

From: Jean-Louis Grenard
Sent: vendredi, 8 mars 2024 10:18
To: Aurelie Noelle Goldblatt; Michel Duraffourg
Subject: Fw: My notes from the meeting rad hard cables

Pour info

JL

From: Ramon Folch <Ramon.Folch@cern.ch>
Sent: 01 March 2024 17:15
To: Giulia Romagnoli <giulia.romagnoli@cern.ch>; Jocelyn Tan <Jocelyn.Tan@cern.ch>; Miguel Lino Diogo Dos Santos <miguel.lino@cern.ch>; Jean-Louis Grenard <Jean-Louis.Grenard@cern.ch>; Mario Di Castro <mario.di.castro@cern.ch>; Jerome Lendaro <Jerome.Lendaro@cern.ch>; Anthony Harrison <anthony.harrison@cern.ch>
Subject: FW: My notes from the meeting

Dear all,

Please find below, for your information, the progress of the discussions about the radiation hard cables in TDC2 and TCC2.

Cheers,
Ramon

From: Thomas Zickler <Thomas.Zickler@cern.ch>
Sent: Thursday, February 29, 2024 4:43 PM
To: NACONS-Team (North Experimental Area Consolidation Project Team) <NACONS-Team@cern.ch>
Subject: FW: My notes from the meeting

FYI...

From: Yacine Kadi <Yacine.Kadi@cern.ch>
Sent: Monday, February 26, 2024 11:18 AM
To: Fernando Baltasar Dos Santos Pedrosa <Fernando.Pedrosa@cern.ch>
Cc: Thomas Zickler <Thomas.Zickler@cern.ch>; Eva Cano Gonzalez <eva.cano.gonzalez@cern.ch>; Alicja Ostrega <alicja.irena.ostrega@cern.ch>; Ixone Angulo Vaquero <ixone.angulo.vaquero@cern.ch>; Guillaume Gros <Guillaume.Gros@cern.ch>; Simao Costa Machado <simao.machado@cern.ch>; Jose Gascon <Jose.Gascon@cern.ch>
Subject: Re: My notes from the meeting

Dear Fernando,

Thank you for providing the summary notes of the meeting. All clear to me and no additional comments.

Cheers
Yacine

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Yacine KADI
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From: Fernando Baltasar Dos Santos Pedrosa <Fernando.Pedrosa@cern.ch>
Date: Monday, 19 February 2024 at 18:31
To: Eva Cano Gonzalez <eva.cano.gonzalez@cern.ch>; Alicja Ostrega <alicja.irena.ostrega@cern.ch>; Ixone Angulo Vaquero <ixone.angulo.vaquero@cern.ch>; Guillaume Gros <Guillaume.Gros@cern.ch>; Simao Pedro Costa Machado <simao.machado@cern.ch>; Yacine Kadi <Yacine.Kadi@cern.ch>; Jose Gascon <Jose.Gascon@cern.ch>
Subject: My notes from the meeting

Dear colleagues,

Please find here below some notes from the meeting we had on Thursday 15th February 2024 regarding the radiation doses received by the cables in TDC2 and TCC2.

Ixone presented the analysis performed with the available RPLs data that goes back to 1978 (the technology used was not always RPLs);

Jose and Yacine pointed out that the available data is not very accurate and that in reality the cables received much more (e.g. RPLs get saturated, the measurement system has some limitation making the values lower than reality, the system that was there in 1978 is not the same as of today, ...);

We can consider that the analysis is not conservative and that the cables received more dose than shown in the analysis,

It was pointed out by Fernando that even if some original cables maybe be still operational, pulling new cables is almost impossible due to the high risk of damaging them. This is why the last campaigns were performed by pulling cables on the floor (outside any cable tray);

Simao declared that in the past (year 2000 and year 2005) some partial campaigns have been performed to replace some irradiated cables;

Simao declared that among the existing cables in these areas only 8 types are rad hard type, and that the others are "General Purpose" – Do we know the radiation resistance levels for the "General Purpose" cables pulled in 1978, 2000 and 2005? Was the limit also 100kGy?

All cables replaced in the scope of the irradiated cables project represent most of the actual needs for category 2 and 3 cables (assuming they are replaced by the same type as it exists today in the machine). If it is not the case, the irradiated cables replacement project leader, should have started discussing with the equipment owners (which is not the case from my understanding);

Jose and Simao mentioned that having category 2 and 3 cables should be easy at the moment because the MS is still valid, and it should be OK for IPT to order cables from some of the companies that replied to the MS;

Jose suggested to order some quantity of each type for cat2 and cat3 to test, validate and to have a clear idea of manufacturing delays and price of each type of cable (only two companies are replied positively to the MS)

Suggested actions:

Simao shall organise a meeting in the coming weeks with Yacine, SCE, CARE, ..., to start discussing the needs on the process to order cat2 and cat3 cables. – Deadline: Ideally before middle of March 2024

- Start preparing everything for at least the 8 type of cables rad hard used today in these areas (EN-EL)

Ixone and Fernando will document the study and store it in EDMD for reference – Deadline: Before middle of March 2024

Ixone and Fernando will continue working with the R2E team to improve the data, to have an estimation for the next 20 years as accurate as possible, and to define the need for extra RPLs. – Deadline: If extra RPLs are needed (defined by R2E) they should be installed before the end of the EYETS2023-24. The forecasting is starting, but it will take a bit longer (R2E is working on it).

For the moment we used the 2018 as reference year, but we know that the situation will be a bit worst than that due to the future operation with HI-ECN3;

Ixone, Fernando and Yacine will write some recommendations from the NA-CONS side to guide the different equipment owners that are requesting new cables – Deadline: end of March 2024

Ixone, Alicja, Fernando and Guillaume

- revise the DICs requested up to now from the equipment owners and make sure they are aware of the doses received by their cables;
- Study with the help of R2E some positions to add patch panels and optimize the rad hard cable length.

If there is any point that is not correct/clear/... please don't hesitate to let me know (correct and reply to all please).

Thank you very much in advance for your feedback.

Cheers,

Fernando