Integrated Safety Management Plan
for the
Daya Bay Reactor Neutrino Experiment

Location: Daya Bay, China
US Contractor Project Manager: Bill Edwards
PRC Contractor Project Manager: Yifang Wang

March 2008

Submitted by:

Dana Beavis, Daya Bay Safety Officer
Brookhaven National Laboratory

Date 2/26/08

Marty White, Daya Bay Safety Liaison
Lawrence Berkeley National Laboratory

Date 3/3/08

CONCURRENCES:

Xiaonan Li, PRC Safety Officer
Institute for High Energy Physics

Date: 3/12/2008

Steve Kettell, US Chief Scientist
Brookhaven National Laboratory

Date: 2/26/08

APPROVAL:

Bill Edwards, US Project Manager
Lawrence Berkeley National Laboratory

Date: 2/29/08

Yifang Wang, PRC Project Manager
Institute for High Energy Physics

Date: 3/12/08

Revision History

Revision No.	Pages Affected	Effective Date
001	p10	3/12/08

Table of Contents

1 ESSH Policies and Management Responsibilities…….1
2 Clear Roles and Responsibilities……3
3 Competence Commensurate with Responsibilities……7
4 Balancing Priorities...……..7
5 Identification of Safety Standards and requirements……..7
6 Installation Work and Operations Concurrent with Installation…….8
7 Hazard Controls……..9
8 Operations……..11
9 Appendix I- Work Permit Form…….12

Integrated Safety Management
For the Daya Bay Reactor Neutrino Experiment

The Daya Bay Reactor Neutrino Experiment will be designed, installed and operated by an international collaboration of research institutions. The Experiment will provide a precision measurement of the neutrino mixing angle θ_{13}. China and the US are taking leadership roles in the Daya Bay Project. The experiment will be conducted at the China Guangdong Nuclear Power Group's (CGNPG) Daya Bay Nuclear Power Facility in southern China, one of the world's most powerful nuclear power complexes. The reactors produce copious electron antineutrinos, whose flux measurements at several experimental sites provide a measure of the mixing angle θ_{13}. The experiment's surface facilities and underground access will be located on the power plant property.

The Daya Bay site was chosen for its copious supply of electron antineutrinos and its favorable topography. The experiment requires that there are mountains with sufficient rock overburden to shield the sensitive detectors from cosmic rays. The rock must have sufficient structural strength to allow tunneling and the construction of large caverns. The detectors will be placed in large caverns distributed along a tunnel constructed under the mountains. The Daya Bay site meets the requirements for the experiment to perform a world class measurement of θ_{13}.

Three major research laboratories are taking a leadership role in managing the project. The Institute of High Energy Physics (IHEP) in Beijing China shall act as the host laboratory for the facility and manage the Chinese portion of the project including the civil construction of the facilities and infrastructure. Lawrence Berkeley National Laboratory (LBNL) and Brookhaven National Laboratory (BNL) will manage the US portion of the project. IHEP, LBNL, and BNL will assume a leadership role in developing and implementing integrated safety management in the project and the operations of the experiment.

This document describes how the international collaboration shall implement Integrated Safety Management (ISM). This document does not provide a complete description of the Project or the experiment. The experiment and management structure are described in detail in the Daya Bay Technical Design Report (TDR). Additional information can be found in the Memorandum of Understanding (MOU) between IHEP, LBNL, and BNL. The MOU requires that the participants follow this Integrated Safety Management plan.

1.0 Environment, Safety, Security, and Health Policies and Management Responsibilities

1.1 Environment, Safety, Security & Health (ESSH) Policy

The Daya Bay Collaboration expects every participant, contractor, and guest to take personal responsibility for adhering to the following principles:

- **Environment:** We protect the environment, prevent pollution, and conserve resources.
- **Safety:** All work for the Collaboration will be planned. A safe work place will be maintained and everyone will perform work safely. We will take responsibility for the safety of ourselves, coworkers, and guests.
- **Security:** We will protect people, property, personal information, and the facilities.
- **Health:** We will protect the health of all persons within the scope of the Daya Bay Collaboration efforts and the surrounding community.
- **Compliance:** Members of the collaboration will comply with all appropriate ESSH requirements at their respective work locations and will comply with the standards established for the Daya Bay experimental site.
- **Community:** Members of the Daya Bay Collaboration are expected to act as ambassadors for their home institutions and demonstrate proper respect for other cultures with which they may interact.
- **Continual Improvement:** We will strive to continually improve the ESSH performance of the Daya Bay Collaboration.

