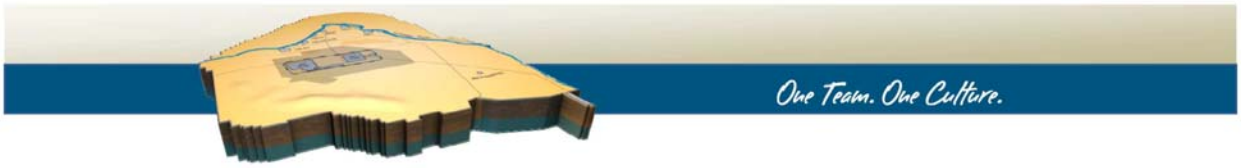

Administrative Procedure

PRC-PRO-SH-40469

Occupational Carcinogen Control

Revision 0, Change 0

Published: 04/04/2012
Effective: 04/04/2012

Project: CH2M HILL Plateau Remediation Company
Topic: Occupational Safety & Industrial Hygiene

Administrative Use

CH2MHILL
Plateau Remediation Company

CHANGE SUMMARY

AJHA: N/A
Periodic Review Due Date: 04/03/2017

HRB Date: N/A
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Rev. 0, Chg. 0 **PR#**: PRC-51236

USQ Screen Number:
TP: Excluded per PRC-PRO-NS-062
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SWOC: 2012-016
S&M: GCX-2
100K: 0055-2012

Description of Change

Rev 0-0: Converting an existing PRC-RD-SH-10994 into a procedure.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

The purpose of this procedure is to ensure compliance with the regulatory and procedural requirements for occupational carcinogens. Because these requirements are documented in multiple procedures, this procedure uses the *CHPRC Carcinogen Control Program Documentation Form* (A-6004-685) to document compliance with the requirements.

1.2 Scope

These requirements are applicable to CH2M HILL Plateau Remediation Company (CHPRC) Team employees/facilities/operations that purchase or use occupational carcinogens.

For the purposes of this procedure, an "occupational carcinogen" is defined as any chemical used in the workplace which contains a concentration of 0.1% or more of a known or potential carcinogen, as recognized by one or more of the following agencies:

- National Toxicology Program (NTP)
  - Known human carcinogens
  - Reasonably anticipated to be human carcinogens
- International Agency for Research on Cancer (IARC)
  - Group 1
  - Group 2A
  - Group 2B
- American Conference of Governmental Industrial Hygienists (ACGIH)
  - Group A1
  - Group A2
- Occupational Safety and Health Administration (OSHA).
  - Regulated by 29 CFR 1910.1003
  - Regulated by 29 CFR 1910.1017 through 1910.1052
  - Regulated by 29 CFR 1926. 1117 through 1926.1152

These definitions are consistent with the definitions of "carcinogen" contained in PRC-PRO-SH-40410, *Hazard Communication Program*.

Consumer products containing non-OSHA-regulated occupational carcinogens used in a manner similar to that of normal consumer use and resulting in a duration and frequency of exposure similar to that which consumers experience are exempt from this procedure. However, consumer products containing "OSHA-regulated carcinogens" and/or "OSHA-specific carcinogens," are *not* exempt, unless the applicable OSHA standard specifically permits such an exemption.

For the purposes of this procedure, "OSHA-regulated carcinogens" are those carcinogens regulated by 29 CFR 1910.1003. "OSHA-specific carcinogens" are those that have substance-specific regulations in 29 CFR 1910.1017 through 1910.1052 and 29 CFR 1926.1117 through 1926.1152. See Appendix A for lists.

Occupational exposure to asbestos is outside the scope of this procedure (see PRC-RD-SH-15097, *Asbestos Control - Construction Industry*, and PRC-RD-SH-15245, *Asbestos Control - General Industry*). Occupational exposure to lead is outside the scope of this procedure (see PRC-RD-SH-12389, *Occupational Lead Exposure Control.)*

Control of exposure to ionizing radiation is also outside the scope of this procedure and is governed by applicable radiation protection requirements. Occupational exposure to beryllium reagents and/or beryllium-containing chemicals/chemical products is covered by this procedure. However, work involving beryllium contamination is outside the scope of this procedure and is covered by DOE-0342, *Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP)*.

