

Important information for planning experimental work & installations at ATF

Listed here are some things that we have learned over the years at ATF, which may have caused delays for some past experiments. If you wish to bring your experiment online quickly, please follow these guidelines during the design phase of your experiment and BEFORE you arrive at ATF to setup your experiment.

Visit the BNL website for SBMS “Work Planning and Control for Experiments” (https://sbms.bnl.gov/SBMSearch/subjarea/109/109_SA.cfm); See the link for “ESH&Q Considerations When Designing an Experiment”.

ESH 1.4.1 - Experimental chambers (vacuum or pressure vessels) must comply with BNL’s ESH policies. **Pressure relief valves must be ASME rated** and marked with required information (otherwise, it will require witness testing & additional documentation).

ESH 1.5.2 - Electrical equipment (commercial and custom-built) that you bring **must have UL** (Underwriters Laboratory) or other NRTL (“nationally recognized testing laboratory”) **certification**. Otherwise, it will have to pass inspection from the BNL electrical safety group, which can be a complicated process. It is much easier to make sure that the equipment you purchase is UL certified. NOTE: The European “CE” marking is NOT sufficient.

ESH 1.5.0 – Work on energized electrical equipment must follow BNL safety standards, which define voltage hazard ranges, training and personal protective equipment. This typically applies to **voltages over 50V**, including any power supplies and spark gaps that you may use. It is advised to request that ATF provide electrical technician assistance, but you must discuss this first with the ATF Director.

ESH 4.3.0 - Any welding within ATF must have a hot work permit issued by the Fire/Rescue group, since building 820 does not have a designated welding area. Temporary disabling of the fire alarm system may be needed. This is usually true for beampipe welding in the experimental hall. Advanced notice is required.

Hazards such as Class 4 lasers and cryogenics will require additional review and approval. Standard operating procedures (SOP’s) must be developed with and approved by the BNL laser safety officer (LSO). Any use of liquid cryogenics, cryopumps (cold heads), flammable liquids/gases, and/or high magnetic fields will most likely require review and approval from the BNL ESH committee (LESHC). This process usually takes at least 2 months, and may be protracted beyond 4 months if you either modify/add hazards during the review or fail to provide requested information. It is best to minimize (or, if at all possible, eliminate) these hazards during the design phase of your experiment BEFORE it is submitted for review.

The ATF will provide as much assistance as possible to get your experiment approved, installed and operational. The ATF ESH officer can walk you through the safety review process.

However, the experiment’s Principle Investigator (or local designee) must take the lead to ensure that all requirements are met on time and that the installation is properly planned.

ATF ESR form flowchart

9/19/05, K. Kusche