1.2 ESSH Policy Committee

The Daya Bay Collaboration has established an ESSH policy committee whose members have been chosen based on their expertise and roles within the project and experimental collaboration (including the Project Managers, Chief Engineers, Chief Scientist, Project Safety Officers, Safety Liaison and power plant Liaison). This committee has the responsibility to review ESSH performance and advise the Project Safety Officers on ESSH policy as deemed appropriate within the guidelines of this document and the MOUs. A draft charter for this committee is under review.

The ESSH Policy Committee may be requested by the Safety Officers or Project Management to consider modification to the safety requirements. The Project will follow the safety standards presented in the BNL Standards Based Management System (SBMS), as noted in the MOU between IHEP, LBNL, and BNL, and discussed below. When the Chinese standard differs from SBMS the more stringent standard will be used. The Project Safety Officers may consider adopting a less stringent standard on a case by case basis, provided it meets or exceeds the Chinese standards. A review of the appropriate standards used at similar facilities will be taken into consideration to determine if it is reasonable to adopt a less stringent standard. Considerations of the single purpose nature of the facility and the fact that all personnel receive training should be used in the considerations.

All environmental releases and issues at the experiment shall follow the appropriate Chinese requirements.

1.3 Daya Bay Experiment

IHEP, as the host laboratory, has final responsibility for environment, safety, security, and health at the Daya Bay Experiment. IHEP is responsible to provide the Daya Bay Collaboration with all environmental regulations that must be satisfied at the experiment. IHEP is responsible to ensure that all safety, security, and health regulations adopted for use at the Daya Bay Experiment meet or exceed local Chinese requirements.

1.4 Daya Bay Nuclear Power Facility (CGNPG)

IHEP is responsible to provide a Liaison Officer to work with CGNPG to communicate the rules and regulations that the collaboration must follow while working at the Daya Bay site. These regulations shall be incorporated into the work procedures, training, and policies of the collaboration.

1.5 Other Sites

Activities performed on behalf of the Daya Bay Collaboration at other sites must follow the ESSH regulations of that site. The respective Level 2 and Level 3 managers in conjunction with the local facility safety staff are responsible to ensure that all rules are followed.

2.0 Clear Roles and Responsibilities

It is important that roles and responsibilities be clearly understood. The present roles and responsibilities are framed within the Daya Bay Project management structure. Roles and responsibilities for the institutions and project personnel involved in the Daya Bay Collaboration are discussed below.

An organizational chart for ESSH is show in Figure 1. Depending on the activity being considered various personnel may not participate. For example, in the early design reviews the Local Safety Coordinator (LSC) would not be involved. In addition, particular personnel may serve in several roles in the safety chain of command.

