

From: [Lesh, Geoff@Energy](mailto:Lesh,Geoff@Energy)
To: [Boyer, Bruce@Energy](mailto:Boyer,Bruce@Energy)
Subject: FW: Questions for HAZ-5 proposed change
Date: Friday, April 05, 2013 12:36:50 PM
Attachments: [image001.png](#)

Can you have this docketed. I referenced this.

Thanks.

From: Allison Bryan [<mailto:allison.bryan@calpine.com>]
Sent: Wednesday, April 03, 2013 4:45 PM
To: Boyer, Bruce@Energy; Lesh, Geoff@Energy
Cc: DocCtrIRCEC
Subject: FW: Questions for HAZ-5 proposed change

Bruce and Geoff,

The responses to your HAZ-5 questions are shown below. Please contact me if any additional information is needed for the staff assessment.

Allison Bryan

EHS Manager

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From: Boyer, Bruce@Energy [<mailto:Bruce.Boyer@energy.ca.gov>]
Sent: Wednesday, April 03, 2013 1:10 PM
To: Allison Bryan
Subject: Questions for HAZ-5 proposed change

Can you please reply to the questions below. If you have questions, please contact me. Thank you.

Fire Exposure Risk Assessment for RCEC Sulfuric Acid Tank

Fire Wall

We will need a specification for the fire wall and a relevant code for its design. *Fire wall is rated based on tests performed under ASTM E119. Sizing of wall (height x width and location) is based on NFPA 850 "Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations"*

It will have to meet seismic requirements, and be stable during a prolonged transformer fire (to not fall over) *Wall is structurally capable of withstanding design wind loads of 85 mph and the seismic relevant to the project.*

Must be signed off by engineer. *Structural Drawings are signed off by Bechtel's Engineer of Record. Test reports associated to fire rating of fire panel wall are signed off by manufacturer's Fire Protection Engineer.*

Transformers

What is the oil capacity of each of the transformers? *337 Gallons of Type II inhibited mineral oil*

What is their normal operating temperature? *Transformer operating temperature is a function of ambient temperature and load. These transformers serve the cooling tower and ZLD equipment, both of which vary with plant conditions. These transformers are arranged for double-ended load centers, that is each pair of transformers is redundant, and in normal operation one will be operating with the other in standby. The transformer fans are set to start at 65C (149F). It is not expected that this will be a normal operating mode.*

How much of the time do they operate? *100% of the time*

What is their voltage? *4.16kV/ 480 V 3 phase*

What is the separation distance between the transformers? *Transformers are spaced 15ft apart with a physical gap of approximately 5'-3"*

Will there still be access for fire suppression if one of them catches fire? *The East side and west side of the line of transformers have access also there is a 4'9" wide walkway just south of the group of the transformers.*

What fire suppression measures are in place for the transformers? *There is a fire hydrant to the North West approximately 55 ft from the nearest transformer.*

Do they sit in secondary containment? *The transformers sit on an 8" high concrete pad to be above the secondary containment. The curb in containment area is 8" tall.*

Sulfuric Acid Tank

Construction material of tank? *Tank is a horizontal vessel made from SA516-GR70 3/8" thick carbon steel with a Heresite P-403 internal coating*

Pressure? *Tank is not pressurized*

Acid tank capacity? *Tank has a usable capacity of 6100 gal*

Nearby fire monitor? *Nearest monitor is to the west of the Sulfuric Acid Tank approximately 63ft away*

In secondary containment? *Tank is in its own containment area*

The two secondary containments don't connect? *The transformer containment and the sulfuric acid containment are separated by the unloading pad which is also a containment area. The transformers have a drain valve that is closed and is only open to release rain water after inspection into a drain line to the oily water separator.*

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