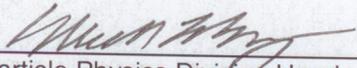


Partial Operational Readiness Clearance (Non-beam operation)

AUTHORIZATION TO PROCEED WITH THE UNATTENDED OPERATION OF THE E906 CHAMBER
ELECTRONICS

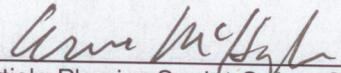
REVIEWED AND APPROVED BY:

DATE



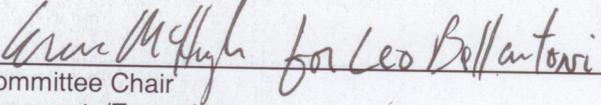
Particle Physics Division Head
Comments/Exceptions:

2/6/2012



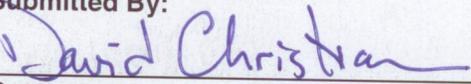
Particle Physics Senior Safety Officer
Comments/Exceptions:

2-3-12



Committee Chair
Comments/Exceptions:

2-3-12

Submitted By:


Requestor

2/3/12

Electronic approvals for this form are acceptable. Please forward your responses to all recipients. A signed paper form (copy) of this document will exist in the Particle Physics Division Office. The original signed document will stay with the experiment requesting clearance.

Eric D McHugh

From: James L. Priest
Sent: Thursday, February 02, 2012 5:22 PM
To: Eric D McHugh
Subject: Re: E906 Electronics

If the electrical reviewers are ok I am ok with there review

Dr. James Priest PhD
Sr. Fire Strategist/Researcher

On Feb 2, 2012, at 5:34 PM, "Eric D McHugh" <emchugh@fnal.gov> wrote:

Hello Jim

Have you had a chance to walk through E906's electronics? If not, Paul can you provide Jim an escort to have a look around at your electronics for the review?

Our electrical reviewers have already signed off and recommended operation. Jim, if you could get out there early tomorrow that would be great! Thanks!

Eric McHugh

PPD/SSO

x3199 or 708-514-4603

Nothing is so important that it cannot be done safely.

Eric D McHugh

From: Angela M Sands
Sent: Friday, February 03, 2012 7:08 AM
To: Eric D McHugh
Subject: RE: E906 Electronics

The NEPA documentation lists the following proposed gas mixtures:

- 50% Argon/50% Ethane mixture
- 10-20% CO2, balance Argon
- 5-15% CF4, 5-8% CH4, balance Argon

Flow rates were expected to be below 1 cubic foot/hour per chamber (below 20 cubic feet/hour total).

From: Eric D McHugh
Sent: Friday, February 03, 2012 7:02 AM
To: Angela M Sands
Subject: FW: E906 Electronics

Hello Angela

Can you please comment on the gas types E906 can use in their chambers according to their NEPA documentation, quantities, etc? Thanks!

From: James L. Priest
Sent: Thursday, February 02, 2012 5:22 PM
To: Eric D McHugh
Subject: Re: E906 Electronics

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Dr. James Priest PhD
Sr. Fire Strategist/Researcher

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x3199 or 708-514-4603

Nothing is so important that it cannot be done safely.

Eric D McHugh

From: Steve Chappa <chappa@fnal.gov>
Sent: Tuesday, January 17, 2012 4:17 PM
To: Leo Bellantoni
Cc: 'Paul E Reimer'; 'Walter Jaskierny'; Eric D McHugh; 'Dave Christian'
Subject: RE: SeaQuest - Afternoon of 17 Jan?

Hi Dr. Leo,

During the walk-through review for SeaQuest, conducted this afternoon at 13:30 in the Ktev Collision Hall, I found:

The electronics used were reviewed and discussed prior to today's walk-through review.

- 1) The G10 patch panel for the HV feed-through connectors was bolted loosely on the rack, less than 1-1/2 thread turns. Need to secure the patch panel.
- 2) In one of the racks, the +12 VDC power output leads were run over aluminum mounting blocks with fairly sharp edges. Since the power conductors are single insulated, these conductors need to be protected from these sharp edges. The edges were taped/covered and the conductor leads moved and fixed away from the mounting blocks. Done during the review. -OK.
- 3) On Rack 34.02, the angle metal used to support the ribbon cable is not fasten to the rack and the metal bracket is showing signs of buckling under the weight of the ribbon cables. Also, the right angle bracket's corners need to be rounded off by about 1/4-inch or covered with protective padding so as not to leave sharp points.
- 4) Move and restrain the large type SO cord, used to supply the +/- 5 VDC to the DC power distribution cards, so the cord does not hang at neck level. Raise it up above head level.
- 5) The narrow access walkway in front of rack 34.05 needs to be more free of the cables lying on the floor. It is very easy to trip over or step on the ribbon cables.
- 6) The AC power IEC connector cord, on the bottom crate in rack 34.05, places too much stress on the connector. This power cord needs to be strain relieved so the cord's weight is not supported by the connector contacts.
- 7) The two metal I-beam supporting structures, one grey and the other one red, do not have a dedicated building ground connection. A copper grounding conductor, connecting the support structures to the existing building grounding conductor (bare copper, 2/0-AWG), needs to be installed. The grounding conductor should be the same size, 2/0-AWG, as the existing grounding conductor.