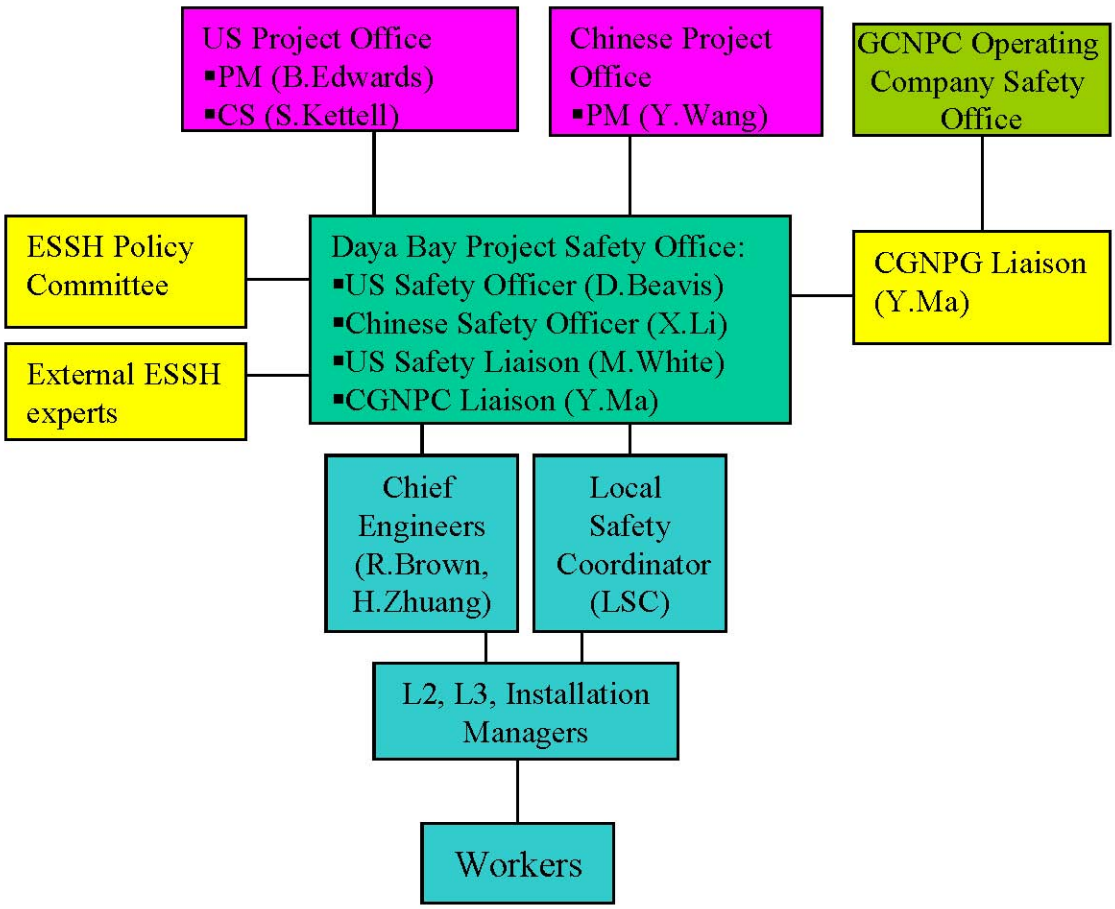

Figure 1: Daya Bay safety organization chart

2.1 Daya Bay Project Roles and Responsibilities

2.1.1 Daya Bay Project Managers

These individuals are responsible for administering, planning, organizing, and controlling the Daya Bay project technical, cost, schedule and ESSH objectives. All ESSH issues and concerns follow project leadership lines up to the Project Managers, who therefore have the responsibility to assure that the appropriate competence and training exists at all levels, and that the appropriate processes consistent with the ISM are in place.

2.1.2 Daya Bay Project Safety Officers

The Daya Bay Project Safety Officers (Chinese and US) are assigned to assist the Daya Bay Project Management Team in designing, constructing, fabricating, installing, commissioning, and operating all aspects of the Daya Bay Project by providing ESSH oversight of these activities. They keep the Daya Bay Project Managers informed of current and potential

upcoming ESSH issues. The Daya Bay Project Safety Officers are responsible for completing required ESSH reports.

2.1.3 Local Safety Coordinator

IHEP is responsible to provide the Local Safety Coordinator (LSC). The LSC is responsible to monitor that all ESSH rules are followed at the Daya Bay Experiment. Typically, he has the highest safety authority on site, unless the Project Safety Officers or Project Managers are on site. He will provide the Project Safety Officers with periodic reports on the ESSH performance at the Daya Bay Experiment. The LSC will be reachable on an around the clock basis and will be within one hours drive of the Daya Bay experimental site.

The LSC will conduct periodic inspections. He will verify that workers are following the correct procedures for installation, construction or operations. Any observed ESSH deficiencies shall be documented and reported to the Daya Bay Safety officers.

Employees, users, and subcontractors are instructed to report any environmental, safety or health incidents or near misses to their on-site supervisor. The supervisor will notify the LSC who will be responsible to determine if further notifications are necessary. Injuries, damage or near misses to equipment will be reported to the Project Safety Officers and the Project Managers. Injuries or near misses to personnel will be reported by the Project Managers to IHEP, LBNL, and BNL management. The workers, supervisors, and LSC shall take immediate action to reduce any further risk. The LSC will determine what work needs to be stopped or continued after initial assessment of the problem that occurred.

A Local Emergency Coordinator (LEC) shall always be on site while working is being performed. IHEP is responsible to provide personnel to serve as an LEC. The LEC reports to the LSC. The primary function of the LEC is to monitor safety alarms and alerts and to implement the Emergency Safety Plan in the event of an Emergency. The LEC shall act as a point of contact for the emergency response team when it arrives.

