

BNL RADIOLOGICAL WORK PERMIT (RWP)

RWP # 08-03

RWP Type: Job Specific General Start Date 08/01/08 End Date 07/31/09 Revised End Date _____

Shaded area 1 through 6 to be completed by requester / initiator

1. Initiator: **Ray Karol** 2. Life #: **15065** 3. Phone #: **5272** 4. Bldg.: **911A**

5. Job Location: **Posted High Radiation Primary Beam Areas in Building 912 (Switchyard, Target Caves) and High Radiation Storage Areas.**

6. Job Description: **Routine Entry for inspections, Data Collection, Tours, and Routine Work Activities Performed by a System Specialist**

7. Radiological Concerns: (e.g. Primary radionuclides, high dose rate, airborne) Exposure rates > 1 R/hr and Localized Contamination Areas May Exist Following Operations with High Intensity Protons Near Target Stations.

8. Conditions that will void RWP: This RWP is not for work in Radiation Fields greater than 1 R hr⁻¹, in posted Contamination Areas, Work with the potential to disperse or generate radioactive contamination such as Cutting, Grinding and Drilling, Handling or exposure to tritiated water, or unapproved alterations of radiation barriers,

<p>9. Job Review:</p> <p><input checked="" type="checkbox"/> Pre-Job Review</p> <p><input type="checkbox"/> ALARA Review</p> <p><input type="checkbox"/> Pre-Job Brief</p> <p><input type="checkbox"/> Post-Job Review</p> <p><input type="checkbox"/> Other</p> <p>Work Control Coordinator to consult with Building Manager and/or Supervisor when assigning tasks. All Work performed in Radiation Fields > 100 mRem/hr, notify Health Physics X-4660.</p>	<p>10. Estimated Dose: (mrem)</p> <p>Highest Individual <u>20 mRem</u></p> <p><input type="checkbox"/> Per-Job</p> <p><input checked="" type="checkbox"/> Per Entry</p> <p>Collective <u>200 mRem</u></p> <p><input checked="" type="checkbox"/> Per Job</p> <p><input type="checkbox"/> Per Entry</p>	<p>11. Attachments:</p> <p><input checked="" type="checkbox"/> Radiological Survey Form (Posted at entrance to area)</p> <p><input type="checkbox"/> Technical Work Document TWD# _____</p> <p><input checked="" type="checkbox"/> Other: Pre Job Review C-A OPM-ATT 9.5.11 See SI (1)</p> <p><input type="checkbox"/> Not Applicable</p>	<p>12. Training Requirements:</p> <p><input checked="" type="checkbox"/> Radiation Worker (RWT 002)</p> <p><input type="checkbox"/> RBA Practical (RWT 002A)X</p> <p><input type="checkbox"/> Contamination (RWT 300 / 300A)</p> <p><input type="checkbox"/> Benchtop/dispersibles (RWT 500)</p> <p><input checked="" type="checkbox"/> Other Applicable C-A Facility Specific Training, (C-A Access, Radiobiology or Collider User) in addition to Radiation Worker I See SI(2)</p> <p><input type="checkbox"/> Not Applicable</p>
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<p>13. Work Controls:</p> <p><input checked="" type="checkbox"/> FS Coverage See SI (3)</p> <p><input type="checkbox"/> Intermittent</p> <p><input type="checkbox"/> Continuous</p> <p><input type="checkbox"/> Pre-Job Briefing</p> <p><input checked="" type="checkbox"/> Limiting Conditions See SI (3)</p> <p><input type="checkbox"/> Hold Points</p> <p><input type="checkbox"/> Air Monitoring</p> <p><input type="checkbox"/> Shielding</p> <p><input checked="" type="checkbox"/> Other See SI (5)</p>	<p>14. Protective Equipment:</p> <p><input type="checkbox"/> Gloves</p> <p><input type="checkbox"/> Shoe Covers</p> <p><input type="checkbox"/> Booties</p> <p><input type="checkbox"/> Coveralls</p> <p><input type="checkbox"/> Respirator</p> <p><input type="checkbox"/> Head Cover</p> <p><input checked="" type="checkbox"/> Not Applicable</p>	<p>15. Dosimetry:</p> <p><input checked="" type="checkbox"/> TLD</p> <p><input checked="" type="checkbox"/> Self Reading Dosimeter</p> <p><input checked="" type="checkbox"/> Alarming Dosimeter</p> <p><input type="checkbox"/> Finger Dosimetry</p> <p><input type="checkbox"/> Not Applicable</p> <p>(Dose Alarm Setpoint = 18 mrem)</p>	<p>16. Check Out Instructions:</p> <p><input type="checkbox"/> Bioassay</p> <p><input type="checkbox"/> Whole Body Count</p> <p><input type="checkbox"/> Urine Sample</p> <p><input type="checkbox"/> Pre-Job</p> <p><input type="checkbox"/> Post-Job</p> <p><input type="checkbox"/> Contamination Check</p> <p><input type="checkbox"/> Personnel Frisk</p> <p><input type="checkbox"/> PCM</p> <p><input type="checkbox"/> Equipment Tools</p> <p><input type="checkbox"/> Post Job Survey</p> <p><input type="checkbox"/> Not Applicable</p> <p><input checked="" type="checkbox"/> Activation Check See SI (6)</p>
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17. **Expected Radiological Conditions**

<p>Radiation <input type="checkbox"/> N/A</p> <p>General Area: <u>1 to 900 mrem/h, See posted survey</u></p> <p>On Contact: <u>See posted survey</u></p> <p>Gamma <input checked="" type="checkbox"/> Neutron <input type="checkbox"/></p> <p>Beta <input type="checkbox"/> Check all that apply</p>	<p>Surface Contamination <input checked="" type="checkbox"/> N/A</p> <p>Removable: _____ dpm/100cm² Alpha</p> <p>Removable: _____ dpm/100cm² Beta/Gamma</p> <p>Removable: _____ dpm/100cm² Tritium</p> <p>Total: _____ dpm/100cm² Alpha</p> <p>Total: _____ dpm/100cm² Beta/Gamma</p>	<p>Airborne Radioactivity <input checked="" type="checkbox"/> N/A</p> <p>Nuclide _____ Concentration _____</p>
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18. **Special Instructions (Hold Points, Limiting Conditions, Special Dose Limits, etc.) (SI): (Including Facility Specific Training)**

- (1) Follow Guidance in OPM 9.5.11, C-A Procedure for Entry to Posted High Radiation Areas.
- (2) Visitors may be escorted by a trained and authorized C-A escort in accordance with C-A OPM 2.16.
- (3) When work is to be performed in Radiation Fields > 100mR hr⁻¹, notify health Physics prior to entry. Only one notification per job is required. No single entry shall result in more than 20 mR per person. Multiple entries for one job shall be planned so that they do not result in greater than 20 mR per person or a Job-Specific RWP is required
- (4) This RWP is not for work in Radiation Fields > 1000mR hr⁻¹, in posted Contamination Areas, Work with the potential to disperse or generate radioactive contamination such as Cutting, Grinding and Drilling, Handling or exposure to tritiated water, or unapproved alterations of radiation barriers,
- (5) Review appropriate radiological survey prior to commencing work.
- (6) Many locations require activation checks, See attachment 1 of this RWP for Summary of "Activation Check" Rules. Follow all postings

19. Approvals	Signatures	Life Number	Date
Initiator	<i>Ray Karol</i>	15065	7/18/08
Facility Support Representative	<i>Paul Singh</i>	19773	7/18/08
Department (As Required)	<i>Edward T Leonard</i>	14255	7-21-08

SUMMARY OF “ACTIVATION CHECK” RULES

Items that **REQUIRE** an RCT survey before removal from an area posted “activation check” are:

- ✓ Floor sweepings
- ✓ Fixed structures
- ✓ Installed components
- ✓ Shielding
- ✓ Items of unknown origin

Items that **DO NOT REQUIRE** an RCT survey before removal from the area posted “activation check” are:

- ✓ Items under your control at all times after removal from the posted area that are being moved to a low-background area for radiation monitoring
- ✓ Items that are labeled, under your control at all times and that are moving from the posted area to a Radiation Area, High Radiation Area, RMA or Controlled Area
- ✓ Items that you carried into the area that you know not to be activated