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Subcontractors	Program Requirements Document	For Additional Info: <a href="http://EDMS">http://EDMS</a>	Effective Date: 03/08/17
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Manual: 2 – Hoisting and Rigging

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\*The current revision can be verified on EDMS.

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## 1. PURPOSE

This document provides requirements for subcontractors to the Fluor Idaho, LLC Idaho Cleanup Project (ICP) Core performing hoisting and rigging activities. This document implements requirements from codes and standards along with *contractor* (see def.) requirements. Any applicable regulatory or contractor requirements must be followed, with the most stringent requirement being met.

## 2. APPLICABILITY

This document applies to all subcontractors performing hoisting or rigging work at the ICP, as specified in their contract with contractor. Stricter requirements may be imposed by subcontractors upon their employees or sub-tier contractors. Subcontractors must follow the requirements of this document; however, the means of implementation may vary as determined by the subcontractor.

## 3. REQUIREMENTS

3.1 Subcontractors shall use the DOE Hoisting and Rigging Technical Standard 1090, (DOE-STD-1090) and guidance in OSHA 29CFR1926 subpart CC, “Final Rule for Cranes and Derricks in Construction.” Additional requirements specific to performing hoisting and rigging operations on the ICP are specified below.

**NOTE:** *Additional hoisting and rigging requirements specific to Structural Steel Erection can be found in PRD-2008 “Steel Erection.”*

### 3.2 Personnel Qualifications

#### 3.2.1 Crane Operators

3.2.1.1 The purpose of this subcontractor crane operator qualification process is to ensure that prospective crane operators meet minimum job qualifications including specific physical requirements, and demonstrate the knowledge and practical skills required to safely and proficiently operate crane(s) while working on the ICP. In addition to requirements in DOE-STD-1090, Sections 5 and 8, the following Mobile Crane Operator qualification requirements of OSHA final rule for Cranes and Derricks in Construction, 29CFR1926 subpart CC shall be met:

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**NOTE:** *The full requirements of 29CFR1926 subpart CC for crane operator certification have an implementation phase-in period ending November 2017.*

3.2.1.2 Mobile Crane Operators should possess a valid certification as a qualified mobile crane operator by one of the following options:

3.2.1.2.1 Option (1), Certification by an accredited crane operator testing organization such as the National Commission for the Certification of Crane Operators (NCCCO).

3.2.1.2.1.1 Qualification by this option is valid for 5 years.

3.2.1.2.2 Option (2), Qualification by an audited employer program that has been audited by an individual not an employee of the employer in accordance with nationally recognized auditing standards. This option is not portable, and valid only where the operator is employed by (and operating the equipment for) the employer that issued the qualification.

3.2.1.2.2.1 Qualification by this option is valid for 5 years.

3.2.1.2.3 Option (3), Qualification by the U.S. Military. (This does not include employees of private contractors to the Department of Defense or Armed Forces). This option is not portable, and valid only where the operator is employed by (and operating the equipment for) the employer that issued the qualification.

3.2.1.2.3.1 Qualification by this option is valid for a period set by the issuing authority.

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3.2.1.2.4 Option (4), Licensing by a government entity if the testing meets industry recognized criteria for written testing materials, practical examinations, test administration, grading, facilities/ equipment and personnel. This option is valid only when operating within the jurisdiction of the issuing entity.

3.2.1.2.4.1 Qualification by this option is valid for a period set by the issuing authority, not to exceed 5 years.

**NOTE:** *Nothing prevents the employer from specifying requalification at periods shorter than those previously listed for their work site.*

### **3.2.2 Qualified Riggers**

3.2.2.1 Riggers for construction hoisting and rigging activities are required to be qualified. A qualified rigger meets the requirements of a *qualified person* (see def.)

### **3.2.3 Signalperson**

3.2.3.1 Signalpersons for construction mobile crane hoisting and rigging activities are required to be qualified in accordance with requirements of 29CFR1926 subpart CC effective November 8, 2010

3.2.3.2 Employers of contractor and subcontractor construction signalpersons must ensure that those employees meet the qualification requirements of 29CFR1926.1428 (c).