2.1.4 Daya Bay Project Chief Engineers

The Daya Bay Project Chief Engineers are responsible for the coordination of the design, fabrication, and installation of the project. They work with the Daya Bay LSC to implement Integrated Safety Management (ISM) and resolve any ESSH issues that arise.

The Chief Project Engineers are responsible to review designs for mechanical engineering standards and good practices. The installation and

assembly procedures for work activities at the Daya Bay Experiment will be reviewed and approved by the Chief Engineers. The project office will oversee the procedures and maintain an archive of the procedures. The Safety Officers are available to assist the Chief Engineers on ESSH issues in the work practices and procedures that are beyond the Chief Engineers expertise.

2.1.5 Daya Bay Installation Managers

All Level 2 or Level 3 Managers or their designees are responsible for applying the principles of Integrated Safety Management to their subsystems. The L2 Managers for Installation (Installation Managers) are responsible for the overall installation plan and to assure that ESSH is fully integrated into this installation plan and the regular installation planning meetings. Their onsite designee, the Local Installation Manager (LIM) is responsible for direct implementation of all ESSH policies and standards to the tasks being preformed on a daily basis. The LIM serves as the point of contact along with the LSC between the subcontractors and IHEP. The LIM is responsible for assuring that the subcontractor(s) are complying with applicable ESSH requirements. The LIM shall communicate any ESSH issues to the LSC.

2.1.6 Daya Bay Workers

Every worker at Daya Bay is responsible for following safety rules and for stopping any unsafe acts. Workers have the authority to stop any work they witness which they feel puts anyone at risk of injury or equipment at risk of damage. Workers must have the appropriate training to perform their work.

2.1.7 ESSH Project Oversight

Day to day ESSH oversight is provided by the LSC and the LIM. When possible the Chief Engineers, Installation Managers, Project Safety Officers, and Project Managers shall observe ESSH practices at the Daya Bay Experiment.

2.1.8 ESSH Independent Oversight

IHEP and the US Labs shall provide for independent oversight of the work for the Daya Bay Experiment to the extent they deem is needed. This can include inviting outside experts to review designs of detector subsystems, installation, work procedures, and perform onsite inspections.

3.0 Competence Commensurate with Responsibilities

Project Managers are responsible to assure that members of the Project have the expertise necessary to effectively complete their assignment. All members of the project are encouraged to obtain outside expertise for issues beyond their usual experience and training. IHEP and the US Labs will use their ESSH organizations and resources to help address issues.

4.0 Balancing Priorities

The key to balancing priorities is assuring that the decision-makers, the Project Managers, are provided accurate information about the work activity, schedule, costs, hazards, risks, and controls. The LSC shall meet regularly with the Installation Managers to determine if there are potential interferences in priorities. Completing a task on schedule should never take precedent over completing the task in a safe (and prescribed) manner.

5.0 Identification of Safety Standards and Requirements

5.1 Identification of safety standards and applicable safety requirements is the responsibility of the Level 2 and Level 3 managers with assistance from the Safety Officers as described below. In order to identify the safety standards, the Level 2 and Level 3 managers will first define the scope of the subsystem work with the approval of the project managers and the Daya Bay Collaboration.

5.2 Once the scope of the subsystem work has been defined the Level 2 or Level 3 managers will use the BNL SBMS to identify and mitigate hazards in the design of experimental equipment. The SBMS provides for an initial hazard screening tool for the identifying hazards and the standards, which the design must meet to lower the potential risk to acceptable levels. The completed hazard assessment tool will be sent to the Project Safety Officers for review.

5.3 The scope of the review by the Project Safety Officers shall cover environmental, safety and health issues. The respective managers will work with the Project Safety Officers to assure that the proper assessment has been done (including internal design reviews) and the designed device meets the standards. Controls shall be identified to provide for safe installation and operations. The identified hazards will be captured in the Hazards Analysis Document (HAD). Not all items need to be reviewed at the same time.

5.4 The Level 2 or Level 3 managers shall have any changes to the approved scope, design or work practices reviewed and approved by the Project Safety Officers prior to implementing the changes.

5.5 The Level 2 or Level 3 managers may request that the controls identified by the BNL SBMS be modified provided the modifications meet or exceed Chinese

safety regulations. The Level 2 or Level 3 manager will assist the Project Safety Officers in providing a description of the risk verses benefit of any changes in controls. The Project Safety Officers shall seek outside advice from ESSH professionals where appropriate. The ESSH Policy Committee will make a final decision on the change in controls.

