

10 CFR Part 851 Worker Safety & Health Final Rule Implementation Plan Department/Division Self Assessment Checklist

10 CFR Part 851 WS&H Program Department/Division Self Assessment Questions	Part 851 Rules & Regulation Section	Institutional Evidence of Implementation	Department/Division Evidence of Implementation (Identify operating procedures, training, etc. and status of implementation)
851.20 -- Management & Worker Responsibilities			
What are the qualifications of your staff whose responsibilities it is to direct and manage your department/division worker safety & health program and how are those qualifications documented/maintained current?	851.20 (a) (2)	<u>Subject Areas:</u> Performance Appraisals, Performance Goals & Measures: Staff, R2A2, Training and Qualifications <u>Other:</u> Professional accreditations and affiliations	R2A2 for Derek Lowenstein, Ed Lessard and Ray Karol Resumes of Ed Lessard and Ray Karol BTMS JTAs for Ed Lessard and Ray Karol Performance appraisal process – employee input and supervisor appraisal

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<p>How are the worker safety & health responsibilities assigned within your department/division? How is personnel performance evaluated and held accountable for worker safety & health performance within your department/division?</p>	<p align="center">851.20 (a) (3)</p>	<p><u>Subject Areas:</u> Performance Appraisals, Performance Goals & Measures: Staff, R2A2, Disciplinary Action</p> <p><u>Other:</u> Dept/Div Organization Charts</p>	<p>C-AD Staff R2A2s, Annual Appraisals C-A-OPM 14.30, C-AD/SMD OSH Management Plan for Accelerators, Experimental Areas, Shops and/or Offices</p> <p>C-A-OPM 1.26, C-AD Standards for Disciplinary Action C-A-OPM 1.26.1, C-AD Criteria for Application of Disciplinary Action</p> <p>C-AD Organization Chart ESSHQ Division Organization Chart</p> <p>C-A-OPM 1.1, Authorization</p> <p>C-A-OPM 1.7, Supervisory Practice for Working with Hazards</p> <p>C-A-OPM 1.10, C-A Environmental, Safety and Health Policy</p> <p>C-A-OPM 13.1.1, Quality, OSH and Environmental Management System</p>

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<p>What mechanisms are in place within your department/division to involve workers and/or elected representative in the development of the worker safety & health program, goals, objectives, and performance measures?</p>	<p align="center">851.20 (a) (4)</p>	<p>OHSAS 18001 Interim Procedures (JRAs/FRAs), Worker Safety Committees, Department/Division Meetings/Emails, Suggestions Boxes</p>	<p>Worker Safety and Health Committee web page which include charge, procedure and membership and minutes.</p> <p>FRA and JRAs</p> <p>Safety Walks and associated OPM</p> <p>Manager Work Observation, OPM and documentation</p> <p>Annual EMS/OSH Management Reviews</p> <p>Quarterly Safety Awareness Activity documented on ESSHQ Tickler Card #101</p> <p>Annual Safety Week Sessions for all C-AD and User staff. Open issues tracked in Family ATS.</p> <p>Documented reviews of OPM revisions</p> <p>Feedback on Work Planning</p> <p>Scheduled Weekly Group and Division Meetings</p> <p>C-AD Committees List for accelerator systems, experimental systems, radiation safety, ALARA, safety inspections, etc.</p> <p>Work Planning Process procedures, C-A-OPM 2.28, C-A-OPM 2.28.d, C-A-OPM 2.28.i</p>

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<p>*What mechanisms are in place within your department/division to involve workers and/or elected representative in the identification and control of hazards in the work place?</p>	<p align="center">851.20 (a) (4)</p>	<p><u>Subject Areas:</u> Work Planning and Control, SBMS Documents</p> <p><u>Other:</u> Experimental Safety Reviews, Work Permits, JRAs/FRAs, Toolbox/Plan of the Day Meetings</p>	<p>See above answer for 851.20 (a) (4)</p>

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<p>How do workers within your department/division access information relevant to worker safety and health? Do they have personal computers or access to area computers? Do you have hard copies available?</p>	<p align="center">851.20 (a) (5)</p>	<p>SBMS Management Systems, Program Descriptions, Subject Areas</p> <p><u>Other:</u> Supervisor, ESH Coordinator, Work Control Coordinator</p>	<p>ESSHQ Website for C-AD</p> <p>SBMS Subject Areas</p> <p>Material Safety Data Sheets</p> <p>There are two paper copies of the C-AD OPM in addition to the OPM on the Web</p> <p>Quarterly Performance Indicator Reports distributed to the C-AD Staff</p> <p>Workers get hazard and hazard control information from the work planning system described in C-A-OPM 2.28 and they sign on to the permit before starting work.</p> <p>FRA and JRAs</p> <p>5-Minute Safety Talks at the start of any meeting</p> <p>Open Door Policy for any safety staff or line manager</p> <p>Availability to review Critiques or ORPs or Safety Related Reviews</p> <p>BNL Lessons Learned topics</p>

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<p>Ask the following question of 3 of your staff: How do you get safety information? (e.g., fire safety information). List the job title of the staff questioned and their responses.</p>	<p align="center">Implementation Verification</p>		<p>1. Technical Specialist Get safety information from the Web, SBMS, OPM and Supervisor.</p> <p>2. Technical Specialist Get safety information from Supervisor and Work Planning.</p> <p>3. Project Engineer Get safety information from SBMS, Supervisor, and department safety notices (5 min talks).</p> <p>4. Technical Supervisor Consultations with ESHQ division, ESHQ Division emails, including "Take a minute for Safety", Feedback from workers, Work planning, Supervisor meeting, Weekly safety meetings, Subject area update notifications, BNL Safety newsletter, Critiques, Annual Safety week</p>

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<p>What means are used to ensure regular communication with workers about workplace safety and health (e.g., electrical safety) within your department/division? How is this documented?</p>	<p align="center">851.20 (a) (8)</p>	<p>Supervisor conduct Toolbox Meetings or Plan of the Day Meetings or ESR meetings</p> <p><u>Subject Areas:</u> Work Planning and Control, OSHAS 18001 Interim Procedures for JRAs and FRAs</p> <p><u>Other:</u> SBMS change notification emails, Lessons Learned, BNL Bulletin, Monday Memo, ESHQ Newsletter; Dept./Division all hands meeting</p>	<p>Facility Specific Training for Staff and Users</p> <p>Read and Acknowledge of new/revised C-A-OPMs</p> <p>Scheduled Weekly Group and Division Meetings</p> <p>Pre-job briefings and walk downs followed by workers signing work permits before start of work</p> <p>Emergency Planning and Response in C-A-OPM Series 3.0</p> <p>OHSAS-18001 Training and annual OSH Forums</p> <p>Availability to review Critiques or ORPs or Safety Related Reviews. These are distributed by email to staff.</p> <p>Contractor/Vendor orientation including C-AD facility specific training</p> <p>Email used to distribute safety and health information (see Examples)</p> <p>Open Door Policy for any safety staff or line manager</p> <p>5-Minute Safety Topics distributed weekly by ESSHQ Division to all staff</p> <p>Quarterly Safety Awareness Activity documented on ESSHQ Tickler Card #101</p>

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			<p>Material Safety Data Sheets</p> <p>FRA and JRAs</p> <p>CCTS</p> <p>C-AD OPMs</p> <p>BTMS emails telling staff that their retraining on JTA courses is due</p> <p>Special C-AD courses such as Human Performance, Electrical Safe Working Practices Video</p> <p>Quarterly Performance Indicator Reports distributed to the C-AD Staff</p> <p>BNL Lessons Learned topics</p> <p>Safety Walks and associated OPM</p> <p>Manager Work Observation, OPM and documentation</p> <p>Annual all-hands meeting by Department Chair</p> <p>Annual Safety Week Sessions for all C-AD and User staff. Open issues tracked in Family ATS.</p> <p>Annual EMS/OSH Management Reviews</p> <p>Documented reviews of OPM revisions</p> <p>Read and Acknowledge of new and revised C-A-OPMs</p>

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What mechanisms are in place within your department/division to notify workers when monitoring results indicate the worker was overexposed to hazardous materials ? How is this documented?	851.20 (b) (3)	Industrial Hygiene Exposure Monitoring Program	Follow SHSD IH Group Procedure requirements
Do workers within your department/division observe monitoring and measuring of hazardous agents at the workplace? Do workers within your department/division have the results of their own exposure monitoring? Explain.	851.20 (b) (4)	Industrial Hygiene Monitoring Program.	<p>We allow workers to get involved if they request to be involved. We answer any questions they may have about monitoring methods and what they mean and allow them to request why or why not monitoring is to be done on a specific job.</p> <p>We follow SHSD IH Group Procedure requirements to get the results of exposure monitoring within specified time limits.</p> <p>Staff routinely receives their TLD results and get an annual report of there dose from RCD.</p>

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Do you have worker representation on your department/division Tier 1 inspections, Management Walkthroughs and other safety related activities? How is this documented?	851.20 (b) (5)	Senior Manager Work Observations, Tier 1 Inspections.	<p>See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections. Committee minutes are written and checklists developed to implement recommendations or entered into C-AD Family ATS</p> <p>FRA, ARA and JRAs</p> <p>Safety Walks and associated OPM</p> <p>Manager Work Observation, OPM and documentation</p> <p>Involvement with pre-job briefings, walk downs and hazard reviews for work planning before signing permits</p> <p>Training sign-in sheets</p>
Are workers able to request and receive inspection or accident investigation reports? How is this documented?	851.20 (b) (6)	<p><u>Subject Area:</u> Investigation of Incidents/Accidents/Injuries, (Line Organization Accident/Incident Investigation Report Form)</p> <p><u>Other:</u> ORPS Reports Emails; Tier I inspection reports; ESH&Q monthly Newsletter</p>	<p>Availability to review Critiques or ORPs or Safety Related Reviews. Emails are sent out when new reports are written (see Examples).</p> <p>BNL Lessons Learned topics</p> <p>Weekly 5-minute safety topics sent to staff include summaries of any injuries. Worker involved in the injury reads and signs their Accident Investigation Report</p> <p>Accident Statistics are summarized in the C-AD Particle Post and the Quarterly Performance Indicator Reports</p>

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<p>What mechanisms are in place within your department/division to allow workers to express concerns related to worker safety & health? How is this documented? Provide examples.</p>	<p align="center">851.20 (b) (7)</p>	<p><u>Subject Areas:</u> Stop Work, Work Planning and Control, OHSAS 18001 Interim Procedures (JRAs/FRAs)</p> <p><u>Other:</u> Stop Work, ESH Concerns Form, Safety Hot Line, Worker Safety & Health Committee, Suggestion Box, Tier 1 Inspections, Toolbox/Plan of the Day Meetings, Emails</p>	<p>FRA and JRAs</p> <p>Safety Walks and associated OPM</p> <p>Manager Work Observation, OPM and documentation</p> <p>Annual Safety Week Sessions for all C-AD and User staff. Open issues tracked in Family ATS.</p> <p>Scheduled Weekly Group and Division Meetings</p> <p>Documented reviews of OPM revisions</p> <p>Worker Safety and Health Committee including meeting minutes</p> <p>Work Planning</p> <p>Participation in Critiques or ORPs investigations</p> <p>Participation in the Tier 1 Safety Inspection process</p> <p>Management Reviews with documentation in minutes and Record of decision.</p> <p>Annual Safety Week feedback from staff and users with issues assigned into C-AD Family ATS</p>

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<p>Are workers within your department/division aware that they may decline to perform a task because of a reasonable belief that, under the circumstances, the task (activity) poses an imminent risk of death or serious physical harm? Provide examples.</p>	<p align="center">851.20 (b) (8)</p>	<p>Stop Work and Work Planning and Control Subject Areas; Training-General Employee Training, and R2A2s;</p>	<p>Stop Work Authority which is taught in staff and user Facility Specific training classes C-AD Conduct of Operations Human Performance training for work planning</p> <p>The Department Chair has made it clear that staff may take all the time they need to get advice, prepare paperwork, review hazards adequately, obtain safety equipment and call in whomever they feel that they need to complete work safely.</p> <p><u>Example:</u></p> <p>When the C-AD facilities are shut down and the CAS Watch is staffed with one person, they may call in a second CAS Watch if they feel they need that person as a safety watch regardless of the affect on the work schedule.</p>

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<p>Are workers within your department/division aware that they may stop work when exposures to imminently dangerous conditions or other serious hazards exist? (in a justifiable and responsible manner in accordance with established procedures) Provide examples.</p>	<p>851.20 (b) (9)</p>	<p>Stop Work Subject Area and Training, General Employee Training, R2A2</p>	<p>Stop Work Authority taught in Facility Specific training for staff and users Requests for and completion of Ergonomic reviews by C-AD Safety Office and SHSD over the last few years.</p> <p><u>Examples:</u></p> <ol style="list-style-type: none"> 1. Recent Stop Work during Cable Pulling at AGS 2. Recent Stop Work at B912A by PE ESH Coordinator
<p>851.21 – Hazard Identification and Assessment</p>			

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<p>What procedures are in place within your department/division to assess worker exposure to chemical, physical, biological, or safety workplace hazards through appropriate monitoring?</p>	<p>851.21 (a) (1)</p>	<p>SBMS Subject Areas and ESH Standards (i.e., Work Planning and Control, Injury Management, Hazard Analysis, Integrated Assessment, Readiness Evaluations, ESH Standard 1.5.0 Electrical Safety, Lead, Asbestos, Beryllium, Biosafety in Research, Bloodborne Pathogens, Working with Chemicals, Construction Safety, Natural Hazards in the Environment; and PPE)</p>	<p>SHSD Industrial Hygiene measurements baseline</p> <p>Safety Inspection Process</p> <p>Workers get hazard and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs determine if any monitoring is necessary. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i</p> <p>C-A-OPM 1.7, Supervisory Practice for Working with Hazards</p> <p>C-A-OPM Series 1.5 for Electrical Safe Practices</p> <p>C-A-OPM 1.8, Hazard Communication Procedure and C-A-OPM 1.8.a, Hazard Communication Compliance Checklist</p> <p>FRA and JRAs</p> <p>Use of TLDs, Area Radiation Monitors, Confirmatory radiation air samples, Self-reading dosimeters and installed/portable oxygen monitors</p> <p>See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections described in C-A-OPM Chapter 9 Series. Committee reviews result in the documented requirements into Risk exposure samples recommendations or entered into C-AD Family ATS</p>

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			<p>needed exposure samples being listed on their Checklists for new or revised systems and operations</p> <p>C-A-OPM 8.14, Confined Space Entry Procedure, C-A-OPM 8.14.a, Confined Space Entry Certification and C-A-OPM 8.14.c, Example of a Confined Space Entry Permit</p>

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<p>What procedures are in place within your department/division for documenting observations, testing and monitoring results?</p>	<p align="center">851.21 (a) (3)</p>	<p align="center">IH Monitoring Program</p>	<p>Follow SHSD IH Group Procedure requirements</p> <p>Monthly and annual TLD results transmitted to staff and users</p> <p>C-A-OPM 8.14.a, Confined Space Entry Certification and C-A-OPM 8.14.c, Example of a Confined Space Entry Permit</p> <p>C-A-OPM 13.4 Series on Records Index</p> <p>Each C-A-OPM has a section devoted to Records associated with the procedure and many contain observation, testing and monitoring results</p> <p>ESHQ Division Tickler Card #2, Facility Air Samples done on an annual frequency</p> <p>Documenting observations, testing and monitoring results may be determined and documented as part of the work planning system described in C-A-OPM 2.28</p> <p>Documentation for testing the access control system is described in OPM 4.16, Access Control System Testing.</p> <p>Documentation for ODH monitor tests is located in OPM 8.36 series.</p>

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<p>What procedures are in place within your department/division to analyze designs of new facilities and modifications to existing facilities and equipment for potential workplace hazards?</p>	<p align="center">851.21 (a) (4)</p>	<p><u>Management Systems:</u> Facility Safety, Worker Safety and Health</p> <p><u>Subject Areas:</u> Engineering Design, Work Planning and Control, Hazard Analysis</p> <p><u>Program:</u> Property and Procurement Website (ISM flow-down, Web Requisition system)</p>	<p>See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections described in C-A-OPM Chapter 9 Series</p> <p>C-A-OPM 13.6.1, Preparation & Issuance of Engineering Drawings/Specifications</p> <p>C-A-OPM 13.6.2, Configuration Management</p> <p>C-A-OPM 13.7.1, C-AD and SMD Procurement Guidelines</p> <p>C-AD Safety Assessment Document</p> <p>C-A-OPM 1.10.1, Procedure for Documenting Unreviewed Safety Issues</p> <p>C-AD Hazard Screening Tool (See Examples)</p> <p>Initial Hazard Screenings for Accelerators, Experimental Areas, Shops and Offices</p> <p>Work Planning Process procedures, C-A-OPM 2.28, C-A-OPM 2.28.d, C-A-OPM 2.28.i</p> <p>C-A-OPM 9.2.3, Procedure for Chief Engineers to Certify the Conformance of Devices</p> <p>C-A-OPM 1.5 Series for analyzing and controlling of electrical hazards</p>