This procedure applies to "chemicals" as defined in PRC-PRO-SH-10468, *Chemical Management* and does not apply to wastes.

1.3 Applicability

This procedure applies to all CHPRC team members.

1.4 Implementation

This procedure is effective on the date published.

2.0 RESPONSIBILITIES

2.1 Occupational Safety & Industrial Hygiene (OS&IH) Professionals

OS&IH Professionals shall:

- Complete *Carcinogen Control Program Documentation Form* (Site Form A-6004-685) upon request of line management.
- Consult the applicable OSHA section and ensure that any additional provisions of the regulation not addressed by this procedure are identified, including those that may warrant applicability of the OSHA standards(s) to chemical products containing less than 0.1% of the regulated/specific carcinogen.
- Communicate applicable requirements to line management prior to acquisition.

2.2 Line Management

Line management shall:

- Ensure that Site Form A-6004-685 is completed for each occupational carcinogen on the current chemical inventory and retained/maintained by the facility Occupational Safety & Industrial Hygiene (OS&IH) professional and/or the facility OS&IH manager.
- Solicit and utilize input from the project/facility Occupational Safety & Industrial Hygiene (OS&IH) professional to fulfill all additional requirements in this section.
- Ensure that appropriate non-carcinogenic substitutes are evaluated for carcinogen products proposed for acquisition and that the evaluation results are documented on Site Form A-6004-685.

3.0 PROCESS

Prior to acquiring a chemical product containing a carcinogen for a new location or a new use, a *Carcinogen Control Program Documentation Form* must be completed.

All boxes (excluding check boxes) must be filled. If no data is available, list "None" in the box. If the box isn't applicable, list "N/A".

3.1 Chemical Management Review

The Chemical Management section of the form captures information that supports chemical acquisition as documented in PRC-PRO-SH-10468, *Chemical Management Process* as well as the hazard identification/determination requirements contained in PRC-PRO-SH-40410, *Hazard Communication*.

Actionee	*Step*	*Action*
OS&IH Professional	1.	LIST the name of the project/facility in box #1.
	2.	LIST the product name in box #2 and the Hanford MSDS # in box #3. The product name listed in box #2 should exactly match the name on the MSDS.
	3.	LIST the carcinogenic component(s) and estimated percentage quantity in box #4 and the CAS number(s) of the carcinogenic component(s) in box #4.
	4.	LIST the carcinogen designation in box #6. LIST all applicable designations if the chemical has listings from multiple organizations. Include an identifier such as the chemical name or CAS number if the product contains multiple carcinogenic components.
	5.	CHECK whether practical substitutes are available in box #7. IF a substitute is available, THEN PROVIDE an explanation why the substitute won't be used.
	6.	LIST the location where the product will be used in box #8. In most cases the location will consist of a building and room number. It is acceptable, however, to have a larger location listed so long as the description of product use is the same, the potential for exposure is similar, and all potentially exposed employee groups are identified.

NOTE: *For low hazard products that contain a carcinogen (i.e. printer toner cartridges that contain carbon black) a single Carcinogen Control Program Documentation Form for the project is acceptable.*

Actionee	Step	Action
OS&IH Professional	7.	LIST the total quantity normally maintained at the location in box #9. This quantity should be the same as what is listed in CITS. CONTACT the Facility Chemical Coordinator if assistance is needed in determining the total quantity.
	8.	LIST the description of the product use in box #10.

3.2 Exposure Assessment Review

The Exposure Assessment section of the form captures information that supports the requirements of PRC-PRO-SH-17916, *Industrial Hygiene Baseline Hazard Assessment*.

