



Administrative Procedure

PRC-PRO-SH-40463

Ergonomics

Revision 0, Change 1

Published: 04/20/2012

Effective: 04/20/2012

**Project: CH2MHILL Plateau Remediation Company
Topic: Occupational Safety & Industrial Hygiene**

Administrative Use

Ergonomics

Published Date: 04/20/12

Effective Date: 04/20/12

CHANGE SUMMARY

AJHA: N/A

Periodic Review Due Date: 03/14/2017

HRB Date: N/A

Validation Date: N/A

Rev. 0, Chg. 1 PR#: PRC-51278

USQ Screen Number:

WESF: GCX-8

CSB/ISA: GCX-8

100K: GCX-8

PFP: Excluded per PRC-PRO-NS-062

TP: Excluded per PRC-PRO-NS-062

SWOC: Excluded per PRC-PRO-NS-062

S&M: Excluded per PRC-PRO-NS-062

Description of Change

Rev 0-1: Identified responsibility of an ergonomic assessment to be specifically an IH (or qualified Safety Professional approved by Project Safety Manager) and included tools/forms which could be used during the evaluations.

Rev 0-0: Transferring a Requirements Document (RD-SH-8471) into a Procedure (PRO-SH-40463)

Ergonomics

Published Date: 04/20/12

Effective Date: 04/20/12

TABLE OF CONTENTS

1.0 INTRODUCTION..... 4
 1.1 Purpose..... 4
 1.2 Scope..... 4
 1.3 Applicability..... 4
 1.4 Implementation..... 4
2.0 RESPONSIBILITIES 4
3.0 PROCESS..... 5
4.0 FORMS 7
5.0 RECORD IDENTIFICATION..... 7
6.0 SOURCES 7
 6.1 Requirements..... 7
 6.2 References..... 7
7.0 APPENDIXES 7

Ergonomics**Published Date: 04/20/12****Effective Date: 04/20/12****1.0 INTRODUCTION****1.1 Purpose**

This Level 1 procedure is applicable to CH2M HILL Plateau Remediation Company (CHPRC) Team employees and establishes requirements to ensure that conditions presenting potential ergonomic-related hazards to employees are identified and controlled. The general requirements approach used in this document recognizes the varied work activities associated with each of the CHPRC Projects/Functions. This variety necessitates flexibility in addressing ergonomic-related conditions.

1.2 Scope

CHPRC Projects/Functions performing CHPRC work scope shall make ergonomics a consideration in their overall safety program. In line with Voluntary Protection Program (VPP) and Integrated Safety Management Systems (ISMS) principles, efforts will focus on: Management commitment and leadership, Employee involvement, Hazard identification and analysis, Hazard elimination, reduction or control, Training, and Continuous improvement achieved by sharing of lessons learned.

1.3 Applicability

This procedure is applicable to CHPRC Team employees and subcontractor personnel.

1.4 Implementation

This procedure is effective upon publication.

2.0 RESPONSIBILITIES

All responsibilities associated with this procedure are identified in the process steps.

Ergonomics

Published Date: 04/20/12

Effective Date: 04/20/12

3.0 PROCESS

This section identifies process implemented by this procedure.

Actionee	Step	Action
All Personnel	1.	USE mechanical lifting devices for lifting or moving heavy objects when possible.
Employees	2.	OBTAIN a second person to lift objects that exceed physical capabilities or are greater than 55 pounds (24.95 kgs) without a hazards analysis.
All Personnel	3.	<p>CONDUCT the handling of material-containing drums as follows:</p> <ul style="list-style-type: none"> a. USE mechanical and powered assist devices when possible. b. LIMIT single person unassisted manual lift(s) of a drum to 55 pounds (24.95 kgs) or less. c. LIMIT two-person manual lifts of a drum to 55 pounds (24.95 kgs) or less per person. d. LIMIT single person unassisted manual push (tipping) of a drum in an upright position to 240 pounds (108.86 kgs) or less. e. LIMIT two-person manual push (tipping) of a drum in an upright position to 240 pounds (108.86 kgs) per person. f. LIMIT single person unassisted manual pull (tipping) of a drum in an upright position to 220 pounds (99.79 kgs) or less. g. LIMIT two-person manual pull (tipping) of a drum in an upright position to 220 pounds (99.79 kgs) per person. h. OBTAIN a second person before manually raising a drum from a horizontal position to a vertical position or lowering from an upright to horizontal position due to the awkward body positioning needed to complete the task. i. LIMIT two-Person manual rising from a horizontal position to a vertical position or lowering from an upright to horizontal position of a drum to 220 pounds (99.79 kgs).
<p>NOTE: <i>The above practices assume a good coefficient of friction between the employee's footwear and the walking surface, average male weight and strength, one push, pull lift every 30 minutes. Drum handling activities outside these assumptions require further evaluation with support from Project Safety staff as needed.</i></p>		
Employees	4.	REPORT any discomfort resulting from ergonomic-related sources such as computer workstation use, material handling, or other equipment use to the line management <u>AND</u> SEEK a Site occupational medicine provider evaluation.