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<p>What methods are in place within your department/division to evaluate operations, procedures, and facilities to identify workplace hazards? How is this documented?</p>	<p align="center">851.21 (a) (5)</p>	<p><u>Subject Areas:</u> Work Planning and Control (Experimental Safety Reviews, Work Permits), OHSAS 18001 Interim Procedures (JRAs/FRAs)</p>	<p>FRA and JRAs Annual EMS/OSH Management Reviews Work Planning Process procedures, C-A-OPM 2.28, C-A-OPM 2.28.d, C-A-OPM 2.28.i Safety Walks and associated OPM Manager Work Observation, OPM and documentation Safety Inspection Process Documented reviews of OPM revisions</p>

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<p>How are routine job activity-level hazard analyses performed within your department/division? How is this documented?</p>	<p align="center">851.21 (a) (6)</p>	<p><u>Subject Areas:</u> Work Planning and Control (Experimental Safety Reviews, Work Permits), OHSAS 18001 Interim Procedures (JRAs/FRAs)</p>	<p>FRA and JRAs Scheduled Weekly Group and Division Meetings Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs determine if any monitoring is necessary. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i Safety Walks and associated OPM Manager Work Observation, OPM and documentation See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections described in C-A-OPM Chapter 9 Series Initial Hazard Screenings for Accelerators, Experimental Areas, Shops and Offices</p>

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<p>What methods are in place within your department/division to review site safety and health experience information? How is this documented?</p>	<p align="center">851.21 (a) (7)</p>	<p>Lessons Learned Program, ESHQ Newsletter distribution, ORPS email distributions</p>	<p>See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections described in C-A-OPM Chapter 9 Series</p> <p>C-A-OPM 2.12, Communications Practices</p> <p>Availability to review Critiques or ORPs or Safety Related Reviews. These are distributed by email to staff.</p> <p>BNL CCTS System</p> <p>C-AD ESSHQ Division Web Pages</p> <p>Subscriptions to BNL Lessons Learned Program</p> <p>Records for C-AD specific OSH Training on BTMS</p> <p>Distribution of monthly ESHQ Directorate Newsletters and periodic Radiological Control Division Newsletters to staff</p> <p>Periodic Department-wide meeting by the Department Chair on safety issues</p>

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851.22 – Hazard Prevention and Abatement			
How are hazard controls incorporated into the appropriate facility design and/or procedures within your department/division when hazards are identified either in the facility design or during the development of procedures? Provide examples.	851.22 (a) (1)	<p><u>Management Systems:</u> Integrated Safety, Facility Safety, Worker Safety and Health, OHSAS</p> <p><u>Subject Areas:</u> Work Planning and Control, Engineering Design, Readiness Evaluations, Hazard Analysis, OHSAS Interim Procedures</p>	<p>See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections described in C-A-OPM Chapter 9 Series. There are Checklists of items to be completed generated as a result of reviews and walkthroughs of facilities and procedures</p> <p>C-A-OPM 1.1, Authorization</p> <p>BNL Work Permit</p> <p>Annual documented testing of Access Controls, PASS, ODH, fire protection systems</p> <p>C-AD Family ATS</p> <p>Documented reviews of OPM revisions</p> <p>Accelerator Readiness Reviews</p> <p>C-A-OPM 13.6.1, Preparation & Issuance of Engineering Drawings/Specifications</p>

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<p>What methodologies/processes are in place within your department/division to address existing hazards in the workplace? Including:</p> <ul style="list-style-type: none"> • Prioritizing and implementing abatement actions according to risk • Implementation of interim protective measures pending final abatement, and • Protection of workers from dangerous conditions 	<p>851.22 (a) (2), (i), (ii), (iii)</p>	<p><u>Management Systems:</u> Integrated Safety, OHSAS 18001 Management System</p> <p><u>Subject Areas:</u> Work Planning and Control, Hazard Analysis, OHSAS 18001 Interim Procedures (JRAs/FRAs)</p>	<p>FRA and JRAs</p> <p>There are Checklists of items to be completed generated as a result of reviews and walkthroughs of facilities and procedures</p> <p>Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs determine if any monitoring is necessary. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i</p> <p>Stop Work Authority to trained staff</p> <p>Postings, Warnings, Barriers</p> <p>Training</p> <p>Interlocks, Access Controls, Biometrics, key controls, card access controls</p> <p>PPE</p> <p>LOTO</p> <p>Orange Radiation and Oxygen Deficiency Security System Tags</p> <p>Temporary Procedures and Hand Processed Procedure changes</p>

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			C-A-OPM 1.10.4 , OSH Management System Program Description for Collider-Accelerator Department and Superconducting Magnet Division
<p>*Does your department/division have hazard controls in place based on the following hierarchy:</p> <ul style="list-style-type: none"> • Elimination or substitution of the hazards where feasible • Engineering controls where feasible • Work practices and administration controls that limit worker exposures, and • Personal Protective Equipment <p>How is this process documented?</p>	851.22 (b) (1), (2), (3), (4)	<p><u>Management System</u>: Worker Safety and Health</p> <p><u>Subject Areas</u>: Work Planning and Control, Purchase Requisitions, Engineering Design, Hazard Analysis, Personal Protective Equipment.</p>	<p>Hierarchy described in C-A-OPM 1.10.4, OSH Management System Program Description for Collider-Accelerator Department and Superconducting Magnet Division</p> <p>See for example:</p> <ol style="list-style-type: none"> 1. C-A-OPM 14.31.1, Occupational Safety and Health Operational Controls Form for Operations and Maintenance Activities 2. C-A-OPM 14.33.1, Occupational Safety and Health Operational Controls Form for C-AD and SMD Offices 3. C-A-OPM 14.34.1, Occupational Safety and Health Operational Controls Form for C-AD and SMD Shops <p>C-AD Safety Assessment Document</p> <p>C-A-OPM 13.7.1, C-A and SMD Procurement Guidelines</p> <p>C-A-OPM 1.5 Series for analyzing and controlling of electrical and arc flash hazards</p>

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<p>What process is used when changes are made to the hazard inventory? Provide examples.</p>	<p>Implementation Verification</p>	<p><u>Subject Areas:</u> Work Planning and Control, Facility Use Agreements, Emergency Preparedness, Engineering Design, Fire Safety</p> <p><u>Site-wide Program:</u> Chemical Management System</p>	<p>Chemical Management System and C-AD Tickler Card #5, C-A Chemical Inventory Review</p> <p>Radiation Areas are listed in C-A-OPM 9.5.4.a, Collider-Accelerator Department Radiological Areas</p> <p>Examples: Noise Areas, Confined Spaces, Lasers, Cutting and Welding Areas, Fire Run Cards, ODH Areas, RF and Microwave Sources, Radiological Survey Results and Tritium Levels in Water Systems are listed on the ESSHQ Website and maintained up to date</p> <p>C-AD Tickler Cards (TC) are used to periodically review these hazard inventories. For example, TC#1 for tritium levels in water systems, TC#2 for radiation air samples, TC#5 for review of chemical inventories, TC#506 for cutting/welding areas, TC#509 for lasers, TC#510 for Run Cards, TC#515 for confined spaces, etc.</p> <p>See C-AD Committees List for accelerators, experiments, radiation safety, ALARA and Safety Inspections described in C-A-OPM Chapter 9 Series</p>

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			<p>Initial Hazard Screenings for Accelerators, Experimental Areas, Shops and Offices FRA and JRAs</p>
<p>*What processes/methodologies are in place to address hazards when selecting or purchasing equipment, products, and services? How is this documented? Who does the review? Provide examples.</p>	<p align="center">851.22 (c)</p>	<p><u>Subject Areas:</u> Work Planning and Control, Purchase Requisitions, Procurement Operations Manual</p>	<p>Overarching purchasing policy is in Hierarchy described in C-A-OPM 1.10.4, OSH Management System Program Description for Collider-Accelerator Department and Superconducting Magnet Division</p> <p>Also see C-A-OPM 13.7.1, C-A and SMD Procurement Guidelines</p> <p>Purchased chemicals, ladders and lasers are all reviewed by the C-AD ESH Coordinator</p> <p>Each Purchase Requisition is reviewed by a Work Control Coordinator if work is to be purchased</p> <p>*The BNL Web Requisition Process does not capture reviews by a safety SME for all purchases</p>