In general and highly recommended, in light of the observed heating of the IEC connectors observed at CDF, is to check each connector as it connects to the equipment chassis' connector. If there is any cord weight or stress placed on this connection, the AC cord needs to be restrained to the rack or some other fixed part of the equipment to relieve any stress placed on the connector.

Once these concerns, listed above, are corrected for, I need to then visually verify the corrective actions. Once verified, I can then recommend the installation for an ORC.

Regards,
Steve

From: Leo Bellantoni [mailto:bellanto@fnal.gov]
Sent: Monday, January 16, 2012 6:10 PM
To: Paul E Reimer; Walter Jaskierny; Steve Chappa; Eric D McHugh
Subject: Re: SeaQuest - Afternoon of 17 Jan?

Little reminder guys - see ya tomorrow!
Leo

Dr. Leo Bellantoni
(630)730-2155
MS 357, Fermilab Batavia, IL 60510

On Jan 12, 2012, at 12:49 PM, wrote:

OK Let us do it at 1:30PM
Leo

Dr. Leo Bellantoni
(630)730-2155
MS 357, Fermilab Batavia, IL 60510

On Jan 12, 2012, at 11:53 AM, Paul E. Reimer wrote:

Hello,

There is a SeaQuest standing meeting at 15h30 that I would like to attend. Other than that, the day is wide open for me as well.

Paul

Eric D McHugh

From: Steve Chappa <chappa@fnal.gov>
Sent: Thursday, February 02, 2012 4:26 PM
To: Leo Bellantoni; Eric D McHugh
Cc: 'Walter Jaskierny'; Paul E Reimer; David C Christian; David W Featherston
Subject: RE: SeaQuest - Afternoon of 17 Jan?

Hi Dr. Leo, Eric,

I conducted a follow-up review this afternoon of Seaquest at 15:00.

I have verified that the corrective actions, required as a result of the previous review, are currently implemented. We also did another quick walk-around to double check the installation. We did some more minor corrective actions (cable protection, remove extension cords, sign on a chain that is at "clothes-line" level, etc.) during the course of the review.

Now, I am satisfied with the corrections and my concerns have been addressed. Thus, I can recommend this installation be issued the ORC.

Regards,
Steve Chappa

From: Paul E. Reimer [mailto:reimer@anl.gov]
Sent: Tuesday, January 31, 2012 9:21 PM
To: Steve Chappa
Cc: 'Leo Bellantoni'; 'Walter Jaskierny'; 'Eric D McHugh'; 'Dave Christian'; dfeather@fnal.gov
Subject: Re: SeaQuest - Afternoon of 17 Jan?

OK, see you on Thursday. I'd prefer 3 pm, since I have a 12:00-13:00 seminar at Argonne that I was planning on attending and 3 pm would give me a bit more time in case there is something else that I need to do at Argonne.

Paul

On 1/31/12 4:39 PM, Steve Chappa wrote:

Hi Paul,

I (or Walter, or both of us) can be there about 2:00 PM (or 3:00 PM) to verify the corrections and do a follow-up.

Later,

Steve

From: Paul E. Reimer [mailto:reimer@anl.gov]
Sent: Tuesday, January 31, 2012 4:30 PM
To: Steve Chappa
Cc: 'Leo Bellantoni'; 'Walter Jaskierny'; 'Eric D McHugh'; 'Dave Christian'; dfeather@fnal.gov
Subject: Re: SeaQuest - Afternoon of 17 Jan?

Hello Steve and Leo,

I believe that everything on this list is now complete except for item 7. I believe that it will be completed by tomorrow. I suggest that you stop by for a walk through on Thursday afternoon to verify these are complete and issue the (p)ORC for our tracking systems so that we are now "honestly" operating them.

Paul

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Paul

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USA [www.phy.anl.gov/mep/staff/Reimer P E.html](http://www.phy.anl.gov/mep/staff/Reimer_P_E.html)

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