### **3.2.4 Assembly/ Disassembly (A/D) Director**

3.2.4.1 Assembly/ Disassembly (including the dismantling for changing the length of booms) of cranes used in construction must be performed under the control of a person both competent and qualified acting as an Assembly/ Disassembly (A/D) Director effective November 8, 2010.

3.2.4.2 Employers of contractor and subcontractor construction A/D Directors must ensure that these employees meet the qualification requirements of 29CFR1926.1404.

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### **3.2.5 Person-In-Charge (PIC)**

3.2.5.1 Employers of contractor and subcontractor personnel assigned to be person in charge (PIC) for critical lifts must ensure the employee is qualified to the requirements in DOE-STD-1090 Section 2 “Critical Lifts” and the following training and qualifications shall be completed for designated PICs:

- Hoisting and Rigging Supervisor Awareness – 00TRN1009
- Hoisting and Rigging Critical Lift Person-In-Charge 00TRN1016
- Performing Pre-Job Briefs QCPREJOB

3.2.5.2 The responsible manager shall complete and submit Form 433.36, “Hoisting and Rigging Person in Charge (PIC)” to the Subcontractor Technical Representative (STR).

3.2.5.3 The PIC will perform all responsibilities required prior to the critical lift and be present during the entire lifting operation.

### **3.3 Lift Determination**

3.3.1 In addition to requirements in DOE-STD-1090 Section 2 “Critical Lifts” the following requirements shall apply.

3.3.1.1 “Ordinary Lifts” greater than 50 ton or lifts that exceed 75% of the mobile cranes lifting capacity at the radius being used to make the lift shall require an approved lift plan.

3.3.1.2 Crane lifts equal to or exceeding 90% of the mobile cranes lifting capacity at the radius being used to make the lift shall be categorized as “Critical Lifts.”

3.3.1.3 Multiple crane lifts – lifts involving two or more cranes are complex operations requiring considerable skill and planning. It is absolutely essential that a detailed lift plan be developed. A multiple crane lift should be meticulously planned and every eventuality taken into consideration. Multiple Crane Lifts shall be designated as a “Critical Lift.”

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- 3.3.1.4 The contractor will approve all lift plans and critical lift plans before the lift is performed.
- 3.3.2 Lift Plans – a Mobile Crane Lift Plan, Form 433.21 shall be used for all critical lifts. The Mobile Crane Lift Plan may be used for ordinary lifts if desired or requested by the Subcontractor or STR.
- 3.3.3 Rigging from attachments on a forklift truck shall meet the requirements of DOE-STD-1090 Section 9.
  - 3.3.3.1 Attachment and forklift combination shall be approved and rated by the manufacturer.
  - 3.3.3.2 If manufacturer rating and approval is not obtained, then the combination shall be approved in writing by a Registered Professional Engineer.
  - 3.3.3.3 Capacity, operation and maintenance instruction plates, tags, or decals shall be changed or added accordingly.

#### **3.4 Use of Spotters During Forklift Operations**

- 3.4.1 Spotters shall be used for the forklift activities listed below. The requirement can only be waived with the written approval of the Area Project Manager or his designee, when the activity is determined to be low risk.
  - 3.4.1.1 When the route is unpaved and not listed on the snow removal map.
  - 3.4.1.2 When the vision of the forklift operator is in any way impaired by the load being hauled.
  - 3.4.1.3 When adverse weather may cause the travel route to be slick or icy and the route has not been cleared or sanded and walked down by the operator and supervisor/foreman/lead person
  - 3.4.1.4 When it is not during daylight hours
  - 3.4.1.5 When transporting a load a distance greater than 50 feet and when backing up may be required
  - 3.4.1.6 When the activity is "non-routine" and controls have not been demonstrated to be adequate for expected changing conditions or situations (i.e., first time use).

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3.4.1.7 When requested by the forklift operator and/or job supervisor.

### 3.5 Special Conditions

3.5.1 Any facility or area restrictions or requirements such as Technical Safety Report (TSR) specified limits or controls should be incorporated in local procedures and followed to prevent violations.

