

Subject: Operational Problem Identification and Resolution	Effective Date: March 31, 2000	Initiated by: Head, Quality Assurance
	Supersedes: Revision 0 dated April 2, 1999	Approved: Director

From 10 CFR 830.120 (nuclear facilities) and O 414.1 (non-nuclear facilities): *Processes to detect and prevent quality problems shall be established and implemented.*

Items, services, and processes that do not meet established requirements shall be identified, controlled, and corrected according to the importance of the problem and the work affected.

Correction shall include identifying the causes of the problems and working to prevent recurrence.

Item characteristics, process implementation, and other quality-related information shall be reviewed and the data analyzed to identify items, services, and processes needing improvement.

This policy specifies the system for identification and resolution of operational problems. It applies to Laboratory systems and equipment that: directly support experimental programs or their operations, are directly related to ES&H, are designed to protect expensive equipment, or whose failure would affect major operational infrastructure systems at both C and D Sites.

It is PPPL policy that each Project, Department, or Division responsible for such hardware or software assure that the requirements of this policy are implemented. The implementation may be standardized for a project or left to the discretion of the Departments and Divisions supporting the project. The implementation shall require that:

- Criteria be defined for determining which failures are considered to be operational failures.
- Operational failures of Project, Department, or Division systems, equipment, and components be identified.
- Initial response, cause, and corrective action be identified and implemented.
- Periodic trend analyses of these failures be performed and possible preventive actions identified and evaluated for implementation.
- Records sufficient to allow full evaluations of the system for identifying and resolving failures and trends be established and maintained. For each failure, the following information concerning the failure is required: date the failure was discovered, a description, the action taken to resolve, and the date corrective action was completed. For each identified trend, the following information is required: a description of the trend, the root cause, and the resultant actions taken.

Examples of how this policy may be implemented include:

- The use of Project, Department, or Division specific failure reporting forms containing the identification of the failure, initial response, cause, and corrective action with separate periodic trend analyses.
- The use of operator or system logs documenting specific failures and the associated corrective action with separate periodic trend analyses. These logs may be paper or computerized logs.

- White papers documenting the direct, contributory, and root causes for either a single occurrence of a major failure or event or many occurrences of a less significant failure or event and the corrective actions taken or to be taken to preclude recurrence.

If an identified trend or an individual failure impacted or could potentially impact the integrity of a process or system that prevents, in part or in whole, radiological harm to the workers, public, or environment, it must be reported to the Head, ES&H. GEN-011 contains more detail.

Once a project has identified and resolved an operational problem, there is often valuable information or “lessons learned” that should be disseminated among other projects to prevent similar occurrences. The laboratory has selected the use of a web page to achieve a wide audience in the discussion of lessons learned in safety, equipment reliability, and various lab operations issues. Although maintained by the ES&H organization, appropriate subject matter for this web page is determined by the Facility Managers of laboratory areas (reference O-027, Line Management Safety Organization) and may contain material of interest from both inside and outside the laboratory. In addition, relevant subject matter for this web page will be included in “Lessons Learned” sections of specific technical training materials used by the Office of Human Resources in the initial and periodic training and qualification of operations and maintenance staff.