Ergonomics

Published Date: 04/20/12

Effective Date: 04/20/12

Actionee	Step	Action
Line Management	5.	EVALUATE work areas and tasks to IDENTIFY those with potential ergonomic-related hazards including repetition, awkward posture, force, vibration, and contact stress. Physical strength and conditioning of the involved personnel will also be considered.
	6.	ENSURE an IH or a Qualified Safety Professional follow PRC-PRO-WKM-079, <i>Job Hazard Analysis (JHA)</i> to document the results of ergonomic assessments for field activities that identify, evaluate, control, and communicate potential hazards relative to discrete work activities/tasks to be performed

NOTE: *The Qualified Safety Professional referred to in the step above shall be approved by a Project Safety & Health Manager.*

7. ESTABLISH an appropriate level of controls.
8. The following tools may be used as guidance for ergonomic assessments.
 - ACGIH 2010 Physical Agents/Ergonomics,
 - Washington State Department of Labor & Industries Ergonomic Evaluation Tools located at <http://www.lni.wa.gov/Safety/Topics/Ergonomics/ServicesResources/Tools/default.asp>,
 - DHHS (NIOSH) Publication No. 2007-131 (April 2007) [Ergonomic Guidelines for Manual Material Handling](http://www.cdc.gov/niosh/docs/2007-131/) (http://www.cdc.gov/niosh/docs/2007-131/)
9. ENSURE an IH or Qualified Safety Professional perform office assessments using *CHPRC Office Ergonomic Evaluation form*, Site Form A-6006-185 to identify, evaluate, control, and communicate potential hazards relative to discrete work activities/tasks to be performed.

NOTE: *The Qualified Safety Professional referred to in the step above shall be approved by a Project Safety & Health Manager.*

10. ESTABLISH an appropriate level of controls.
11. IMPLEMENT measures that prevent or control to the extent possible ergonomic-related hazards specific to the involved work area and activities. SELECT hazard controls based on the following hierarchy:
 - a. Elimination or substitution of the hazards where feasible and appropriate;
 - b. Engineering controls where feasible and appropriate;

Ergonomics

Published Date: 04/20/12

Effective Date: 04/20/12

<i>Actionee</i>	<i>Step</i>	<i>Action</i>
Line Management	c.	Work practices and administrative controls that limit worker exposures; and
	d.	Personal protective equipment.
NOTE: Refer to Appendix A for examples.		
	12.	Periodically ASSESS the overall effectiveness of controls implemented for ergonomic-related hazards using Project/Function developed measures <u>AND</u> MODIFY as necessary for continuous improvement.
Employees	13.	FILL OUT the <i>CHPRC Office Ergonomic Self-Assessment form</i> , Site Form A-6006-145, as a learning tool or when employees want to ENSURE they are using good ergonomics.
Project/Function Safety managers	14.	PROVIDE the OS&IH Leadership team feedback on Lessons Learned, Ergonomic-related assessment summaries, results of ergonomic-related injury/illness investigations, etc. to facilitate continuous improvement.

4.0 FORMS

CHPRC Office Ergonomic Self-Assessment form, Site Form A-6006-145
CHPRC Office Ergonomic Evaluation form, Site Form A-6006-185

5.0 RECORD IDENTIFICATION

None

6.0 SOURCES**6.1 Requirements**

10 CFR 851, *Worker Safety and Health Program*
 29 CFR 1910, *Occupational Safety and Health Standards*

6.2 References

PRC-PRO-WKM-079, *Job Hazard Analysis*

7.0 APPENDIXES

APPENDIX A - MATERIAL HANDLING CONTROLS

Ergonomics

Published Date: 04/20/12

Effective Date: 04/20/12

Appendix A - Material Handling Controls

Control Type	Examples
Engineering Controls	Changing the shape of items or handles to allow easier grasp; using counterbalances to stabilize loads; decreasing the distance, height, or weight of objects; providing mechanical devices such as handcarts, hand trucks, fork trucks, cranes, or hoists; reducing the weight manually handled.
Work Practices	Optimizing the load location between knee and shoulder level whenever possible; distributing a load evenly while keeping it close to the body; providing assistance/help; maintaining good physical condition; not exceeding physical or mental abilities; avoiding twisting, pushing, pulling or sliding objects instead of lifting; avoid fatigue from repeated forceful activities.
Administrative Controls	Establishing limits for handling heavy, bulky, or awkward-shaped objects; providing adequate recovery time.
Personal Protective Equipment	Use personal protective equipment to reduce or eliminate ergonomic hazards such as gloves to enhance grip stability on slippery surfaces, hearing protection in high noise areas and clothing appropriate for the prevailing environmental conditions.