

GUIDELINE	PERFORMANCE	EXCEPTIONS
<p>1) Policies</p> <p>a) Specify goals and the means to achieve them</p> <p>b) Specify the type of controls necessary to implement the policy</p> <p>c) Personnel should understand their authority and responsibility, through accountability</p> <p>d) Physical Security should conform to DOE 5630.11, "Safeguards and Security Program"</p>	<p>1) Policies</p> <p>a) Goals, objectives and targets, some of which are derived from institutional-level documents, e.g., Appendix B of the BSA Contract, Critical Outcomes, Objectives and Performance Measures, are integrated into the Department's <a href="#">Environmental Management Programs (EMPs)</a> and the annual <a href="#">Self Assessment Plan for the C-AD</a>. The C-AD goal for risk from all hazards is not only to be below relevant legal limits, but also is to be 'as low as reasonably achievable (ALARA).' For radiation exposure, the <a href="#">annual ALARA goal</a> is recommended by the ALARA Committee and approved by the Department Chair. The ALARA philosophy has also been expanded to include waste generation and the potential for pollution from accelerators and experiments. Performance against goals is reviewed by C-AD and BNL managers at the annual Environmental and Self Assessment Management Review, and resources are assigned, if appropriate, following the review.</p> <p>b) Supervision, administrative controls, training, procedures and engineered safety systems are used to implement policy.</p> <p>c) Authority, responsibility, accountability and interfaces with other groups are defined clearly in the Operation Procedure Manual (OPM), <a href="#">Chapter 1</a>, "Authorization, C-AD Documents, and Definitions" and <a href="#">Chapter 2</a>, "Guidelines for the Conduct of C-AD Operations." Specific individuals are trained and held accountable for safety, emergency, commissioning and operations roles. Additionally, the Department employs the <a href="#">R2A2</a> concept, which is an institutional program to define role, responsibility, accountability and authority for each employee.</p> <p>d) The exterior doors to most buildings are locked from 5 PM to 8:30 AM and on weekends and holidays. The accelerator vault at the Tandem Van De Graaff (TVDG) is secured when operations personnel are not in residence. A C-A Property Protection Area (PPA) is a facility, or portion thereof, that requires access control to prevent unacceptable loss or destruction of valuable property and/or disruption of research. Assigned PPA's for C-A are Cryogenic Control Room (Building 1005S) and the Equipment Area (Building 911B), when the facilities are operating. See <a href="#">OPM 2.32</a>,</p>	<p>1) Policies None</p>

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	<p>“Access Controls – Building 911B and 1005 Property Protection Areas During Operations.” C-AD accelerator areas are secured via automatic access-control system hardware.</p>	
<p>2) Resources</p> <p>a) Provide sufficient resources, material, and labor</p> <p>b) Do not use excessive overtime</p> <p>c) Provide technical support personnel</p> <p>d) Develop a long range staffing plan.</p>	<p>2) Resources</p> <p>a) We have a minimum numbers of Operators and Operations Coordinators defined in the Accelerator Safety Envelopes. This minimum staff is deemed sufficient by DOE for safe operation, although larger staffs are used routinely for operational efficiency. During operations, materials and resources for the accelerators are managed day-to-day by the Operations Coordinator, and during Shutdown, by the Maintenance Coordinator. Sufficient resources are provided.</p> <p>b) Excessive overtime is avoided where possible by using shift operations</p> <p>c) The technical support personnel, accelerator operators, Siemen's operators, Radiological Control Technicians (RCTs), Collider Accelerator Support (CAS) personnel and Cryogenic Systems (Cryo) Watch personnel, are staffed according to various changes in operations.</p> <p>d) C-AD management prepares a long-range staffing plan</p>	<p>2) Resources None</p>
<p>3) Monitoring Of Operations Performance</p> <p>a) Refer to Chapter VI for operating problems</p> <p>b) Document problems for evaluation</p> <p>c) Supervisor should observe operations frequently.</p> <p>d) Operations Goals should be to:</p>	<p>3) Monitoring Of Operations Performance</p> <p>a) See Chapter VI for operating problems</p> <p>b) Scheduled inspections, performance indicators, audits, reviews and self-assessments are used to document problems for evaluation and to observe operations. Problems are also documented via the Trouble Reporting System (<a href="#">OPM 2.9</a>) and occurrences are documented via the Occurrence Reporting System (<a href="#">OPM 10.1</a>). Minor issues are <a href="#">critiqued</a> to reduce the chances that they lead to future occurrences. The C-AD operators use a <a href="#">web-based machine-performance monitoring log</a>.</p> <p>c) Supervisors participate in inspections and audits, they are members of safety review committees, and they are encouraged by C-AD management to ‘supervise by walking around’</p> <p>d) Operations Goals</p>	<p>3) Monitoring Of Operations Performance None</p>

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<ul style="list-style-type: none"> <li>i) Minimize the unavailability of the safety system</li> <li>ii) Minimize personnel errors</li> <li>iii) Conform to ALARA guidelines</li> <li>iv) Minimize loss of the facility capability</li> <li>v) Minimize the number of unscheduled shutdowns</li> <li>vi) Complete inspections on a timely basis</li> <li>vii) Minimize the amount of overtime</li> <li>viii) Achieve and maintain complete staffing and training requirements</li> </ul>	<ul style="list-style-type: none"> <li>i) Operations procedures minimize the unavailability of safety systems by requiring operations to be curtailed should safety systems fail to operate</li> <li>ii) Minimizing personnel errors is a goal, see <a href="#">OPM 2.1</a>, "C-AD Operations Organization and Administration"</li> <li>iii) ALARA is integrated into routine operations via <a href="#">OPM 6.1.0</a>, "ALARA Strategies for Tuning during Proton Operations" and into work review and planning via ALARA Committee procedures (<a href="#">OPM Chapter 9.5 series</a>). Operators aim at reducing beam losses to the lowest reasonably achievable level.</li> <li>iv) High reliability is a C-AD goal given the constraints of safety and available resources. Equipment breakdown at C-AD is the major source of radiation exposure to workers, and high reliability is built into components based on experience gained in the past four decades. At the TVDG, a computer aided maintenance program is audited on a daily basis in order to aim for maximum system and facility availability.</li> <li>v) Unscheduled shutdowns are minimized through periodic maintenance, formal reporting of problems such as the C-AD <a href="#">Trouble Report System</a>, good communications between users and operators such as the Weekly Time Meeting and the C-AD Web Site, and by designing equipment to be "radiation hardened."</li> <li>vi) Completing inspections on a timely basis is ensured through written procedures and checklists for Operators, RCTs, Cryo Watch and CAS</li> <li>vii) Maintaining shift operations during running periods minimizes overtime</li> <li>viii) Achieving and maintaining complete staffing and training requirements are requirements in <a href="#">OPM 2.1</a>, "C-AD Operations Organization and Administration." For example, see the Operational Safety Limit for</li> </ul>	

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<p>ix) Minimize waste</p> <p>x) Minimize the number of lighted annunciators</p> <p>xi) Goals should be measurable, achievable, and auditable</p> <p>xii) Develop an Action Plan to meet goals</p> <p>xiii) Report results of audits to facility management and DOE</p>	<p>Operators, Operations Coordinators and Watch for Hydrogen Targets in <a href="#">OPM 2.5</a>, "Operational Safety Limits / Accelerator Safety Envelope."</p> <p>ix) Waste minimization is a formal program in <a href="#">SBMS</a>, and requirements are implemented via the <a href="#">OPM 8.20</a> and <a href="#">OPM 8.22</a> series of procedures that deal with hazardous, radioactive and clean waste plus recycling. Also see <a href="#">OPM 1.7</a>, "Supervisory Practice for Working with Hazards," which describes supervisor responsibilities in this area. Waste minimization and pollution prevention are specific responsibilities listed in each person's R2A2 (Roles, Responsibility, Accountability and Authority).</p> <p>x) When new systems are introduced into the Main Control Room, human factors are considered in the design of panels and annunciators.</p> <p>xi) Goals such as lost work case rate, collective dose and dose per proton are measurable and many have been achieved each year over the last decade. Specific operations goals are included in the <a href="#">Department's Self-Assessment Plan</a> and in <a href="#">OPM 2.1</a> "C-AD Operations Organization and Administration," Section 2.5, "Monitoring of Accelerator Performance." ALARA goals are included in <a href="#">OPM 9.5.7</a>, "ALARA Goals." Each week during operations and less frequently during major shutdowns, physicists, operators, Head of Main Control Room, Users, and C-AD management meet to critique the previous week's operations and to discuss future goals.</p> <p>xii) The Self Assessment Plan is an action plan for Department operations. Ad hoc groups or C-AD committees typically develop action plans in response to an event or audit results. For example, an action plan which includes re-training supervisors was recently developed to reduce the lost work case rate and an action plan to improve the LOTO program was recently issued. Action plans are also found in the Department's <a href="#">Environmental Management Programs</a> that relate to BNL environmental goals.</p>	

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<p>xiv) Perform Self-Assessments</p>	<p>xiii) Results of audits are reported to C-AD management and where applicable up the line to DOE. Annually, results of audits are reviewed at the Department’s Environmental and Self Assessment Management Review.</p> <p>xiv) Management and worker self-assessments are conducted on an established schedule and reports are forwarded to C-AD management. Corrective actions are tracked to closure via the <a href="#">Assessment Tracking System (ATS)</a>. See <a href="#">OPM 9.4.2</a>, "C-AD Self Assessment" and <a href="#">OPM 13.10.1</a>, "Independent Assessments." The C-AD Enhanced Work Planning Procedure, <a href="#">OPM 2.28</a>, “C-AD Procedure for Work Planning and Control for Operations,” contains a job-specific assessment module that requires workers to assess specific jobs at completion. The department’s self-assessment program is described in terms of the Baldrige Award Criteria in the Assessment Planning and Evaluation Criteria Framework as defined in the SBMS Integrated Assessment Subject Area.</p>	
<p>4) Accountability</p> <p>a) Hold workers and supervisors accountable for their actions</p> <p>b) Use discipline and performance appraisals to ensure accountability</p>	<p>4) Accountability</p> <p>a) The C-AD has a formal performance appraisal program and Roles, Responsibilities, Authorities and Accountability (R2A2) program for all C-AD staff. These documents are maintained by the C-AD Chairman's Office.</p> <p>b) Adhering to all rules, including rules dealing with safety, quality, operations or maintenance, is factored into an individual’s appraisal, performance goals and R2A2. Discipline has been used when appropriate. For example, letters to a personnel file have been written when procedures were not followed. On other occasions, personnel have been given time off without pay or Users have had letters sent back to their University management when safety rules were willfully violated.</p>	<p>4) Accountability None</p>
<p>5) Management Training</p> <p>a) Formal training of supervisors and other management should be incorporated into overall training plan.</p>	<p>5) Management Training</p> <p>a) The C-AD Training Plan is described in <a href="#">OPM 1.12</a>, “Conduct of Training Policy (Training Plan).” The C-AD has performed job assessments for all positions including management and supervisors, and has developed corresponding training requirements. The C-AD Training Manager maintains the Job assessments.</p>	<p>5) Management Training None</p>