6.0 Installation Work and Operations Concurrent with Installation

6.1 Work Planning

All work shall be planned. Most of the work risks should have been captured in the process described in section 5 above. A graded approach will be applied to work planning (a complete description of the work planning process can be found in the BNL SBMS subject area: Work Planning and Control for Experiments and Operations), which identifies the hazards, risks and complexity according to the following three categories:

6.1.1 Worker Planned Work

This level of work represents the lowest level of risk and complexity. It recognizes that the skill levels of the worker should be sufficient to reduce any risk to acceptable levels. The worker is expected to recognize when conditions exist that require additional work planning. The worker is also expected to know the Personal Protective Equipment (PPE) that is required to perform the task safely.

6.1.2 Prescribed Work

This work is shall require documented work procedures which have been approved by the Installation Managers and Project Chief Engineers. The procedure will define the necessary level of training, the PPE, number and type of workers, and the necessary documentation to conduct the work. Prescribed Work will typically be used for repetitive tasks that are considered to have more risk than Worker Planned Work.

6.1.3 Work Permit

Work that requires on the job planning and careful consideration of the risks will be conducted under a work permit. The work permit will document the required personnel, training, PPE, and documentation for the job. A copy of the Daya Bay work permit form is shown in appendix I. Tasks not originally captured as prescribed work during the review process shall be conducted with a Work Permit pending the approval of documented work procedures, provided the tasks are hazardous enough to warrant the use of a work permit.

6.2 Worker Feedback

Workers are expected to provide the Installation Managers with feedback on the work they perform. The Installation Managers shall incorporate worker suggestions into updates of the worker procedures or work permits to improve the working conditions. In some cases the Installation Managers may request that the Safety Officers consider modifying the regulations for the work so that the work conditions can be improved.

6.3 Personal Protective Equipment (PPE)

The Daya Bay Project will provide all workers with the required PPE. The necessary PPE to safely conduct a task shall be captured in the work review process as discussed in section 6.1 above. The Daya Bay Project will also provide workers with the necessary training to use the PPE properly. The LSC shall periodically check the condition of the PPE to ensure that it is not damaged.

6.4 Training

The Daya Bay Collaboration in conjunction with IHEP and the power plant shall ensure that proper training is available for all workers. The training will be commensurate with the tasks the individual will be required to perform. When necessary the collaboration will pay for a worker to receive appropriate certification for the job he is expected to perform.

The Daya Bay Safety Officers are shall maintain a training database for the experiment. The database shall be available to the LSC and the Installation Managers at the experiment.

The Installation Manager is responsible to ensure that all workers have the necessary training for the jobs they are performing underneath his supervision and to verify this training with the LSC.

7.0 Hazard Controls

The Daya Bay Experiment shall control some hazards with a Facility Safety System and an Experimental Hazard System. These systems are important in the reduction of hazards and must not be compromised.

7.1 Facility Safety Systems

These systems are part of the facility infrastructure and typically provide life safety functions. The engineering firm, Yellow River Engineering Company (YREC), provided the engineering design for the civil construction and the life safety systems such as fire detection and suppression, smoke detection, emergency lighting, and communications. YREC has extensive experience in the

design of road tunnels and railway tunnels. YREC will monitor the work and inspect that the specified the requirements of the infrastructure and safety systems have been properly installed by the subcontractor. The systems are designed to satisfy the local regulations.

The primary function of the facility safety system is to reduce the hazards to personnel from smoke, fire, and emergency egress. The system will alarm the local fire department in the event of a fire, alert personnel in the tunnel, and alert the shift crew in the control room of the hazard and its location. The system provides for smoke clearing functions to enable personnel to egress out the facility or to refuge rooms. There may be automatic fire suppression in areas if specified by a fire hazards analysis.

The Project Managers with the assistance of the Project Officers shall determine what systems must be operational for different phases of the project. Well defined acceptance, maintenance, and testing procedures must be in place. Appropriate bypass procedures may be defined. The personnel allowed to work on these systems will be carefully considered.

7.2 Experimental Hazard Systems

The experiment shall use a series of sensors in conjunction with the slow controls system to reduce the likelihood of a condition which would increase the risk to personnel, equipment or activate the Facility Safety Systems. The Level 2 or Level 3 managers in conjunction with the Project Safety Officers shall define these systems and develop the processes of configuration control.