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851.25 – Training and Information			
Who determines the JTAs for employees to assure that all workers exposed or potentially exposed to hazards are provided with the training and information on that hazard in order to perform their duties in a safe and healthful manner, prior to assigning the work?	851.25 (a)	Training & Qualifications Subject Area, R2A2s, JTAs	As per C-A-OPM 1.12 , The C-AD Training Manager, a Safety Subject Matter Expert, the Worker’s Supervisor and Group Leader are involved with determining the correct training for each C-AD employee, guest, contractor and student. These requirements are assigned in the employees JTA
What are the qualifications of personnel assigning JTAs within your organization?	Implementation Verification		The Training Manager, Supervisor, Safety Expert and Group Leader are assigned to these positions based on their education, training and experience. In addition they have taken their own required training related to their job functions which are listed in their own JTAs

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<p>*How are workers within your department/division notified of initial training prior to assignment of a job involving hazards, periodic training to ensure they are adequately trained and informed, and additional training when safety and health information or a change in workplace conditions indicates that a new or increased hazard exists? How is this documented?</p>	<p>851.25 (b)(1), (b)(2), (b) (3)</p>	<p>Work Planning and Control, BTMS Emails through JTA link; Annual JTA Reviews.</p>	<p>Each new employee is assigned their initial training by meeting with the Training Manager, Safety Subject Matter Expert, Supervisor and Group Leader</p> <p>We assure that employees have the proper training before they perform operations or work by verifying their training completion before issuing a TLD, access cards, access keys, and biometrics data. In addition, work permits specify the training required for each medium or high hazard job and our C-A-OPMs have a statement on the training needed to implement the procedure</p> <p>BTMS and the C-AD Training Manager each send out emails warning of the need to retrain on each JTA assigned training course.</p> <p>The Training Manager, Safety Subject Matter Expert, Supervisor and Group Leader periodically reviews employee JTAs</p> <p>The Training Manager, Safety Subject Matter Expert, Supervisor and Group Leader reviews the employee's JTA when new assignments occur</p>

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			<p>C-A-OPM 1.26 and C-A-OPM 1.26.1 describe the C-AD Standards for Discipline and how it is implemented. Delinquency in required training is addressed as part of this policy</p> <p>Work Permits address required training to allow a worker to be involved in each job</p>

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<p>Is there training and information provided to workers within your department/division who have worker safety and health program responsibilities that is necessary for them to carry out those responsibilities? How is this documented? List examples of training courses.</p>	<p>851.25 (c)</p>	<p>R2A2s, JTAs</p>	<p>The C-AD WOSH Committee, composed of workers representing each group in the Department are given OSH information that they bring back to their groups to disseminate during group safety meetings</p> <p>Staff involved with hazards is given OSH Training which is assigned to their JTA. See for example Facility Specific OSH Training</p> <p>Training is documented in BTMS</p> <p>Safety staff is assigned based upon their formal education, training and experience.</p> <p>Examples of safety type courses include OSHA, QA, facility specific OSH, SBMS Subject Areas, supervisory and management courses, IH measurement methods, safety analysis techniques, accident review techniques, methods for safety observations, PPE requirements, safety leadership, specific hazards training, national standards, DOE requirements, leadership, chemical safety, etc.</p>

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851.26 – Recordkeeping and Reporting			
<p>What is the process used to ensure that work related injuries and illnesses of workers and subcontractor workers within your department/division are recorded and reported accurately and consistent with DOE Manual 231.1-1A, Environment, Safety and Health Reporting Manual? How is this documented?</p>	<p>851.26 (a) (2)</p>	<p>Investigation of Incidents/Accidents/Injuries Subject Area, Injury Management Subject Area</p>	<p>C-A-OPM 9.4.5, C-A Accident / Incident Investigation</p> <p>C-A-OPM 1.22, Return to Work and Restricted (Light) Duty Work Policy</p> <p>C-A-OPM 10.1, Occurrence Reporting and Processing of Significant Operations Information</p> <p>BNL Accident/Incident Investigation Report Form</p> <p>C-AD Critiques and Occurrence Lists related to work related injuries/illnesses</p> <p>Facility specific training at C-AD for Staff and Users clearly states that any work related injuries or illnesses must be reported to the OMC</p>

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<p>What process is used to address job hazard concerns during the course of the job? Provide examples of ESR reviews and pre-job briefings. How are job hazards documented?</p>	<p>Implementation Verification</p>	<p>Work Planning and Control, JRAs.</p>	<p>Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs help determine hazards. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i, Conducting Effective Pre-Job Briefings, Walk-Downs and Post-Job Reviews</p> <p>Stop Work Authority for trained staff</p> <p>Safety Walks and associated OPM</p> <p>Manager Work Observation, OPM and documentation</p> <p>Pre-job briefings may be viewed by contacting the C-AD Work Control Manager to view Work Permits and Work Control Logs by the various C-AD Groups</p> <p>JRAs</p>

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Are Supervisors flowing down safety incidents and lessons learned? Is this process documented? If so, how?	Implementation Verification	Group meetings, ESHQ Newsletter, Monday Memo, emails, Lessons Learned subject area and subscription service.	Scheduled Weekly Group and Division Meetings Consultations with C-AD ESSHQ Division, ESSHQ Division emails, including “take a minute for safety”, feedback from workers, work planning, Supervisor meeting, weekly group and division meetings, Department meetings, Subject Area update notifications, BNL Safety Newsletter, Critiques, Annual Safety week C-A-OPM 1.10 , C-A Environmental, Safety and Health Policy states that each group/division weekly working meeting shall include a 5-minute safety/security discussion
Worker Safety and Health Functional Areas			
Construction Safety (e.g. lab/office renovations, new construction, excavations, foundations, structural steel, roofing, etc.)			

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<p>Are activity hazard analysis prepared and approved by the construction manager prior to commencement of construction/renovation work? Do analyses include methods to:</p> <ul style="list-style-type: none"> • Identify foreseeable hazards and protective measures • Address further hazards revealed by supplemental site information (e.g. site characterization data, as-built drawings) provided by the construction manager • Provide drawings and/or other documentation of protective measures for which OSHA standards require a Professional Engineer or other qualified professional, and • Identify competent persons required for workplace inspections of the construction activity. <p>How is this documented?</p>	<p>1. (a) (1), (i), (ii), (iii), (iv)</p>	<p>Construction Safety Subject Area; Work Planning and Control Subject Area; Engineering Design Subject Area ; Building Managers and Work Control Managers involved in Work Planning /Hazard ID</p>	<p>*C-AD has a known gap here with regard to a formal written program for construction safety</p> <p>Large construction projects are handled by Plant Engineering Division</p> <p>Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs help determine hazards. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i, Conducting Effective Pre-Job Briefings, Walk-Downs and Post-Job Reviews</p> <p>C-AD writes specifications for construction work and works with the BNL Construction Safety Engineer and C-AD ESSHQ Division to ensure that the right safety requirements are written into the specifications</p> <p>Contractors are given the appropriate facility specific training and other training as required in C-A-OPM 1.12</p> <p>C-A-OPM 1.11 requires that Safety Inspections of construction activities shall be performed and documented by qualified service providers or qualified C-A personnel for the duration of the job. In addition, it</p>

* Identified as an Institutional-Level Gap during Gap Analyses

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			<p>requires that the outside service provider conforms to the applicable requirements for C-AD. The C-A requester for outside services must assure that the outside service provider be competent in required training and ESH responsibilities outlined in SBMS for the type of work to be performed. Only qualified C-A personnel or qualified designees who request work by outside providers can assure work performed by the outside service providers conforms to laboratory ESH requirements. Safety inspections of construction activities shall be performed and documented by qualified service providers or C-A personnel for the duration of the job. Inspection frequency shall be determined by the inspector based on the severity and frequency of actual and anticipated hazards, the contractor's performance history, and the contractor's demonstrated competency. Safety inspections shall be documented by the qualified person by the use of log books, checklists, notebooks, or other documentation that will be maintained by the qualified person.</p>