Actionee	Step	Action
OS&IH Professional		CHECK whether one or more of the carcinogenic components is listed in 29 CFR 1910.1003 in box #11. CHECK whether one or more of the carcinogenic components has a chemical specific standard in box #12.

NOTE: *The list of carcinogens that have chemical specific standards is in Appendix A.*

9. PROVIDE a qualitative description of the exposure potential to the carcinogen(s) in box #13. The description should include:
   - Frequency of exposure
   - Peak exposure
   - Normal exposure
   - Number of people normally exposed during normal usage
   - Exposure during upset conditions
   - Number of people potentially exposed during upset conditions
   - Likelihood of upset conditions occurring

NOTE: *The information provided regarding to exposure potential may be preliminary in nature since it must be determined prior to chemical acquisition.*

10. PROVIDE a summary of exposure monitoring results in box #14, including:
    - Data from use of the product for the same use
    - Data from use of the product for other uses
    - Data from use of other products with similar components

11. LIST any chemical specific regulatory requirements that aren't contained in CHPRC procedures. Examples include:
    - Creation of a regulated area
    - Chemical specific training
    - Hygiene facilities
    - Housekeeping
    - Medical monitoring

3.3 Hazard Communication & Medical Surveillance Review

The Hazard Communication & Medical Surveillance Review section of the form captures information that supports the employee training requirements contained in PRC-PRO-SH-40410 as well as the Employee Job Task Analysis (EJTA) revision requirements of PRC-RD-SH-11058, *Occupational Medical Qualification and Monitoring*.

Actionee	*Step*	*Action*
OS&IH Professional	1.	DETERMINE whether all potentially exposed employees have been trained in the hazards of the product in accordance with PRC-PRO-SH-40410.
	2.	MARK whether hazard training has been completed in box #16. PROVIDE an explanation if training hasn't been completed or isn't applicable.

NOTE:
- *Since this form is required to be completed prior to chemical acquisition, the most common explanation will be a description of the employee groups that still require training and when the training will be completed.*
- *An example of when training wouldn't be applicable would be for low hazard products such as printer toner cartridges that contain carbon black.*

	3.	DETERMINE whether the EJTA's for all potentially exposed employees have been updated to identify their potential exposure to the carcinogen(s).
	4.	MARK whether the EJTA's has been updated in box #17. PROVIDE an explanation if updates haven't been completed or aren't applicable.

NOTE:
- *Since this form is required to be completed prior to chemical acquisition, the most common explanation will be a description of the employee groups whose EJTA's still require updating and when the updates will be completed.*
- *An example of when updates to the EJTA's wouldn't be applicable would be for low hazard products such as printer toner cartridges that contain carbon black.*

3.4 Location of Related Procedures

The Location of Related Procedures section of the form captures information that supports exposure assessment requirements, as documented in PRC-PRO-SH-17916, as well as, the work planning requirements contained in PRC-PRO-WKM-12115, *Work Management*. While the absence of one or more of the referenced documents doesn't preclude the acquisition of the product, the lack of one or more of the documents suggests that additional work planning is required prior to the use of the chemical.

Actionee	*Step*	*Action*
OS&IH Professional	1.	LIST the applicable Industrial Hygiene Baseline Hazard Assessments (IHBHA's) for the specific product and usage in box #18.

NOTE: *Inclusion of the product in a IHBHA isn't always required. Refer to Industrial Hygiene Baseline Hazard Assessments for specific requirements.*

2. LIST the applicable safe use procedure in box #19. This may be a work instruction, maintenance procedure, or other technical work document.

3. CONTACT the appropriate Waste Management Representative to identify the disposal pathway for the product. LIST the applicable disposal procedure in box #20.

4. CONTACT the appropriate Emergency Preparedness representative to identify the applicable emergency release procedure. LIST the applicable emergency release procedure in box #21.

3.5 Completion of the Carcinogen Control Program Documentation Form

Actionee	*Step*	*Action*
OS&IH Professional	1.	LIST the name of the OS&IH professional who completed the review as well as the review date in boxes #22 and #23.
	2.	PROVIDE non-record copies of the form to the requestor of the product as well as the Facility Chemical Coordinator.
	3.	FILE the record copy of the form in the appropriate location.

4.0 FORMS

Site Form A-6004-685, *CHPRC Carcinogen Control Program Documentation Form*

5.0 RECORD IDENTIFICATION

All records are required to be managed in accordance with PRC-PRO-IRM-10588, *Records Management Processes*.

Records Capture Table

Name of Record	Submittal Responsibility	Retention Responsibility
Carcinogen Control Program Documentation Form (A-6004-685)	OS&IH Professional	Facility OS&IH and/or Project OS&IH manager

6.0 SOURCES

6.1 Requirements

10 CFR 851, *Worker Safety and Health Program*
29 CFR 1910, Subpart Z, *Toxic and Hazardous Substances* (various sections --see Appendix A)
29 CFR 1910.1200, *Hazard Communication*
29 CFR 1926, Subpart D, *Occupational Health and Environmental Control* (various sections -- see Appendix A)
29 CFR 1926, Subpart Z, *Toxic and Hazardous Substances* (various sections -- see Appendix A)
PRC-MP-SH-32219, 10 CFR 851 *CHPRC Worker Safety and Health Program Description*

6.2 References

DOE-0342, *Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP)*
PRC-MP-SH-40015, *Chemical Management Plan*
PRC-PRO-IRM-10588, *Records Management Processes*
PRC-PRO-SH-10468, *Chemical Management Process*
PRC-PRO-SH-120, *Respiratory Protection Program*
PRC-PRO-SH-17916, *Industrial Hygiene Baseline Hazard Assessment*
PRC-PRO-SH-40410, *Hazard Communication*
PRC-PRO-WKM-12115, *Work Management*
PRC-RD-SH-11058, *Occupational Medical Qualification and Monitoring*
PRC-RD-SH-15097, *Asbestos Control - Construction Industry*
PRC-RD-SH-15245, *Asbestos Control - General Industry*

7.0 APPENDIXES

APPENDIX A -“OSHA-REGULATED CARCINOGENS” AND “OSHA-SPECIFIC CARCINOGENS” LISTS

Appendix A - OSHA Carcinogens Lists

29 CFR 1910.1003 – OSHA Regulated Carcinogens

4-Nitrobiphenyl
alpha-Naphthylamine
Methyl Chloromethyl Ether
3,3'-Dichlorobenzidine, Salts
bis-Chloromethyl Ether
beta-Naphthylamine
Benzidine
4-Aminodiphenyl
Ethyleneimine
beta-Propriolactone
2-Acetylaminofluorene
4-Dimethylaminoazobenzene
N-Nitrosodimethylamine

OSHA-Specific Carcinogens

29 CFR 1910.1017 / 29 CFR 1926.1117 ..... Vinyl Chloride
29 CFR 1910.1018 / 29 CFR 1926.1118 ..... Arsenic
29 CFR 1910.1026/ 29CFR 1926.1126 ..... Chromium (VI)
29 CFR 1910.1027 / 29 CFR 1926.1127 ..... Cadmium
29 CFR 1910.1028 / 29 CFR 1926.1128 ..... Benzene
29 CFR 1910.1044 / 29 CFR 1926.1144 ..... 1,2-Dibromo-3-Chloropropane
29 CFR 1910.1045 / 29 CFR 1926.1145 ..... Acrylonitrile
29 CFR 1910.1047 / 29 CFR 1926.1147 ..... Ethylene Oxide
29 CFR 1910.1048 / 29 CFR 1926.1148 ..... Formaldehyde
29 CFR 1910.1050 / 29 CFR 1926.60 ..... Methylenedianiline
29 CFR 1910.1051..... 1,3-Butadiene
29 CFR 1910.1052 / 29 CFR 1926.1152 ..... Methylene Chloride