The primary function of the experimental hazard system is to reduce hazards directly related to the experimental equipment and be integrated into the experimental systems. The electronics racks will have smoke detectors that will interlock the power in the event that smoke is detected. This is expected to be more sensitivity than the facility system for smoke/fire occurring in the electronics. The experimental system will use flammable gas detectors to examine whether there are leaks of flammable gas and interlock the flammable gas flow off when detected levels are above the interlock level. There will be Oxygen Deficient Hazard (ODH) sensors, if necessary, to monitor for potential conditions of oxygen deficiency. The experimental safety system will use alert and alarm levels as deemed appropriate by the safety reviews. The alarm levels will alert personnel to allow for intervention before the interlock level is exceeded and the system takes automatic action.

8.0 Operations

When the Project is declared complete and the experiment moves into an operations phase, this document will be updated to represent the new experimental management structure and the departure of various project

personnel. It is agreed that the ISM shall retain most of the present form and philosophy in continuing Integrated Safety Management in the data taking and analysis phase.

Appendix I: Work Permit Form

Work Permit # _____

Work Order # _____
Job# _____ Activity# _____

1. Work requester fills out this section. ☐ Standing Work Permit

Requester:	Date:	Ext.:	Subsystem:
Other Contact person (if different from requester):			Ext.:
Work Control Coordinator (Installation Manager):		Start Date:	Est. End Date:
Brief Description of Work:			
Area:	Room:	Equipment:	Service Provider:

2. WCC, Requester/Designee, Service Provider, and ESSH (as necessary) fill out this section or attach analysis

ESSH ANALYSIS					
Radiation Concerns	☐ None	☐ Activation	☐ Airborne	☐ Contamination	☐ Radiation ☐ Other
☐ Special nuclear materials involved, notify Isotope Special Materials Group				☐ Fissionable materials involved, notify Laboratory Criticality Officer	
Radiation Generating Devices:	☐ Radiography	☐ Moisture Density Gauges		☐ Soil Density Gauges	☐ X-ray Equipment
Safety and Security Concerns	☐ None	☐ Explosives	☐ Transport of Haz/Rad Material		
☐ Adding/Removing Walls or Roofs	☐ Critical Lift	☐ Fumes/Mist/Dust*	☐ Magnetic Fields*	☐ Pressurized Systems	
☐ Asbestos*	☐ Cryogenic	☐ Heat/Cold Stress	☐ Nanomaterials/particles*	☐ Railroad Work	
☐ Beryllium*	☐ Electrical	☐ Hydraulic	☐ Noise*	☐ Rigging	
☐ Biohazard*	☐ Elevated Work	☐ Lasers*	☐ Non-ionizing Radiation*	☐ Security Concerns	
☐ Chemicals/Corrosives*	☐ Excavation	☐ Lead*	☐ Oxygen Deficiency*	☐ Suspect/Counterfeit Items	
☐ Confined Space*	☐ Ergonomics*	☐ Material Handling	☐ Penetrating Fire Walls	☐ Vacuum	
* Industrial Hygiene (IH) Review Required				☐ Other	
Environmental Concerns		☐ None	☐ Work impacts Environmental Permit No.		
☐ Atmospheric Discharges (rad/non-rad)		☐ Land Use Institutional Controls	☐ Soil Activation/contamination	☐ Waste-Mixed	
☐ Chemical or Rad Material Storage or Use		☐ Liquid Discharges	☐ Waste-Clean	☐ Waste-Radioactive	
☐ Cesspools (UIC)		☐ Oil/PCB Management	☐ Waste-Hazardous	☐ Waste-Regulated Medical	
☐ High water/power consumption		☐ Spill potential	☐ Waste-Industrial	☐ Underground Duct/Piping	
Waste disposition by:				☐ Other	
~~Pollution Prevention (P2)/Waste Minimization Opportunity:~~		~~☐ No ☐ Yes~~			
FACILITY CONCERNS	☐ None				
☐ Access/Egress Limitations	☐ Electrical Noise	☐ Potential to Cause a False Alarm		☐ Vibrations	
	☐ Impacts Facility Use Agreement		☐ Temperature Change	☐ Other	
☐ Configuration Control	☐ Maintenance Work on Ventilation Systems		☐ Utility Interruptions		
WORK CONTROLS					
Work Practices					
☐ None	☐ Exhaust Ventilation	☐ Lockout/Tagout	☐ Spill Containment	☐ Security (see Instruction Sheet)	
☐ Back-up Person/Watch	☐ HP Coverage	☐ Posting/Warning Signs	☐ Time Limitation	☐ Other	
☐ Barricades	☐ IH Survey	☐ Scaffolding-requires inspection	☐ Warning Alarm (i.e. "high level")		
Personal Protective Equipment					
☐ None	☐ Ear Plugs	☐ Gloves	☐ Lab Coat	☐ Safety Glasses	
☐ Coveralls	☐ Ear Muffs	☐ Goggles	☐ Respirator*	☐ Safety Harness	
☐ Disposable Clothing	☐ Face Shield	☐ Hard Hat	☐ Shoe Covers	☐ Safety Shoes	☐ Other
Permits Required (Permits must be valid when job is scheduled.)					
☐ None	☐ Cutting/Welding	☐ Impair Fire Protection Systems			
☐ Concrete/Masonry Penetration	☐ Digging/Core Drilling	☐ ~~Rad Work Permit RWP No~~			
☐ Confined Space Entry	☐ Electrical Working Hot	☐ Other			

