



LAWRENCE
LIVERMORE
NATIONAL
LABORATORY

LLNL Chronic Beryllium Disease Prevention Program 10 CFR 850 Requirements Flowdown

S. Lee

January 13, 2012

Disclaimer

This document was prepared as an account of work sponsored by an agency of the United States government. Neither the United States government nor Lawrence Livermore National Security, LLC, nor any of their employees makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States government or Lawrence Livermore National Security, LLC. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States government or Lawrence Livermore National Security, LLC, and shall not be used for advertising or product endorsement purposes.

This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

RULE		10 CFR 850										
		PROGRAM PLAN										
LLNL Beryllium Safety Program Elements	IMPLEMENTATION	Work Line		Worker Safety and Health FA - Industrial Hygiene			Occupational Medical Program		Emergencies	Waste Management	Performance Feedback	Training
		General Work Control	Be-Specific Work Control	Industrial Hygiene Practices	Control Specification	Analytical Support to IH	Medical Surveillance Program	Medical Restrictions/Removal				
	Institutional Procedures	ISMS Program Description [DES-0541] Doc. 2.1: General LLNL Worker ES&H Responsibilities Doc. 2.2: LLNL Institution-Wide Work Planning and Control Process Doc. 2.5: Managing Subcontracted Work at LLNL Doc. 21.5: Requirements for Transfer of Equipment and Property for Repair, Reuse, Maintenance, Storage, Excess, or Scrap	Doc. 14.4: Working Safely with Beryllium	Worker Safety and Health Program	Specific IH Elements: Doc. 11.1: Personnel Protective Equipment Doc. 14.4: Working Safely with Beryllium		Doc. 10.1: Occupational Medical Program	Human Resource: Personnel Policies and Procedures Manual Doc. 10.1: Occupational Medical Program	Doc. 22.1: Emergency Preparedness and Response	Doc. 36.1: Hazardous, Radioactive, and Biological Waste Management Requirements	DES 0048: LLNL Assessment Program PRO 0049: Institutional Assessment Plan	Doc. 40.1: LLNL Training Program Manual
	Organizational Procedures	F&I Work Control Manual Superblock Work Control Manual NIF&PS Principal Directorate Integrated Safety Management System - NIF&PS Directorate Safety Manual - NIF&PS Directorate Subcontractor Safety Manual	Beryllium Addendum: Subcontractor Language Controlled Items Service List, defines procurement of beryllium-related: - Services (i.e., laundry) - Materials (e.g., beryllium alloys or compounds) NIF&PS Radiological and Beryllium Control Manual	LLNL Industrial Hygiene Surveillance Program, UCRL-AM-228154-Rev 1 Industrial Hygiene Policies and Information Manuals. Specific documents include: PIM 84: Equipment Transfer and Release PIM 91: Industrial Hygiene Surface Sampling ("Swipe Sampling")	Beryllium Program Elements: Baseline Be Inventory and Facility/Area Characterization Plan Industrial Hygiene documents specific to beryllium program include: - PIM 89: Beryllium Safety Program Requirements - Discipline Action Plan 22: Beryllium Program Surveillance Requirements	Industrial Hygiene Lab: AIHA Laboratory Accreditation Onsite Laboratory: Hazards Control Analytical Lab QA/QC Manual Offsite Laboratory: See ALAB procurement specifications.	Health Services Department: - Beryllium Medical Surveillance Program - Beryllium Medical Test/Exam Processing Procedure - Beryllium Clinical Reference Guide		LLNL Emergency Plan (LLNL-AM-466972)	RHWM Procedures: - WPT 108: Waste Transfers - DIS 110: Performing lab pack operations - WIC 153: Sample Management	TBD	Regulatory Driven Curriculum: HS4258W and -RW-Be Awareness HS4256 and -RW-Be Worker Training Additional courses: HS0001: New Staff Safety Orientation HS0016-W: Site Access Safety and Security Orientation HS0100-W: ES&H Annual Briefing HS4252: Providing Support and Work Accommodations for Employees with Beryllium Work Restrictions HS4956: Industrial Hygiene Surface Swipe Sampling
Records/Deliverables	IWS and IWS/SP OSP Institution-Wide Work Control Permit - WCI Work Permit - NIF Work Permit	IWS and IWS/SP OSP Release Packages Be Checklist Signage/Labels HACs	Exposure Monitoring Memos General correspondence Analytical results (STAR/Spiramid data)	Beryllium Disease Prevention Program website (LLNL Be Areas/Activities Inventory) Hazard Assessments: Facility or Task-specific (Activity) Individual facility characterization summaries/reports. Includes references to: -DAP Results -Field survey form -STAR/Spiramid data	ALIMS STAR/Spiramid	OAASIS Case File (eCAR) MASS (Be Medical Surveillance Rosters) Be Registry Report Medical outcomes analysis reports	Work Accommodations Memo HSIS (Medical Restrictions)		WDR (Waste Disposal Req) Container labels Data supporting waste characterization: - ALIMS - STAR/Spiramid	Internal Independent Assessment reports External Program Reviews Information sources for performance feedback: - Lessons Learned - ORPS - Regulatory Alerts - Medical Outcomes/Workplace Monitoring Analysis Employee comments	L-TRAIN	