BROOKHAVEN NATIONAL LABORATORY

Work Permit # DRL-2006-007
Work Order # _____
Job# _____ Activity# _____

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

Requester: Don Lynch	Date: 7/15/2006	Ext.: 2253	Dept/Div/Group: PO/PHENIX
Other Contact person (if different from requester): Sal Marino			Ext.: 3704
Work Control Coordinator: Don Lynch		Start Date: 7/15/2006	Est. End Date: 10/15/2006
Brief Description of Work: Add Clear Vinyl anti-slip carpet runner to IR Bridge to prevent loose hardware and tools from falling through floor grating and damaging equipment below.			
Building: 1008	Room: IR	Equipment: Bridge Rack Platform	Service Provider: PHENIX Techs

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

ES&H ANALYSIS				
Radiation Concerns	☒ None	☐ Activation	☐ Airborne	☐ Contamination	☐ Radiation
Radiation Generating Devices:	☐ Radiography	☐ Moisture Density Gauges	☐ Soil Density Gauges	☐ X-ray Equipment
☐ Special nuclear materials involved, notify Isotope Special Materials Group			☐ Fissionable materials involved, notify Laboratory Criticality Officer	
Safety Concerns	☒ None	☐ Ergonomics	☐ Transport of Haz/Rad Material	
☐ Adding/Removing Walls or Roofs	☐ Confined Space*	☐ Explosives	☐ Lead*	☐ Penetrating Fire Walls
	☐ Corrosive	☐ Flammable	☐ Magnetic Field*	☐ Pressurized Systems
☐ Asbestos*	☐ Cryogenic	☐ Fumes/Mist/Dust*	☐ Material Handling	☐ Rigging/Critical Lift
☐ Beryllium*	☐ Electrical	☐ Heat/Cold Stress	☐ Noise*	☐ Toxic Materials*
☐ Biohazard*	☐ Elevated Work*	☐ Hydraulic	☐ Non-ionizing Radiation*	☐ Vacuum
☐ Chemicals*	☐ Excavation	☐ Lasers*	☐ Oxygen Deficiency*	☐ Other
* Does this work require medical clearance or surveillance from the Occupational Medicine Clinic? ☐ Yes ☒ No				
Environmental Concerns		☒ None	☐ Work impacts Environmental Permit No.	
☐ Atmospheric Discharges (rad/non-rad)		☐ Land Use	☐ 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:		☒ None ☐ 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")	
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 below specific training requirements)				
PHENIX Awareness				
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)**	
ES&H Risk Level:	☒ Low ☐ Moderate ☐ High		WCC:	Date:
Complexity Level:	☒ Low ☐ Moderate ☐ High		Service Provider:	Date:
Work Coordination:	☒ Low ☐ Moderate ☐ High		Authorization to start	Date:
			(Departmental Sup/WCC/Designee)	

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): See Attached backup Documentation
Special Working Conditions Required:
Operational Limits Imposed:
Post Work Testing Required:
Job Safety Analysis Required: ☐ Yes ☐ No — Walkdown Required: ☐ Yes ☐ No

Reviewed by: Primary Reviewer will determine the size of the review team and the other signatures required based on hazards and job complexity. Primary Reviewer signature means that the hazards and risks that could impact ES&H have been identified and will be controlled according to BNL requirements.

Title	Name (print)	Signature	Life #	Date
Primary Reviewer				
ES&H Professional				
Other				
Other				
Work Control Coordinator				
Service Provider				
	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:	Life#:	Workers :	Life#:
Workers are encouraged to provide feedback on ES&H concerns or on ideas for improved job work flow. Use feedback form or space below.			

5. Departmental Job Supervisor, Work Control Coordinator/Designee

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

6. Departmental Job Supervisor, Work Requester/Designee determines if Post Job Review is required. ☐ Yes ☐ No

Post Job Review (Fill in names of reviewers)			
Name:	Signature:	Life#:	Date:
Name:	Signature:	Life#:	Date:

7. Worker provides feedback.

Worker Feedback (use attached sheets as necessary)
a) WCM/WCC: Is any feedback required? ☐ Yes ☐ No

b) Workers: Are there better methods or safer ways to perform this job in the future? ☐ Yes ☐ No

8. Closeout: Work Control Coordinator (authorizing dept.) checks quality of completed permit and ensures the work site is left in an acceptable condition. (WCC can delegate clean up of work area to work supervisor)

Name:	Signature:	Life#:	Date:
Comments:			

Attachment toW.P. # DRL-2006-007 July 15, 2006

IR Bridge Floor covering

Problem

The new rack platform installed above the Central Magnet (CM) in the PHENIX IR has an open grating style metal flooring which would be allow small objects (such as hardware) to fall onto sensitive detector subsystems below. (n.b. This platform is commonly referred to as the "Bridge" in PHENIX parlance). The open design of the platform floor allows lighting above the bridge to illuminate the areas below the Bridge for maintenance and repair tasks. It also allows for easy access to cooling water, power and signal electronics and optical services which are run immediately below the flooring.

Work Plan

Several possible solutions were proposed to this problem including replacing the flooring with solid panels, rigging netting immediately below the floor, and affixing a transparent mylar covering to the bottom side of the floor. A simpler, cost effective, easy to install solution which maintains the advantages of the open grating floor was proposed to cover the flooring with a non-slip, transparent, vinyl carpet runner. Conveniently such a floor covering was available at the exact width (48") necessary to cover all of the walkways and leave only the area above the CM flux return uncovered as is necessary to provide passageway for the services to the electronics racks to be installed on the Bridge.

