

**WORCESTER POLYTECHNIC INSTITUTE
HEALTH PHYSICS PROCEDURE HP-20**

RSO REACTOR FACILITY INSPECTION

1. PURPOSE:

To ensure that all applicable regulations and procedures pertaining to Radiological Controls are not violated.

2. FREQUENCY:

This procedure shall be performed monthly by the Radiation Safety Officer or Assistant Radiation Safety Officer.

3. MATERIALS, TOOLS, AND EQUIPMENT:

- 3.1. HPF-14 RSO Reactor Facility Inspection Form.
<http://www.wpi.edu/Admin/Safety/RSO/Forms/>
- 3.2. RHSC Report Form 6 Reactor Facility Inspection.
- 3.3. G-M tube survey meter (preferably a pancake probe).

4. PRECAUTIONS:

- 4.1. Ensure that all appropriate health physics practices are followed throughout the survey.
- 4.2. Perform an operability check on all instrumentation used. Ensure that the instrumentation has been calibrated (in accordance with 105CMR120.225(B) and 10CFR20.1501(b)) at intervals not to exceed 12 months (CMR not CFR).

5. INSTRUCTIONS:

- 5.1. Ensure that all applicable regulations and procedures pertaining to Radiological Controls are not violated:
 - 5.1.1. All film badges are stored in the proper location to eliminate the possibility of false dose readings.
 - 5.1.2. All radioisotopes are stored in the proper storage areas in accordance with 105CMR120.235 and 10CFR20.1801.

- 5.1.3. All storage areas are clearly and properly labeled.
- 5.1.4. All radioisotopes are handled in accordance with RHSC Laboratory Safety Rules.
- 5.1.5. All required forms are posted and kept up to date.
- 5.1.6. All signs pertaining to radiation areas and radioactive materials are in conspicuous places and in good condition. (105CMR120.241 and 242; 10CFR20.1901 and 1902.)
- 5.1.7. The following documents are kept available, to the general public, in the Reactor Facility Office (required by 10CFR19 and 105CMR750):
 - 5.1.7.1. NRC Form 3 (10CFR19.11(c)).
 - 5.1.7.2. DPH Form MRCP 120.750-1 (105CMR120.752(C)).
 - 5.1.7.3. U.S. Nuclear Regulatory Commission Rules and Regulations (10CFR19.11(a)).
 - 5.1.7.4. Regulations of 105CMR120.750 and 105CMR120.200 (105CMR120.752(A)(1)).
 - 5.1.7.5. Required Reactor and Radiation Licenses (10CFR19.11(a)(2) and 105CMR120.752(A)(2)).
 - 5.1.7.6. Reactor Technical Specifications and Operating Procedures (10CFR19.11(a)(2) and 10CFR19.11(a)(3)).
 - 5.1.7.7. RHSC Regulations and Procedures (105CMR120.752(A)(2) and 105CMR120.752(A)(3)).
 - 5.1.7.8. If posting of the RHSC Regulations and Procedures, CMR/CFR Regulations, or Licenses is not practicable, the licensee may post a notice describing the above documents, and stating where they may be examined (105CMR120.752(B) and 10CFR19.11(b)).
- 5.1.8. The proper radiation monitoring equipment is available for reactor operators, faculty, staff, and student use, and is properly calibrated.
- 5.1.9. The purification demineralizer is surveyed to detect any activity due to an undetected fuel element failure.

- 5.2. Reports: Complete form HPF-14 monthly, and note any significant findings in the comments section. Submit RHSC Report Form 6 and three monthly HPF-14's to the RHSC quarterly.
6. RESTORATION: None
7. REFERENCES:
 - 7.1. Radiation, Health, and Safeguards Committee Radiation Regulations.
 - 7.2. 10CFR19.11. Posting of Notices to Workers.
 - 7.3. 105CMR120.750. Notices, Instructions, and Reports to Workers; Inspections.
 - 7.4. 10CFR20.1501 and 105CMR120.225. Surveys and Monitoring, General.
 - 7.5. 10CFR20.1801 Security of Stored Material.
 - 7.6. 105CMR120.235 Security and Control of Licensed or Registered Sources of Radiation.
 - 7.7. 10CFR20.1901 and 105CMR120.241. Caution Signs.
 - 7.8. 10CFR20.1902 and 105CMR120.242. Posting requirements.