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How do workers within your department/division acknowledge being informed of the hazards and protective measures associated with the assigned activity?	1. (a) (3)	Work Planning and Control (ESRs, WPs, RWPs), JRA/FRAs.	<p>Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs help determine hazards. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i, Conducting Effective Pre-Job Briefings, Walk-Downs and Post-Job Reviews</p> <p>FRA and JRAs</p> <p>Work Permits and RWPs, and any other permits such as Fire Protection Impairment, Aggressive Concrete Penetration Permits, Digging Permits, Welding and Cutting Permits, etc.</p> <p>Facility Specific Training given by C-AD C-AD Safety Assessment Document</p>
Electrical Safety			

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<p>How is your department/division implementing NFPA 70E?</p>	<p>Implementation Verification</p>	<p>ESH Standard 1.5.0 Electrical Safety, Lockout/Tagout Subject Area</p>	<p>C-A-OPM 1.5 Series for analyzing and controlling of electrical and arc flash hazards during electrical work and breaker/disconnect operations</p> <p>C-A-OPM 2.36, Lock and Tag Program for Control of Hazardous Energy</p> <p>Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28. During this process the safety SMEs help determine hazards. See also C-A-OPM 2.28.d, Work Screening Guidance, and C-A-OPM 2.28.i, Conducting Effective Pre-Job Briefings, Walk-Downs and Post-Job Reviews</p> <p>Use of Energized Electrical Work Permits</p> <p>Use of PPE as specified in Electrical Safety ESH Standard 1.5.0</p> <p>BNL training courses in electrical safety and LOTO and annual review and approval by workers supervisor for LOTO OJT</p> <p>C-AD facility specific training in Electrical Safe Work Practices and Electrical Circuit Breaker/Switch Operation Safety</p> <p>Periodic courses for electrical workers in NEC and electrical related NFPA standards</p>

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<p>*Does your department/division perform Ground Fault Circuit Interrupter (GFCI) maintenance and testing per the manufacturer's requirements? How frequently is the maintenance and testing performed? How is this documented?</p>	<p>Implementation Verification</p>	<p>ESH Standard 1.5.0 Electrical Safety</p>	<p>*No, we have no written program to check and document checks of GFCIs. We spot check GFCIs on Tier 1 safety inspections but do not document unless the GFCI malfunctions. It is than entered into C-AD Family ATS</p>

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<p>What processes exist in your department/division for electrical design review?</p>	<p>Implementation Verification</p>	<p>Electrical Safety Committee, ESH Standard 1.5.0 Electrical Safety, Lockout/Tagout Subject Area</p>	<p>C-A-OPM 13.6.1, Preparation & Issuance of Engineering Drawing/Specifications</p> <p>C-A-OPM 13.7.1, C-A and SMD Procurement Guidelines</p> <p>Safety Reviews of new equipment are formal and conducted by standing committees with C-AD and other BNL physicists, safety professionals and engineers. A parallel review system exists for both experimental areas and accelerators. See examples for the current EBIS and ERL projects. See C-AD Committees List for accelerator, and experiment reviews described in C-A-OPM Chapter 9 Series</p> <p>C-A-OPM 9.23, Procedure for Chief Engineers to Certify the Conformance of Devices</p> <p>C-A-OPM 1.5 Series for analyzing and controlling of electrical and arc flash hazards</p> <p>New purchased equipment must be designed to accept LOTO locks as required by OSHA</p> <p>NRTL electrical equipment inspector program for non-NRTL equipment</p>

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<p>*How does your department/division ensure that panel schedules of all distribution panels are maintained current and changed only through a controlled process? How is this documented?</p>	<p align="center">Implementation Verification</p>	<p>ESH Standard 1.5.0 Electrical Safety</p>	<p>*This is a known deficiency at C-AD Tier 1 inspections identify panel labels that are missing but do not verify that existing labels are correct</p> <p>The C-AD Power Distribution Group is responsible to control the use of panels and maintain one-line drawings and labeling current</p>
<p>*How does your department/division ensure that all persons working on or near energized electrical parts are training in CPR and First Aid? How is this documented?</p>	<p align="center">Implementation Verification</p>	<p>ESH Standard 1.5.0 Electrical Safety, BTMS, Training and Qualifications Subject Area</p>	<p>*C-AD has no program for first aid training. We depend upon a response from BNL Fire/Rescue by calling x2222 or x911</p> <p>Electrical workers are evaluated by the Training Manager in consultation with the Supervisor, Group Leader and Chief Electrical Engineer to determine who needs CPR training. This is then documented for individuals on their JTA in BTMS</p>

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<p>What training does your department/division provide, in addition to the web-based electrical training, for the facility (i.e., facility-specific electrical training)? How does your department/division implement this facility-specific training and how is it documented?</p>	<p align="center">Implementation Verification</p>	<p>Departmental Job-Specific Training https://sbms.bnl.gov/SBMSearch/d/1d08/1d08e951.htm</p>	<p>C-AD facility specific training in Electrical Safe Work Practices and Electrical Circuit Breaker/Switch Operation Safety. Attendance sheets are signed and completion is recorded in BTMS</p> <p>Periodic courses for electrical workers in NEC and electrical related NFPA standards. Attendance sheets are signed and completion is recorded in BTMS</p> <p>Facility Specific Training for Staff, Contractors and Users which recorded in BTMS</p> <p>LOTO OJT which is approved by the Supervisor and recorded in BTMS</p> <p>Read and acknowledgement of electrical related C-A-OPMs</p>

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<p>How does your department/division identify and record: electrical hazard levels, electrical assessments, systems, LO/TO logs, Energized Electrical Work Permit reviews, etc.? Provide evidence of reviews.</p>	<p>Implementation Verification</p>	<p>ESH Standard 1.5.0 Electrical Safety, Lockout/Tagout Subject Area; Department Specific Training; FRAs</p>	<p>Work permits and work planning including pre-job briefings and walk downs. Documented in work control logs and in completed green work permits</p> <p>Approved Energized Electrical Work Permits C-A-OPM 1.5 Series for analyzing and controlling of electrical and arc flash hazards</p> <p>LOTO logs and annual LOTO reviews by Supervisors (Tickler Card #303) in accordance with OSHA requirements. The annual review is documented in the Tickler Card file</p> <p>Electrical FRAs and JRAs</p> <p>Electrical Program assessments by C-AD QA and BNL. Recommendations are tracked in C-AD Family ATS</p> <p>Identification of OSHA violations missed by the OSHA inspection in 2003 by ESSHQ Division. These are being tracked by ESSHQ Division</p> <p>Tier 1 Safety Inspections tracked in C-AD Family ATS</p>

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<p>*What processes are used at the department/division level to address electrical safety hazards during selection and purchasing of equipment?</p>	<p>Implementation Verification</p>	<p>Purchase Requisitions Subject Area, Procurement Operations Manual</p>	<p>Large purchases use approved Specifications C-A-OPM 13.7.1, C-A and SMD Procurement Guidelines</p> <p>Documented NRTL Electrical Equipment Inspections by C-AD inspectors</p> <p>See C-AD Committees List for accelerator, and experiment reviews described in C-A-OPM Chapter 9 Series. In some cases these committees review the specifications before they are put out for bidding</p> <p>The requirement to purchase NRTL approved equipment if it is available and to conduct design reviews (see C-A-OPM 1.5)</p> <p>C-A-OPM 9.23, Procedure for Chief Engineers to Certify the Conformance of Devices</p> <p>C-A-OPM 13.6.1, Preparation & Issuance of Engineering Drawing/Specifications</p>

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What are the qualifications of the department/division personnel performing the electrical reviews? (Safety reviews, sign drawings, etc.)	Implementation Verification	AHJ Training	<p>Education and experience must match their responsibilities</p> <p>See C-AD Committees List for accelerator, radiation safety system and experiment reviews described in C-A-OPM Chapter 9 Series. Each committee has electrical experts from within C-AD and from other BNL organizations assigned to the membership</p> <p>Our C-AD Chief Electrical Engineer and our C-AD Power Distribution Group Leader are active members of the BNL Electrical Safety Committee</p> <p>C-AD has 22 electrical engineers with college degrees and some of our electrical engineers also have PE Licenses</p> <p>C-AD has eight trained NRTL Electrical Equipment Inspectors</p>
Fall Protection			
Who in your department/division has fall protection in their R2A2? What training do these workers have?	Implementation Verification	Portable Ladder Safety Training, Aerial Lift Operator Training, Fall Protection Training, Scaffold User Training	<p>Fall protection training is assigned to applicable worker's JTAs in BTMS. This decision is made by the Training Manager consulting with the Supervisor</p> <p>Staff, Users and Contractors assigned this JTA take the BNL Fall Protection course</p>
Fire Protection			

