

Herman Cease

From: "Michael Lindgren" <mlindgre@fnal.gov>
To: "Tom Diehl" <diehl@fnal.gov>
Cc: "Peter Wilson" <pjw@fnal.gov>; "Herman Cease" <cease@fnal.gov>; <tommy@fnal.gov>; <asands@fnal.gov>
Sent: Wednesday, February 09, 2011 10:56 AM
Subject: Re: FW: Cryo review panel - IRLabs setup
Hi Tom,

A accept the recommendation of Tom's committee to operate the test setup.

Mike

On 2/7/11 3:30 PM, Tom Diehl wrote:

>
> Mike and Peter,
>
> Now I think all that is required is for you to reply to Herman
>
> and I that it is OK to run it.
>
> Tom
>
> *From:* Tom Peterson [mailto:tommy@fnal.gov]
> *Sent:* Tuesday, December 21, 2010 3:55 PM
> *To:* Herman Cease
> *Cc:* Tom Diehl; Angela Sands; Russ Rucinski; Del Allspach; Thomas J.
> Peterson
> *Subject:* Re: Cryo review panel - IRLabs setup
>
> Hello Herman,
>
> Our panel has reviewed the documentation and looked at the IRLabs
> vacuum chamber with hand-filled internal LN2 dewar. We recommend
> permission to go ahead and operate this test setup. We have just one
> comment, which is that the Job Hazards Analysis should be redone on
> the latest form, where PPE is specifically listed.
>
> We note that extra care is required when pouring LN2 into an opening
> above head height, since more of the operator's body and face are
> potentially in the way of a spill or splash. But the PPE should
> protect against cryo burns, and we heard that your people have plenty
> of experience with handling LN2 in this manner for other similar setups.
>
> Feel free to forward this recommendation message to whomever should
> see it.
>
> Regards,
>
> Tom
>

2/14/2011

HAZARD ANALYSIS IRLABS TEST STAND

Dec. 21, 2010
Herman Cease

Description of Work:

A small commercial test stand is used in Lab C for testing CCDs. The test stand is an 8 inch diameter 14 inch long aluminum vacuum chamber. It is cooled with an internal 2.6 liter dewar open to the atmosphere. The CCD temperature is controlled using a heater located inside the test stand. The heater is fused with a thermal switch. The heater power is controlled using an external controller. The chamber is not opened unless the internal temperature has returned to room temperature. Once the chamber is at room temperature, and the vacuum is vented, the CCD can be removed from the test stand.

Hazard Analysis Form

This form can be used by Fermilab Employees, Fermilab Supervisors, Fermilab Task Managers, Construction Coordinators, Service Coordinators and Fermilab Subcontractors. This is a dynamic document which may require modification as the project moves from start to finish and should be readily available at the site where the work is being performed.

Note: Not all sections of the first page are applicable to every job or task, complete what is necessary for your specific job or task.

Job Title IRLabs Vessel LN2 Fill

Job Location Lab C South Clean Room

Contract/Work Order # _____

TO BE COMPLETED FOR WORK INVOLVING SUBCONTRACTORS

Subcontractor (if applicable)

Fermilab

Company _____

Project Eng/C.M. _____

Project Manager _____

Phone _____

Phone _____ Page _____

TM/CC/SC _____

ESH Rep. _____

Phone _____ Page _____

Phone _____ Page _____

ES&H Rep. _____

Phone _____ Page _____

AT LEAST TWO SIGNATURES ARE REQUIRED

Prepared *Herman Cease* Date 12/22/10

Print Name Herman Cease

Accepted *Tom Duere* Date 12/22/10

Print Name Tom Duere

Accepted as noted *Eric McHugh* Date 2.8.11

Print Name ERIC McHUGH

Accepted *Pat Wilson* Date 2/8/11

as noted Pat Wilson

Description of Work: The IRLabs Vessel is filled with LN2 using a hand flask.

Personal Protective Equipment: (Check protective equipment required for the job.)

- | | | |
|--|---------------------------------------|---|
| <input type="checkbox"/> Safety glasses | <input type="checkbox"/> Side shields | <input type="checkbox"/> Chemical splash goggles |
| <input type="checkbox"/> Hearing Protection | <input type="checkbox"/> Hard Hats | <input type="checkbox"/> Impact goggles |
| <input type="checkbox"/> 3.0 Brazing goggles | <input type="checkbox"/> Rubber apron | <input type="checkbox"/> Hot/Cold thermal protective gloves |
| <input checked="" type="checkbox"/> Face shield | <input type="checkbox"/> Respirators | |
| <input type="checkbox"/> Leather gloves | | |
| <input type="checkbox"/> Chemical resistant gloves (specify type): | | |

Other required PPE (specify): Cryogenic Gloves, Face Shield, Long sleeves and pants, Safety Shoes

 Fall protection equipment (specify):

Environmental Aspects (check one):

- Yes, I have thought about the environmental aspects of this job and will document such aspects and mitigation steps within this document.
- Yes, I have thought about the environmental aspects of this job and no such credible aspects exist and therefore do not need to be written in this document.

Equipment required for the job: (List the tools needed to perform the job.)

5 Liter hand flask for Filling LN2

Work Plan History Information: (List any lessons learned incidents from this job, tips from previous jobs)

Improvement/Feedback: At the conclusion of the job, the Task Manager, Supervisor and/or Project Leader shall work with those involved to consider lessons learned and receive feedback in order to improve future work plans.

Check One:

- Yes we have considered lessons learned and accepted feedback on this job and will communicate such information so that future work plans may be improved.
- Yes we have considered lessons learned feedback and determined that future work plans do not need to be improved.

Utilizing the format below, identify hazards and environmental aspects, and their corresponding safety precautions/procedures to mitigate hazards. Use as many sheets as necessary.

HAZARD ANALYSIS

Step	Description	Hazards/ Environmental Aspects	Precautions / Safety Procedures
1	Working with Cryogenics	Cold Temperatures. Persons exposed to cold temperatures may experience frostbite or loss of extremities.	<p>General Cryogenic Safety Training Class (FN000115)</p> <p>Wear appropriate protective clothing per FESHM/5000/5101, and as listed above.</p> <p>Do not open the chamber until it has reached room temperature.</p>
2			<p>PPE - Cryo rated gloves, Face shield, long sleeves, pants, safety shoes</p>
3			
4			
5			
6			
7			
8			
9			

I have reviewed this hazard analysis and I understand the hazards and required precautionary actions. I will follow the requirements of this hazard analysis or notify my supervisor or Fermilab contact if I am unable to do so.

Name and ID (please print)

Signature

Date

Tom Dahl 9403N

tdahl

12/22/10