



5.U-2.1

Procedure for Alarm Response at the Backscattering Spectrometer

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SNS-OPM 5.U-2.1

Procedure for Alarm Response at the Backscattering Spectrometer

1. Purpose

1.1 This procedure provides required responses to alarms that can be encountered during operation at the Backscattering Spectrometer. There are three types of alarms: radiation, equipment failure and emergency. Each is described below followed by response procedures.

2. Responsibilities

2.1 The **Backscattering Spectrometer Lead Instrument Scientist** or designee is responsible for ensuring that personnel performing work in the area of the Backscattering Spectrometer read, understand, and follow this procedure.

3. Prerequisites

3.1 SNS staff and users must read [SNS-OPM 3.A-1.5.2.2](#), Procedure for Operation of the Backscattering Spectrometer User IPPS Panel.

4. Precautions

4.1 Always listen for and obey the Public Address (PA) system and all emergency personnel.

4.2 If you see a situation that concerns you, you are encouraged and responsible to promptly contact a member of the instrument team (the Lead Instrument Scientist, designee, or the Instrument Hall Coordinator) or the appropriate staff member listed at the emergency station by the exit at the instrument building.

5. Procedure

Alarm Indication	Description
<p data-bbox="186 1423 526 1451">Flashing magenta beacon</p> 	<p data-bbox="548 1423 1427 1598">The beacon flashes while the radiation levels at the radiation detector at the boundary of the Restricted Sample Area exceed 5 mrad/hr. If they exceed 20 mrad/hr, the secondary shutter will automatically close and an uncertified audible alarm may also sound to draw attention.</p>

<p>Chirping from the Evacuated Final Flight-path Vacuum Control Panel</p> 	<p>This condition is caused by the vacuum system being requested to operate when some of the required services (gas, cooling water) are out of acceptable range.</p>
<p>Strobe lights illuminated on the wall and repetitive piercing sound</p> 	<p>The fire alarm has been activated.</p>

Step number	Response to Magenta Beacon
5.1.1	<p>Check for postings</p> <ul style="list-style-type: none"> • If you have approval of the RSO for these levels or see signage addressing such a situation, follow those instructions from this point. • If there is not RSO approval, close the secondary shutter.
5.1.2	<p>Verify that the radiation decreases</p> <ul style="list-style-type: none"> • If you do not see the beacon turn off within 20 seconds of the shutter closing, EXIT and contact the CCR (576-1502) to explain the situation and request an RCT and a member of the instrument team
5.1.3	<p>If the beacon turns off within 20 seconds of the shutter closing</p> <ul style="list-style-type: none"> • Go to the IPPS User panel and read the display above the panel • If there is a message requiring assistance (System Fault, Rad Fail, or High Rad), call a member of the instrument team to help troubleshoot or follow the instructions • If assistance is not required and you can determine the cause and fix it within your training, do so
5.1.4	<p>Report</p> <ul style="list-style-type: none"> • Contact the instrument team or RCT office before opening the secondary shutter

Step number	Response to Alarm from EFF Vacuum Panel
5.2	<p>Contact Sample Environment Team</p> <p>If you need information, go to the safety and experiment information display by the exit door and the phone, or contact a member of the instrument team.</p>

Step number	Response to All Other Alarms	
5.3	Follow access training Refer to the safety and experiment information display by the building door if uncertain. An emergency contact list, phone, fire alarm, fire extinguisher, and an evacuation/shelter map are posted (Figure 1).	