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<p>*Has your department/division reviewed the list of OSHA requirements and NFPA fire codes for standards that are applicable to your operations? How has this been documented?</p>	<p>Implementation Verification</p>	<p>Fire Safety Subject Area</p>	<p>The C-AD SAD, Chapter 3, p.92 references a list of codes, standards and design guides that apply to Fire Protection. Any additional documents, and the reason for their use, are identified in the appropriate FHA. These codes, standards and design guides apply to facilities built in the last 10 years. Older facilities may comply with all or part of these standards</p>
<p>*Have details of applicable OSHA requirements NFPA codes been reviewed and implemented? How has this been documented?</p>	<p>Implementation Verification</p>	<p>Fire Safety Subject Area</p>	<p>*BNL and C-AD have hired Hughes to perform FHAs for C-AD facilities. These FHAs, scheduled to be completed by the end of CY07, will review the fire-safety-related OSHA and NFPA requirements for our facilities showing compliance and recommending required corrective actions necessary to satisfy compliance</p>
<p>*Have training/qualification requirements been changed to implement these OSHA and NFPA requirements?</p>	<p>Implementation Verification</p>	<p>Fire Safety Subject Area, Training and Qualifications Subject Area</p>	<p>No changes have been made recently but we have facility specific training that informs staff, users and contractors how to respond to emergencies and how our equipment is designed to comply with life safety requirements. We use BNL and contractor Fire Protection Engineers to assist in the design, construction and modification of our experimental and accelerator facilities</p>

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			<p>See C-AD Committees List for accelerator, and experiment reviews described in C-A-OPM Chapter 9 Series. Each committee has a BNL Fire Protection Engineer assigned to the membership. Changes to training requirements, if any, would be identified by the committees. Additionally, the staff is made aware of changes to training requirements via the SBMS and BTMS systems</p>
<p>For deviations from the requirements, have funding requests been developed and submitted?</p>	<p>Implementation Verification</p>	<p>Fire Safety Subject Area</p>	<p>BNL and C-AD have hired Hughes to perform FHAs for C-AD facilities. These FHAs, scheduled to be completed by the end of CY07, will review the OSHA and NFPA requirements for our facilities showing compliance, and the priority for recommended corrective actions necessary to satisfy compliance</p> <p>*Based on these completed FHAs, C-AD will request funding to implement the recommended corrective actions</p>

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*Has your department/division evaluated the Fire Safety Subject Area to determine the effects of the newly documented requirements on your facilities and operations? Has this evaluation and the effects been documented?	Implementation Verification	Fire Safety Subject Area	<p>*BNL and C-AD have hired Hughes to perform FHAs for C-AD facilities. These FHAs, scheduled to be completed by the end of CY07, will review the OSHA and NFPA requirements that are also reflected in the Fire Safety Subject Area</p> <p>The completed FHAs will become the documentation of these evaluations</p>
How does your department/division conduct periodic inspections that consider fire safety, status of fire protection equipment, etc.? How is this documented?	Implementation Verification	Fire Safety Subject Area, ESH&Q Tier I Inspections Subject Area	<p>Tier 1 safety inspections, which are documented in C-AD Family ATS</p> <p>FHAs have been completed in the past and are currently being upgraded for the entire C-AD facility</p> <p>An FRA for General Fire Issues is periodically reviewed at least every 3 years as part of our OHSAS 18001 program</p> <p>See C-AD Committees List for accelerator or experiment reviews described in C-A-OPM Chapter 9 Series. Each committee has a BNL Fire Protection Engineer assigned to the membership. Walkthroughs of experiments and accelerator equipment are completed and documented in committee meeting minutes</p>

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Industrial Hygiene (IH)			
<p>*Does your department/division IH program include coordination with cognizant occupational medical, environmental, health, physics, and work planning professionals? How is this documented?</p>	<p>Appendix 6. (c)</p>		<p>This is accomplished by the work planning process. Hazard review and hazard control information from the work planning system described in C-A-OPM 2.28 Series. During this process the safety SMEs help determine hazards. All C-AD Work Planners are trained by taking BNL web courses and C-AD facility specific work planning training courses which are documented in the work planner's training records in BTMS</p> <p>See C-AD Committees List for accelerator or experiment reviews described in C-A-OPM Chapter 9 Series. Each committee has a BNL Fire Protection Engineer assigned to the membership. Walkthroughs of experiments and accelerator equipment are completed and documented in committee meeting minutes</p> <p>C-AD has an assigned Environmental Compliance Representative from the ESWMD, and IH Representative from SHSD and a Health Physics Group from RCD to support their respective programs. These individuals are members of the C-AD Safety Committees</p> <p>Each worker's JTA includes medical surveillance requirements related to IH</p>

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			<p>hazards that they are exposed to during their work. These are documented in the BTMS</p> <p>We work with OMC if a worker is injured to determine their best return to work schedule as described in C-A-OPM 1.22, Return to Work and Restricted (Light) Duty Work Policy</p> <p>The FRA and JRA process involves input from IH, health physicists and work planners from within and outside the Department</p>
<p>Asbestos: Confirm and report on the following:</p> <ul style="list-style-type: none"> • In-place asbestos containing material is labeled. • Handling asbestos containing material is limited to workers with OSHA/EPA specified training credentials. 	Implementation Verification	Asbestos Subject Area	<p>*Asbestos inventory for C-AD is maintained by Plant Engineering. C-AD needs to verify this process and verify that identified areas are labeled</p> <p>Tier 1 inspections periodically identify suspect areas and asks Plant Engineering to determine if asbestos is present</p> <p>Handling asbestos is done only by Plant Engineering workers with OSHA/EPA training credentials. This is supported by the following C-AD OPMs: C-A-OPM 1.7, Supervisory Practice for Working with Hazards which clearly requires Plant Engineering Asbestos Abatement Group to perform any asbestos work C-A-OPM 1.21, Cable Pulling Safety Procedure C-A-OPM 2.28.d, Work Screening Guidance</p>

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			<p>C-A-OPM 2.28.h, Screening Guide Card for Work Planning C-A-OPM 9.2.1, Procedure for Reviewing Environmental, Health and Safety Aspects of an Experiment C-A-OPM 9.2.1.e, ESRC Review Checklist C-A-OPM 9.5.14, Process Knowledge Form</p> <p>Use of the C-AD Hazard Screening Tool for accelerator additions or modifications</p>
<p><u>Beryllium:</u> Confirm and report on the following:</p> <ul style="list-style-type: none"> All operations with Beryllium are controlled to eliminate inhalation of Beryllium particulates and a Chronic Beryllium Disease Prevention Program is written by the organization or operations are prohibited (cutting, drilling, grinding, sanding, etc). Beryllium operations controls are documented (BURF form or other). Spill clean up procedures are documented. 	Implementation Verification	Beryllium Subject Area	<p>The work planning process covers the reviews of working with Beryllium supplanted by the following procedures:</p> <p>C-A-OPM 1.7, Supervisory Practice for Working with Hazards C-A-OPM 1.8, Hazard Communication Procedure C-A-OPM 2.28.d, Work Screening Guidance C-A-OPM 2.28.h, Screening Guide Card for Work Planning C-A-OPM 8.3.3, Procedure for Bleedup of Collider Ring Warm Beam Vacuum Sections C-A-OPM 8.24, Use of Beryllium</p> <p>Beryllium operational controls, including spill response and cleanup are documented in OPMs 8.24.a through 8.24.e</p> <p>C-A-OPM 9.2.1, Procedure for Reviewing Environmental, Health and Safety Aspects of</p>

