Office (DOE-HFO). Therefore, DOE-HFO conducts oversight and issues the HSHRM.

Any lack of clarity, errors, omissions, or discrepancies should be submitted either to DOE-HFO or a member of the HHRC via [email](#).

1-2.5 Manual Organization

This is a “user’s manual.” It designates areas of responsibility regarding H&R activities, specifies qualification and training requirements, and stipulates operation, maintenance, and repair requirements for H&R equipment and components. Topics have been grouped to make the Manual user friendly and to minimize “jumping around” within the manual. While selected

design considerations are included in this Manual, primarily as information to operators and inspectors, this Manual is a user's manual, not a design manual.

1-2.6 Mandatory and Advisory Rules

Mandatory rules are characterized by use of the word *shall*. If a provision is of an advisory nature, it is indicated by use of the word *should* and is to be considered; its advisability depends on the facts in each situation.

1-2.7 Manual Revisions

Any user may prepare written requests for Manual revision. Revision requests shall be submitted to a member of the HHRC via [email](#) or to the DOE-HFO H&R Program Manager.

1-2.8 Variances, Exemptions, Waivers, and Interpretations

1-2.8.1 Variances, Exemptions, and Waivers

Variances and exemptions are frequently referred to as “waivers,” however, it is appropriate to recognize that a waiver is really a variance or an exemption. The difference between a variance and an exemption and their approval processes are as follows:

- a. A variance is an administrative decision that allows an employer to meet a requirement in a different manner than stated in the requirement or standard. To do this, the employer must show that the level of worker protection is “at least as effective” as that dictated by the requirement or standard.
- b. An exemption is an administrative decision that frees an employer from complying with a requirement. In other words, if an exemption from a requirement is granted, that requirement would not apply to the specific operation or facility in question.
- c. Usually, variance or exemption decisions concerning site-specific requirements can be made at the Hanford contractor or DOE-HFO level. Requests concerning mandatory standards (such as OSHA, ANSI, or ASME standards) will be elevated to DOE Headquarters for a decision.
- d. Requests for variances or exemptions shall be submitted to the responsible DOE-HFO Contracting Officer in accordance with the contractor's internal procedures. The contractor shall also send a copy of the request to the DOE-HFO H&R Program Manager, for information purposes. Upon receipt of the request from the contractor, the DOE-HFO Contracting Officer shall evaluate the request and, in coordination with the DOE-HFO H&R Program Manager, determine if it can be decided at the local level or if it must be elevated to DOE Headquarters.
- e. Following approval or disapproval, the DOE-HFO Contracting Officer shall respond to the contractor in writing. Costs incurred while awaiting administrative action typically will not be considered.

1-2.8.2 Interpretations

An “interpretation” asks the meaning of a requirement, or whether a proposed method fulfills a given requirement. See Chapter 1-10, *Interpretations*, to review previous interpretations.

To request an interpretation, users should contact a Hanford Hoisting Rigging Committee (HHRC) representative or send an [email](#) requesting a formal interpretation (see Chapter 1-10, *Interpretations*, for the process to be followed). Notify the HHRC if any inconsistent standards are identified.

If a request for interpretation is determined to actually be a request for a variance or exemption, process the request as outlined in Section 1-2.8.1(d).

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