BNL *Safety Solution* Program

FY06 Project Submission Form

Title: **Installation of Sound Barrier Wall at STAR (B1006) to Separate the Pumping System Noise from the Electrical Breaker Area**	
Site	Brookhaven National Laboratory
Dept/Div	**Collider-Accelerator Department**
Submitter Point of Contact	Name: Al Pendzick Organization: C-AD Bldg. #: 911B Phone: 4718 email: Pendzick@bnl.gov
Date of Submission	12/19/2005

Text Description: Add sound reduction barrier wall on 2nd Floor of STAR Experimental Hall, B1006, to separate the Pumping System Section from the Breaker/Power Supply Section of the Second Floor. This will reduce the noise levels in the Breaker/Power Supply Section of the 2nd Floor since the noise is generated by the pumping system and make critical communications easy while performing Breaker and Power Supply operations. It will remove the need for hearing protection and reduce the tendency for worker to not wear the proper hearing protection so communications can be improved during breaker/power supply operations. Reduction is expected to be from a maximum level of 91 DBA to about 70 DBA in the breaker/power supply area following barrier installation.

Potential for Broader Application: Can be used at other BNL locations for the same reason, where original designs did not properly consider noise reduction by engineering methods.

Graphic Description: Drawings, material costs and proposed Contractor cost proposal maintained by by Al Pendzick (copies attached).

Return form to:
R. Selvey, Building 120

Project Details (complete all applicable sections below that provide evaluation information to the S2 Council)		
Project type	**X** Elimination of Hazard/Source **X** Installation of barrier ☐ Hazard reducer	☐ Personal Protective Equipment ☐ Training ☐ Other
Primary hazards avoided	☐ Radiological material ☐ Chemical **X** Physical hazard	☐ Ergonomic ☐ Fire ☐ Electrical ☐ Other:
Projected annual injury reduction	Reduce chance of hearing Threshold Shift to worker occurring from high noise levels and the chances of improper breaker/power supply operations which could damage equipment and cause worker injury.	
Projected useful life	☐One time reduction or x Annually recurring	
Requested expense funds	Costs for material	$6000.00
	Cost for labor/installation	$15975.00 - Contractor cost proposal in 11/2005.
	Cost for training	None
	Other	None
Total project cost	Materials $6000, Contract installation $15,975 TOTAL $21,975	
Projected annual savings	1. Avoid cost of disability from hearing shift of worker 2. Avoid improper breaker or power supply operation causing equipment damage or injury. This cost cannot be accurately estimated since it depends upon the injury.	
Payback period	Could be as little as one year depending upon the disability payment needed for the particular case.	
Additional Funding Source	C-AD can eventually pay for some of the funding, either materials or contract when their funding is restored by DOE. It is suggested that the materials ($6000) be purchased with this P2 Funding Award.	
Non-financial Benefits	1. Ease of communications between workers when conducting critical operations on 13.8 kV breaker or STAR Magnet Power Supplies by using engineering controls instead of administrative controls and PPE. 2. Reduce chance of equipment damage or worker injury because of communication problem while wearing hearing protection.	
Regulatory drivers	1. OHSAS 18001 – JRA 13-05B at C-AD recommended that this be considered to improve communications. 2. OSHA General Duty Clause, 5 (a) (1) 3. OSHA 1910.95, Occupational Noise Exposure 4. DOE 440.1, WORKER PROTECTION MANAGEMENT FOR DOE FEDERAL AND CONTRACTOR EMPLOYEES	

Critical outcomes	Reduce Recordable Injuries and DART Cases.
Implementation schedule	Materials purchased in FY06 ($6000) and installation using operating funds when available ($15,975), expect FY07.
To be completed by S2 Council	POC: Adjusted Cost: