Identification Number	Reviewer	Actionee	Area of Concern
1	Scott Weidner	Ken Nelson	Anode board
2	Susan Pope	Steve Layman	3Kv Lug Connection
3	Susan Pope	Steve Layman	MCP holder 900V connection
4	Susan Pope	Steve Layman	Venting
5	Steve Jaskulek	Steve Layman	Wedges
6	Steve Jaskulek	Steve Layman	Wedges
7	Steve Jaskulek	Ken Nelson	Anode board
8	Steve Jaskulek	Ken Nelson	HV testing
9	Steve Jaskulek	Steve Layman	Wedges
10	Steve Jaskulek	Ken Nelson	HV testing
11	Ken Nelson	Scott Weidner	Anode board
12	Don Mitchell	Steve Layman	

Updated 7-9-2013

EPI-Lo Sensor Review - May 22, 2013

Concern	Recommended Action
HV Guarding	Make ground "targets" surrounding HV on a LV side of the PWB to protect LV circuitry from discharges
Extra parts covering this lug connection provides extra surface	Remove Ultem cover and associated spring washer (slide 11) on 3Kv lug connection
Increased spacing from 1000V to 900V at connection point	Make 900V guard washer out of plastic and eliminate Kapton spacer
Unvented volumes are virtual leak. The local increase in pressure can lead to HV breakdown.	Vent all fasteners. (1) Vented Screws (2) Vent trapped volume sideways by drilling in below threads
UV	Use aluminum tape to close the gaps between the wedges for UV purposes
	Consider using bevel washer on screw for the 1000 volt to the side wall to avoid loss of contact due to material creep
	The separation distance around the 3000V components on the anode board component side have only 1000/mm spacing along the board surface. This needs to be increased. Is the decoupling 3000V cap even needed?
	If HV standoff is run at room temperature rather than our expected max temp in test/qual, we may need to increase the HV (e.g. 3600 --> 4000) to compensate.
	Reshape the 1Kv lug to provide more separation from the side wall, and open hole. The 2-9 Kv lug is even worse.
Discharge monitoring must use partial discharge circuits, not just use the HV supply trip.	Use blocking cap and CSA to look for discharges.
	Give identifier of Kapton sheet used in PWB stackup for IES
The insulator between the cover and the 1 kV volume spans a gap of 2mm.	It should be shaped so that the surface path along the insulator surface is at least 3mm. For example, "T" shaped or "U" shaped.

Date Opened	Due Date	Action Response
5/22/2013	7/4/2013	Completed.
5/22/2013	7/4/2013	Parts have been deleted.
5/22/2013	7/4/2013	Guard washer removed. Lug redesigned.
5/22/2013	7/4/2013	Will incorporate into the design.
5/22/2013	7/4/2013	Will know more when we assemble. Will use it if needed.
5/22/2013	7/4/2013	Will use bevel washers.
5/22/2013	7/4/2013	Increased as much as possible.
5/22/2013	7/4/2013	Run HV stand off test with heaters
5/22/2013	7/4/2013	Redesigned to a "dog leg."
5/22/2013	7/4/2013	Will employ CSA in future testing.
5/22/2013	7/4/2013	Information sent to APL.
5/22/2013	7/4/2013	We will modify to accommodate request.