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			<p>an Experiment C-A-OPM 9.2.1.e, ESRC Review Checklist C-A-OPM 9.5.9, Use of HEPA Vacuum Cleaners Use of the C-AD Hazard Screening Tool for accelerator additions or modifications</p>
<p>Biohazards: Confirm and report of the following:</p> <ul style="list-style-type: none"> • All operations with CDC or USDA etiologic agents are covered in the BNL registration with CDC. • All areas with CDC or USDA etiologic agents are posted with biohazard symbol and locked when not occupied. • Written exposure control plans are in place. • Available vaccine programs have been explained to workers. 	Implementation Verification	Biosafety in Research Subject Area	<p>All operations using etiologic agents are controlled by procedures:</p> <p>C-A-OPM 9.2.1, Procedure for Reviewing Environmental, Health and Safety Aspects of an Experiment C-A-OPM 9.2.1.e, ESRC Review Checklist C-A-OPM 9.2.1.g, NSRL Users Experimental Safety Approval Form</p> <p>No vaccines are necessary at C-AD facilities</p>
<p>Bloodborne Pathogens: Confirm and report on the following:</p> <ul style="list-style-type: none"> • Written exposure control plans are in place. • Exposure control plan has been reviewed within last 12 	Implementation Verification	Bloodborne Pathogens Subject Area	<p>*Our BBPPC, Peter Cirnigliaro, need his R2A2 updated to include this responsibility and the ESSHQ org chart needs to be updated</p> <p>C-AD Work Planning process which includes a new NSRL experiment Work Plan for each run (~3 times per year) and C-A-OPM 2.28.h,</p>

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<p>months.</p> <ul style="list-style-type: none"> Exposure control plan documents continual efforts to remove/reduce BBP hazards and better control methods. Spill clean up procedures are documented. 			<p>Screening Guide Card for Work Planning</p> <p>*The following OPM is only reviewed every 3 years. This must be changed to annually by adding this review to Tickler Card #202: C-A-OPM 3.25, Emergency Procedure for Building 958, NASA Space Radiation Laboratory. Attachment 8.2 to this procedure is the NSRL Exposure Control Plan</p> <p>C-A-OPM 9.2.1.g, NSRL Users Experimental Safety Approval Form</p>
<p><u>Chemical Safety:</u> Confirm and report on the following:</p> <ul style="list-style-type: none"> Workers have access to Material Safety Data Sheets which can be obtained within 15 minutes without assistance. Workers have training in the hazards they encounter in their operations. (Web based CBT or equivalent). OSHA regulated chemical workers have specific training. Chemical containers are labeled with at least chemical name and hazard (HazCom areas) or chemical name 	Implementation Verification	Chemicals, Working With Subject Area	<p>MSDS are all available to C-AD staff on the SHSD CMS website. All staff has computers available for their use.</p> <p>Worker training is determined by consultation between the C-AD Training manager and the workers Supervisor in accordance with C-A-OPM 1.12, Training and Qualification Plan. The results are documented in the worker's JTA which is in the BTMS</p> <p>Other OPMs related to this IH topic: C-A-OPM 1.7, Supervisory Practice for Working with Hazards C-A-OPM 1.8, Hazard Communication Procedure C-A-OPM 1.10, Environmental, Safety and Health Policy</p>

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<p>(labs). Chemical name needs to match MSDS or are crosswalk list is maintained. Manufacturer's label is adequate for this requirement.</p> <ul style="list-style-type: none"> • Carcinogen use areas are posted. • Worker exposure to hazardous chemicals is monitored. 			<p>C-AD workers have training on lead, beryllium which is documented in their JTA in BTMS</p> <p>Chemicals follow the subject area requirements on labeling and this is spot checked during Tier 1 inspections. In addition, chemical lockers are reviewed by the Environmental Coordinator and the ESWMD Waste Technician annually by ESSHQ Tickler Card #5</p> <p>No carcinogens are used at C-AD</p> <p>The IH base lining program checks for routine chemical hazards and the work planning process reviews jobs for job specific chemical monitoring</p>
<p>Confined Spaces: Confirm and report on the following:</p> <ul style="list-style-type: none"> • Inventory of confined spaces is maintained (ESD Run Cards). • Permit required spaces are permanently marked. • Entry into permitted spaces have posting at all entrances. • Permitted entry records are reviewed annually for 	<p align="center">Implementation Verification</p>	<p align="center">Confined Spaces Subject Area</p>	<p>C-AD confined spaces are listed on the ESSHQ Confined Spaces website and reviewed annually by ESSHQ Tickler Card #515, and the ESD Run Cards are reviewed and updated annually by ESSHQ Tickler Card #510</p> <p>Confined spaces are marked in accordance with the BNL Confined Spaces subject area</p> <p>The BNL SHSD Subject Matter Expert reviews C-AD Confined Space Permits annually</p>

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<p>improvements.</p> <ul style="list-style-type: none"> Workers are qualified for their role in the entry. 			Workers have the proper training for confined space entry which is documented in their JTA in BTMS
<p>Exhaust Ventilation: Confirm and report on the following:</p> <ul style="list-style-type: none"> The effectiveness of system is verified and documented. Lab hood face velocity. Local exhaust system appropriate parameters- capture velocity, duct velocity, etc. 	Implementation Verification	Exhaust Ventilation Subject Area	<p>C-AD ESSHQ verifies the effectiveness of exhaust ventilation by using the SHSD IH 62 series procedures Documentation follows the IH procedure requirements.</p> <p>*A gap exists in that all of our exhaust ventilation systems are not always done periodically, e.g., Linac, TVDG</p>
<p>Lasers: Confirm and report on the following:</p> <ul style="list-style-type: none"> A SOP is maintained for the laser operations. Laser use areas are posted. Operators have medical surveillance including eye exam and training. Laser is marked with appropriate Class and warning statement. Class 4 lasers have interlocks and posting. Appropriate PPE is used and stored properly. 	Implementation Verification	Laser Safety Subject Area	<p>The lasers at C-AD are listed with their SOPs on the ESSHQ Class IIIb and IV Lasers website. ESSHQ Tickler Card #509 requires the C-AD Laser Coordinator to review each laser twice per year to ensure all laser safety requirements are satisfied</p> <p>Postings for lasers satisfy SBMS requirements</p> <p>The laser SOPs specify medical surveillance including eye exams and training. In addition the training and medical exam requirements are included in the laser operator JTAs in BTMS</p> <p>Class IV lasers follow the SBMS requirements. IN addition, the following</p>

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			<p>procedures are examples of laser requirements and testing: C-A-OPM 1.7, Supervisory Practice for Working with Hazards C-A-OPM 2.28.h, Screening Guide Card for Work Planning C-A-OPM 4.120.72.j, LINAC Laser Interlock Systems Tests C-A-OPM 9.2.1, Procedure for Reviewing Environmental, Health and Safety Aspects of an Experiment C-A-OPM 9.2.1.e, ESRC Review Checklist C-A-OPM 9.3.1, Procedure for Reviewing Conventional Safety Aspects of a C-A System C-A-OPM 9.3.1.a, Considerations when Designing an Accelerator System for Safety</p> <p>PPE is used as specified in the approved SOP for each laser</p>
<p>Lead: Confirm and report on the following:</p> <ul style="list-style-type: none"> • Workers handling lead or lead based paints have exposure monitoring. • Workers handling lead or lead based paints are trained. • Workers exposed above permitted level are included in medical surveillance. • Areas with high lead levels 	Implementation Verification	Lead Subject Area	<p>Monitored is performed as per the IH base lining and as part of work planning. Records are retained by ESSHQ Division and put into Compliance Suite</p> <p>Training and required medical surveillance is assigned to the worker's JTA and documented in BTMS</p> <p>Examples of procedures related to lead: C-A-OPM 1.7, Supervisory Practice for Working with Hazards</p>

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are posted.			C-A-OPM 1.8 , Hazard Communication Procedure C-A-OPM 1.10 , Environmental, Safety and Health Policy Work planning system described in C-A-OPM 2.28 Series C-A-OPM 8.20 , Procedure for Handling and Disposal of Hazardous Waste C-A-OPM 9.5.9 , Use of HEPA Vacuum Cleaners We have no areas that are required to be posted for lead
<p>Natural Hazards: Confirm and report on the following:</p> <ul style="list-style-type: none"> Workers are protected from heat stress via TLV regimens or other suitable mechanism. Workers in PPE are monitored with heat stress dosimetry. 	Implementation Verification	Natural Hazards in the Environment Subject Area	C-A-OPM 1.7 , Supervisory Practice for Working with Hazards C-A-OPM 1.21 , Cable-Pulling Safety Procedure C-A-OPM 2.28.h , Screening Guide Card for Work Planning Sweeps in C-A-OPM Chapter 4 Series include warnings and PPE required for ticks and chiggers
<p>Noise: Confirm and report on the following:</p> <ul style="list-style-type: none"> High exposure areas are measured and posted. Equipment producing high noise levels is labeled. Personal exposure monitoring 	Implementation Verification	Noise and Hearing Subject Area	Posted areas are listed on the ESSHQ website Noise Areas Noise measurements and evaluations follow the SHSD IH 96 series procedures Procedures related to hearing protection: C-A-OPM 1.7 , Supervisory Practice for