3.5.2 Wind Precautions: Follow the crane manufacture's instructions for safe operations at specific wind speeds.

3.5.2.1 The operator shall evaluate the lift (size, shape, and weight of the load) when winds are greater than 25 mph to ensure that the operation may safely continue.

3.5.3 Lightning Precautions: Use the following guidance (whichever is most applicable) when performing hoisting and rigging:

3.5.3.1 If you can see lightning (it does not matter if you can hear thunder) STOP WORK AND SEEK SAFE SHELTER IMMEDIATELY. Lightning can strike as far as 10 miles away from the rain area in a thunderstorm. That's about the distance you can hear thunder. When a storm is 10 miles away, it may even be difficult to tell a storm is coming.

3.5.3.2 IF YOU CAN HEAR THUNDER, YOU ARE WITHIN STRIKING DISTANCE. SEEK SAFE SHELTER IMMEDIATELY! The first stroke of lightning is just as deadly as the last. If the sky looks threatening, take shelter before hearing thunder.

3.5.3.3 Use the 30-30 Rule where visibility is good and there is nothing obstructing your view of the thunderstorm. When you see lightning, count the time until you hear thunder. If that time is 30 seconds or less, the thunderstorm is within 6 miles of you and is dangerous. Stop Work and seek shelter immediately. The threat of lightning continues for much longer period than most people realize. Wait at least 30 minutes after the last clap of thunder before leaving shelter. Don't be fooled by sunshine or blue sky!

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### 3.6 ICP Use of Track Hoes for Lifting

- 3.6.1 The following guidelines are for use of a track hoe as a lifting device at ICP controlled facilities:
- 3.6.1.1 A manufacturer supplied load chart, or written permission and use recommendations from the manufacturer must be present on equipment. It shall be inferred with the presence of a load chart, that manufacturer's written permission has been obtained.
  - 3.6.1.2 A manufacturer installed lift point must be on the equipment. In the absence of a lift point, the manufacturer must be consulted with, and must provide written guidance and recommendations for attaching the load.
  - 3.6.1.3 The Pre-operations inspection must be performed (per manufacturer's recommendations).
  - 3.6.1.4 Track hoes may not be used for critical lifts.
  - 3.6.1.5 Obtain the area Hoisting and Rigging SME and area Safety organization approval of operation prior to commencing the lift.

### 3.7 Specific Requirements for Handling Cargo Containers with Forklifts

**NOTE:** *The Project Manager or Project Engineering Manager may approve additional or compensatory requirements for cargo container lifting on a case by case basis, based on an engineering evaluation.*

- 3.7.1 Responsible Manager: ensure that forklift operators are briefed prior to lifting cargo containers.
- 3.7.2 Operator: All cargo containers being lifted by a forklift shall use the container manufacturer's guidance for forklift tine pocket selection.
- 3.7.3 Visually inspect the forklift tine pockets prior to use to ensure that the forklift tine pockets are steel reinforced along the full length of the pocket.
  - 3.7.3.1 Cargo containers without steel reinforced tine pockets may only be lifted by a forklift when the cargo container is empty and the forklift tines extend beyond the outside edge of the cargo container unless otherwise directed by manufacturer's instructions.

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3.7.4 Lift empty cargo containers using a forklift with adequate working load limit and minimum 6 foot long tines.

3.7.5 Lift loaded cargo containers using a forklift with adequate working load limit and forklift tines that extend beyond the outside edge of the cargo container.

#### **4. DEFINITIONS**

Definitions for Companywide Manual 2 procedures are contained in PDD-650, “ICP Hoisting and Rigging Program,” Appendix A.

#### **5. REFERENCES**

##### **5.1 Source Documents**

Code of Federal Regulations Title 10, Energy, Part 851, Worker Safety and Health Programs, (10CFR851)

29CFR1926, subpart CC, Cranes and Derricks in Construction

DOE-STD-1090, “Hoisting and Rigging” (Current Edition)

#### **6. APPENDIXES**

None