Dosimetry/Monitoring			
☐ None	☐ Heat Stress Monitor	☐ Real Time Monitor	☐ TLD
☐ Air Effluent	☐ Noise Survey/Dosimeter	~~☐ Self-reading Pencil Dosimeter~~	☐ Waste Characterization
☐ Ground Water	☐ O_2/Combustible Gas	~~☐ Self-reading Digital Dosimeter~~	☐ Other
☐ Liquid Effluent	☐ Passive Vapor Monitor	☐ Sorbent Tube/Filter Pump	
Training Requirements (List specific training requirements)			

Based on analysis above, the Walkdown Team determines the risk, complexity, and coordination ratings below:				If using the permit when all hazard ratings are low, only the following need to sign: (Although allowed, there is no need to use back of form)	
ESSH Risk Level:	☐ Low	☐ Moderate	☐ High	WCC:	Date:
Complexity Level:	☐ Low	☐ Moderate	☐ High	Service Provider:	Date:
Work Coordination:	☐ Low	☐ Moderate	☐ High	Authorization to start	Date:
				(LSC authorizes work permits)	

3. Both work requester and service provider contribute to work plan (use attachments for detailed plans)

Work Plan (procedures, timing, equipment, and personnel availability need to be addressed):	
Special Working Conditions Required (e.g., Industrial Hygiene hold points or other monitoring)	
~~Notifications to operations and Operational Limits Requirements:~~	
Post Work Testing, Notification or Documentation Required:	
Job Safety Analysis Required: ☐ Yes ☐ No	Walkdown Completed (Required): ☐ Yes

Reviewed by: Primary Reviewer signature means that the hazards and risks that could impact ESSH have been identified, a Walkdown was completed and the hazards will be controlled according to DAYA BAY requirements.

Title	Name (print)	Signature	Institution	Date
Primary Reviewer				
ES&H Professional				
~~Building Manager~~	~~____~~		~~____~~	~~____~~
Service Provider				
Work Control Coordinator				
Other				
	Review Done: ☐ in series	☐ team		

4. Job site personnel fill out this section.

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements (including any attachments).			
Job Supervisor:		Contractor Supervisor:	
Workers:	Institution	Workers :	Institution
Workers are encouraged to provide feedback on ESSH concerns or on ideas for improved job work flow. Use feedback form or space below.			

5. Local Safety officer

Conditions are appropriate to start work: (Permit has been reviewed, work controls are in place and site is ready for job.)

Name:	Signature:	Institution:	Date:

6. Worker provides feedback.

Worker Feedback (use attached sheets as necessary)
a) WCM/WCC: Are there any changes as a result of worker feedback? ☐ Yes ☐ No
Note: See work planning and control subject area section 2.6.

7. Post Job Review/Closeout: LSC checks quality of completed permit and ensures the work site is left in an acceptable condition. (LSC can delegate clean up of work area to work supervisor.) The LSC ensures that the change process to update drawings, placards, postings, procedures, etc. are initiated, if necessary.

Name:	Signature:	Life#:	Date:
Comments:			

WCC and installation manager are interchangeable.
Items crossed out should not apply to Daya Bay.
Form is based on the BNL work permit.