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<p>data verifies dose levels are below OSHA and ACGIH standards.</p> <ul style="list-style-type: none"> Workers exposed above permitted level are included in medical surveillance. Workers exposed to noise levels above 85dBA have training on the hazards and controls (including PPE). PPE is stored in sanitary manner including provisions to disinfection between users. 			<p>Working with Hazards C-A-OPM 1.17, C-A Hearing Conservation Program C-A-OPM 1.17.a, C-A Hearing Conservation Program Interview Form Work planning system described in C-A-OPM 2.28 Series C-A-OPM 9.2.1, Procedure for Reviewing Environmental, Health and Safety Aspects of an Experiment Use of the C-AD Hazard Screening Tool for accelerator additions or modifications</p> <p>Training and required medical surveillance is assigned to the worker's JTA and documented in BTMS. This training includes noise hazards and controls, including PPE</p> <p>Hearing protection that is reused has clean wipes available for staff use</p>
<p>Respirators: Confirm and report on the following:</p> <ul style="list-style-type: none"> Users have training, medical surveillance, and fit test for each piece of equipment used. Respirators are maintained clean and stored in a manner that does not distort the face piece. Respirators are cleaned of 	Implementation Verification	Respiratory Protection Subject Area	<p>There is little respirator use at C-AD. If they are needed they are determined during the work planning process. Work planning system described in C-A-OPM 2.28 Series</p> <p>Example procedures related to respirator use: C-A-OPM 1.8, Hazard Communication Procedure C-A-OPM 3.15 Series for use of Escape Paks C-A-OPM 8.14.c, Example of Confined Space Entry Permit</p>

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<p>contaminations and disinfected between users.</p> <ul style="list-style-type: none"> • Selection of appropriate respiratory protection equipment is documented (SBMS Selection form or equivalent). 			<p>If workers need to use respirators they have the training and medical requirements in their JTA listed in BTMS We obtain all respirators and have them cleaned by ESWMD</p> <p>If a respirator is needed we follow the selection requirements of the BNL subject area, Respiratory Protection</p>
<p><u>RF/Microwave and Static Magnetic Fields:</u> Confirm and report on the following:</p> <ul style="list-style-type: none"> • High exposure areas are measured and posted (refer to SBMS RF/Microwave and Static Magnetic Fields (5G and 600G)). • Personal exposure monitoring data verifies dose levels are below OSHA and ACGIH standards. <p>(BNL policy includes training and medical surveillance)</p>	<p align="center">Implementation Verification</p>	<p>RF/Microwave Radiation Subject Area, Magnetic Fields, Static Subject Area</p>	<p>All C-AD staff checks that they are at least sometimes exposed to static magnetic fields on their JAF. Their training and medical requirements are listed in their JTA in BTMS</p> <p>RF/Microwave and Static Magnetic Field Areas are posted as per the BNL subject area</p> <p>RF/Microwave areas are listed on the ESSHQ website rf and Microwave Sources</p> <p>Area measurements have been taken and the records are with the ESSHQ Division and put into Compliance Suite</p> <p>There have been no over exposures in these fields</p> <p>Examples of procedures related to RF/Microwave and Static Magnetic Fields: C-A-OPM 1.7, Supervisory Practice for Working with Hazards</p>

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			C-A-OPM 9.2.4.a , Considerations When Making An ESRC Checkoff List C-A-OPM 9.3.1.a , Considerations when Designing an Accelerator System for Safety Work planning system described in C-A-OPM 2.28 Series
Occupational Medicine			
*Ask 3 Supervisors or Managers in your department/division if they notify the occupational medicine clinic when an employee has been absent because of a work-related injury or illness for more than 5 consecutive workdays. How is this documented?	Appendix 8 (d) (2)	Supervisor's Personnel Manual	Supervisors and Managers follow C-A-OPM 1.22 , Return to Work and Restricted (Light) Duty Work Policy which specifies that they inform OMC as soon as possible when an employee is out because of a work-related illness/injury C-AD has an OSH Target for FY07 to Re-enforce requirement to report occupational illnesses and injuries immediately to the supervisor and within 24 hours to the BNL OMC and for supervisor to notify the OMC if an employee is out of work for a non-occupational illness or injury for more than 5 consecutive workdays One Group Leader and two Technical Supervisors were asked this question and answered correctly

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<p>*Ask 3 Supervisors or Managers in your department/division if they notify the occupational medicine clinic when an employee has been absent because of a non-work related injury or illness for more than 5 consecutive workdays. How is this documented?</p>	<p>Appendix 8 (d) (2)</p>		<p>Supervisors and Managers follow C-A-OPM 1.22, Return to Work and Restricted (Light) Duty Work Policy which specifies that they inform OMC when an employee has been absent for 5 consecutive workdays from a non-work related illness/injury</p> <p>C-AD has an OSH Target for FY07 to Re-enforce requirement to report occupational illnesses and injuries immediately to the supervisor and within 24 hours to the BNL OMC and for supervisor to notify the OMC if an employee is out of work for a non-occupational illness or injury for more than 5 consecutive workdays</p> <p>One Group Leader and two Technical Supervisors were asked this question and answered correctly</p>

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<p>*Does your department/division provide OMC information on, and the opportunity to participate in, worker safety and health team meetings and committees? If so, how?</p>	<p>Implementation Verification</p>		<p>The OMC has participated and given presentations to C-AD Management during our annual EMS/OSH Management Reviews. Minutes of these discussion are found at the Management Reviews website</p> <p>We have given tours of C-AD facilities to OMC staff including Dr. Falco so they are aware of hazards at C-AD</p> <p>The clinic has given talks to our staff on ergonomics</p> <p>An OSH target for FY07, in C-A-OPM 14.30, is to invite a representative of the OMC to a Worker Occupational Safety and Health (WOSH) Committee meeting to ensure interaction and input on worker health issues. This action is assigned to a specific individual.</p>
Welding and Cutting			
<p>How do departments train personnel to perform cutting, welding, soldering, and brazing?</p>	<p>Implementation Verification</p>		<p>C-AD uses Central Shops staff for most of our welding and brazing.</p> <p>*Soldering, cutting and brazing are done by C-AD staff based on OJT and experience. Some incidental welding is also performed by our staff based on their experience. C-AD does not have a documented program to qualify these staff.</p>

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*What requirements are workers following the when performing incidental brazing? (i.e., fire retardant clothing.) How is this verified?	Implementation Verification	American National Standards Institute (ANSI) Z 49.1, (1999), Safety in welding, cutting and allied processes, Sections 4.3 and E4.3	*The work planning process determines the requirements for this type of work. We have no specific procedures to cover this work.
Motor Vehicle Safety			
*Does your department/division safety program for motor vehicles include awareness campaigns and incentive programs to comply with on site speed limits, encourage safe driving, and include provisions for enforcement?	Appendix 9. (c) (4), (5), (6)	Traffic Safety Subject Area	C-A-OPM 1.26 , C-AD Standards for Disciplinary Action C-A-OPM 1.26.1 , C-AD Criteria for Application of Disciplinary Action
Nanotechnology (Reserved)			
Does your department conduct work with nanomaterials? If so, are you in compliance with the interim subject area?		Interim Procedure – Approach to Nanomaterial ESH	C-AD has not used nanomaterials that are dispersible. NSRL has used some that was encapsulated *We need to review the BNL subject area and write procedures to control use on nanomaterials
Workplace Violence Prevention (Reserved)			

**10 CFR Part 851 Worker Safety & Health Final Rule Implementation Plan
Department/Division Self Assessment Checklist**

10 CFR Part 851 WS&H Program Department/Division Self Assessment Questions	Part 851 Rules & Regulation Section	Institutional Evidence of Implementation	Department/Division Evidence of Implementation (Identify operating procedures, training, etc. and status of implementation)
Does your department/division have a process for identifying potential for workplace violence and addressing issues or referring issues to the Conflict Resolution Committee?	851 Appendix A.12	BNL Conflict Resolution Committee	C-A-OPM 1.26 , C-AD Standards for Disciplinary Action C-A-OPM 1.26.1 , C-AD Criteria for Application of Disciplinary Action