The runner is available in rolls long enough to roll out the full length of the walkways . The runner is easily trimmed in length with a razor knife or sharp scizzors. The runner is to be installed in a 48" wide path on the entire perimeter of the Bridge platform.

Additional Information

The runner is to be per McMaster Carr P/N 6839T55 clear vinyl floor runner. Total weight of the material on the bridge is less than 75 lbs. MSDS for this material is attached.

WEARWELL
You're in good company™

Tenn-E-Klear

Performance: Better

Product Group Name: Tenn-E-Klear
Product Group Number: 318

Tenn-E-Klear allows the beauty of your carpeting to shine through while protecting valuable carpets from the damaging effects of heavy traffic and use. Designed only for use on carpeted floors, Tenn-E-Klear has grippers underneath to hold it in place.

SKUs

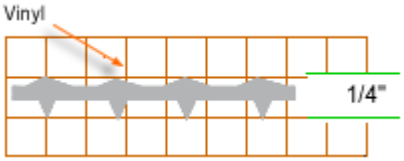
Sku	Upc	Sku Description	Stock	List Price
318.14x27CUTCL	50118	Cut sizes up to 60' in length.		$ 3.12 per SF
318.14x27x60CL	50121	27' x 60'	Y	$ 380.00 per RL
318.14x3CUTCL	50124	Cut sizes up to 60' in length.		$ 4.56 per SF
318.14x3x60CL	50127	3' x 60'	Y	$ 743.00 per RL
318.14x4CUTCL	50130	Cut sizes up to 60' in length.		$ 4.16 per SF
318.14x4x60CL	50133	4' x 60'	Y	$ 989.00 per RL

Specifications

Performance	
Better	Y
Uses	Indoor carpeted walkways.
MNF	
70	Y
Compound	
Vinyl	Y
Coefficient of Friction	
Vinyl	.80 Dry per ASTM F1677, .51 Wet per ASTM F1677
Tabor Abrasion	1% lost @ 1,000 cycles per Fed. Std. 193
Flammability	"A" Rating per MVSS 302
Thickness	1/4 inches
Warranty	1 years
Surface	100% Vinyl
Tensile Strength	1000 lbs. per sq. inch per ASTM D412
Blue Bar	
Wear Resistance	
Value	3

Slip Resistance	
Value	3.5

Schematics



Brochures/MSDS/etc.

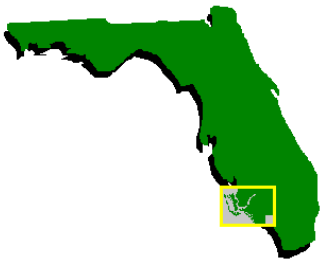
Brochure - PDF

MSDS

Accessories

FRS FIRE RETARDANT SERVICES, INC.

FIRE CODES



FRS Inc. Recognizes and follows the
LEE COUNTY FIRE MARSHALS ASSOCIATION STANDARDS

Codes & Standards Committee Rules

CODES AND TESTS

Here are some common fire resistance code and regulation standards:

NFPA 701 (Small Scale) Standard for Flame Tests of Textiles - Draperies, blankets, bedspreads, quilts, mattress ticking, sheets, upholstery fabrics, wall hangings, outside coverings.

This recently revised test places the fabric specimen in a vertical position while a test flame is held to the lower edge for 12 seconds before the flame is removed. The test requires that any after-flame must be extinguished within 2 seconds of the removal of the test flame, that no flaming drippings touch the test chamber floor, and that the char length be limited according to the weight of the fabric.

NFPA 701 - VERTICAL BURN, 12 second ignition, Sample size 3.5" x

10", Maximum flame time 2 seconds, Maximum burn length specified, no drop to floor.

FAR 25.853 (b) - Aircraft: floor covering, draperies, seat cushions, upholstery, padding, decorative, and non-decorative coated fabrics, etc.

This is the Federal Aviation Administration's test method for textiles and films in aircraft. This protocol is identical to NFPA 701 except that its requirements are easier to meet: the after flame can exist for 15 seconds and the char length is fixed at 8 inches.

FAR part 25.853 or 25.855 Aircraft - VERTICAL BURN, 12 seconds ignition, Sample size 2" x 12", Maximum burn length 6 inches, Maximum burn time 15 seconds.

Motor Vehicle Standard (MVSS) #302 - This protocol currently is in use by the automotive industry for fabrics used in vehicles. The fabric is placed in a horizontal position and allows the test flame to burn at one end. As the fabric burns away from the test flame it is gradually relieved of the heat and combustion front until within a distance of 1.5 inches from the flame. The test measures flame spread from a point 1.5 inches from the flame to 11.5 inches from the flame. Any flame spread that is 4 inches per minute or less is acceptable.

MVSS 302 - HORIZONTAL BURN, Sample size 4" x 14", Maximum 4 inches per minute burn rate.

ADDITIONAL CODES

California Title 19
NFPA 260
CPAI 84-Tent Fabric Flammability Test
FVMSS 302-Motor Vehicle Upholstery
BS 2782: Part I NIFire 022 Nordtest (NORD ARCH)
ASTM-E 119
Federal Standard 191 Method 5903
ASTM E-84 (NFPA 255) Tunnel Test
CAN/ULC-S101
IMO - Para. A-563
UL-214
ASTM-E 814

Join FRS Inc. and our quest to make fire protection and life safety a reachable goal. Think about it, LIFE SAFETY, what does that mean to YOU? Life is the key word here.

Home