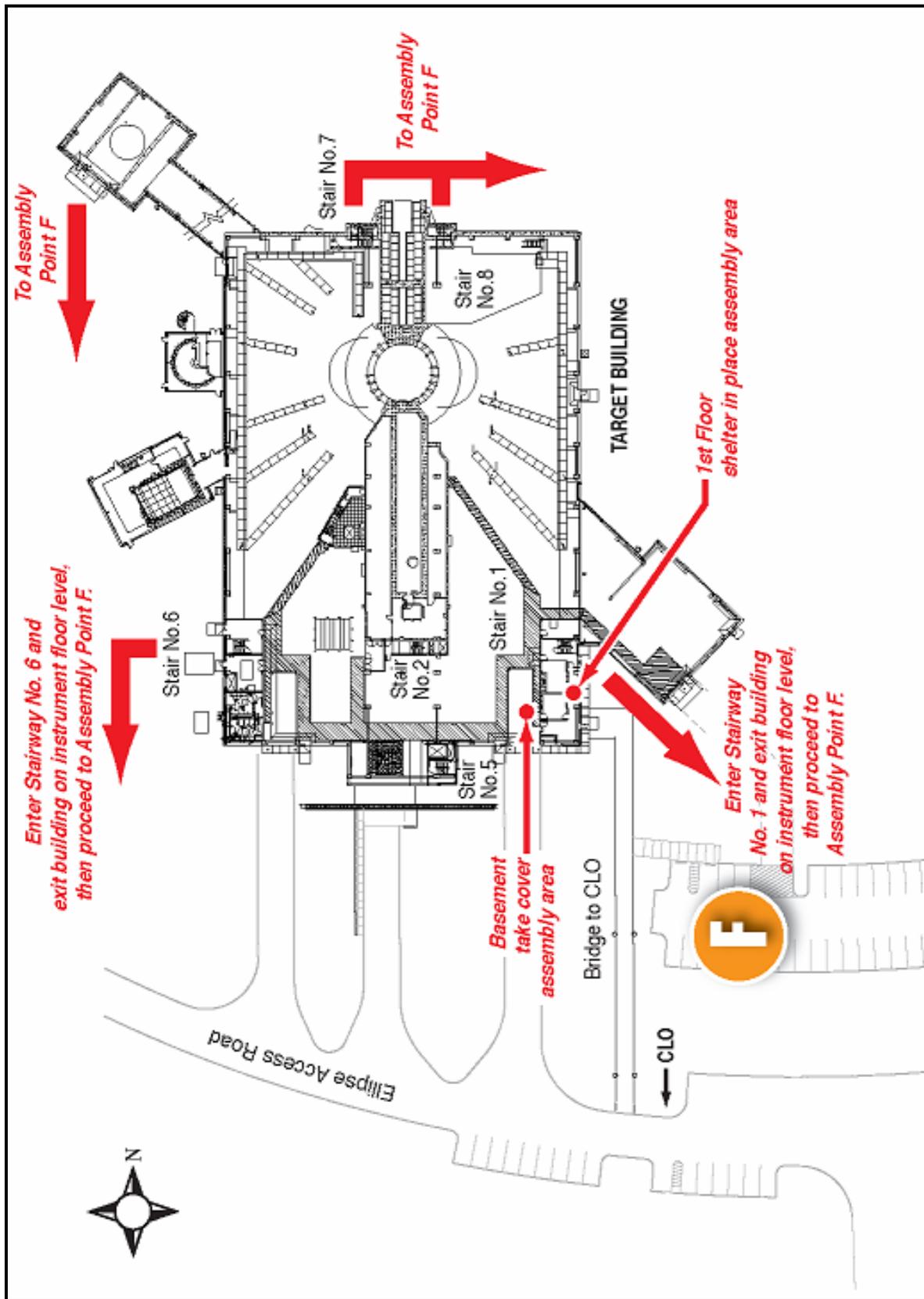


Figure 1. Evacuation and shelter map for the Backscattering Spectrometer

6. Documentation

- NONE

7 References

- SNS-OPM 3.A-1.5.2.1, Procedure for Operation of the Backscattering Spectrometer User IPPS Panel.
<https://neutrons.ornl.gov/x/operations/SNS-OPM/03-A-01-05-02-02.pdf>

8. Attachments

- NONE