NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: F. Zafonte, L. Stiegler, Kim Hayes	**Point Value → Parameter ↓**	**1**	**2**	**3**	**4**	**5**
Job Title: **Use of Unsealed Radioactive Materials** **Job Number or Job Identifier: LS-JRA-0023**	**Frequency (B)**	**≤once/year**	**≤once/month**	**≤once/week**	**≤once/shift**	**>once/shift**
Job Description: Use of unsealed radioactive material with the potential for spread of contamination, including: - Dispersibles - Unsealed sources - Accountable Nuclear Materials - Activated materials	**Severity (C)**	Rad stop work, RAR	ORPS threshold exceeded	NTS report filed with DOE	DOE enforcement action levied against BNL	DOE mandated rad ops stand down
Training and Procedure List (Optional):	**Likelihood (D)**	**Extremely Unlikely** <<1x/20yrs	**Unlikely** 1x/10-20yrs	**Possible** >1x/10-20yrs	**Probable** 1x/yr	**Multiple** >1x/yr
Approved by: **A. Ackerman** Date: **8/05/10** Rev. #: **3** **Revision Log**						
Stressors (if applicable, please list all):		**Reason for Revision (if applicable):**			**Comments:**	

		Before Controls							**After Initial Controls**						**After Additional Controls**					
Job Step / Task	**Hazard**	**Stressors Y/N**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Initial Controls**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**Control(s) Added to Reduce Risk**	**# of People A**	**Frequency B**	**Severity C**	**Likelihood D**	**Risk* AxBxCxD**	**% Risk Reduction**

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Using dispersible radioactive materials	Radiation exposure	N	1	2	3	5	30	Training, dosimetry as required, postings, RWPs & Safety Approval Forms as needed, inventory, RADCON manual, RCT monitoring & assistance as needed, proper labeling & storage	1	2	1	4	8							
	Radioactive contamination from dispersed materials	N	1	2	3	3	18	Area checks and frisks, Surface wipes as needed proper clothing and coverings (PPE), RADCON manual, RWP and RCT assistance as needed, proper labeling & storage	1	2	1	2	4							
Using unsealed sources, eg. foils, electrodeposited materials, sources with layers of containment such as Kapton tape	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as required, postings, RWPs & Safety Approval Forms as needed, inventory, RADCON manual, RCT assistance as needed, proper labeling & storage	1	2	1	4	8							
	Radioactive contamination from a compromised source	N	1	2	2	3	12	Area checks and frisks, Surface wipes as needed, PPE as needed, RADCON manual,RWP and RCT assistance as needed, proper labeling & storage	1	2	1	2	4							

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Transporting radioactive materials to another building on site	See **LS-JRA-0039** for Vehicle Use See **LS-JRA-0022** for Transporting Chemicals and Radioactive Materials																			
Working with Accountable Nuclear Materials	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as required, , postings, RWPs & Safety Approval Forms as needed, review & inventory by I&SM, Material Balance Area defined & custodian appointed, , RADCON manual, RCT monitoring & assistance as needed proper storage & labeling	1	2	1	4	8							
	Radiation contamination from source	N	1	2	3	3	12	Training, review & inventory by I&SM, Material Balance Area defined & custodian appointed, Area checks and frisks, Surface wipes as needed, RADCON manual,RWP and RCT assistance as needed proper storage & labeling, PPE as needed	1	2	1	2	4							

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Working with activated materials, i.e. accelerator metal parts activated by the electron beam	Radiation exposure	N	1	2	2	5	20	Training, dosimetry as required, activation checks, RWP as needed, PPE as needed, work planning, proper labeling if stored	1	2	1	4	8							
	Radiation contamination from source	N	1	2	2	3	12	Training, radiation surveys, RWP as needed, PPE as needed, work planning, proper labeling if stored	1	2	1	2	4							

Further Description of Controls Added to Reduce Risk:

***Risk:**	**0 to 20 Negligible**	**21 to 40 Acceptable**	**41 to 60 Moderate**	**61 to 80 Substantial**	**81 or greater Intolerable**