

Stanford Linear Accelerator Center

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September 6, 2006

Ms. Nancy Sanchez
U. S. Department of Energy
Stanford Site Office
M/S 08A
Stanford, CA 94025

Subject: Resolutions to Deficiency and Concerns Identified During the August 7 & 8, 2006 Onsite Assessment of the Stanford Linear Accelerator Center (SLAC) Personnel External Dosimetry Program.

Dear Ms. Sanchez,

The Onsite Assessment Report dated August 08, 2006 of SLAC's Vendor-Based External Dosimetry System for the DOELAP accreditation identified 0 (zero) Deficiency and 3 (three) Concerns, all of which require corrective actions and written responses. The attached report describes actions taken or planned to correct all of these concerns. In brief, resolutions to all these finding will be completed by 12/31/2006, when the new Luxel+ (Ja and Pa types) dosimeters will be officially placed in distribution. These concerns and resolutions will also be entered into the CATS system and formally tracked to closure.

This response to the onsite assessment report should be reviewed and approved by your office and then forwarded to Scott Schwahn, DOELAP Performance Evaluation Program Administrator by Sept. 15, 2006. This package should be mailed to:

Scott O. Schwahn
DOELAP Performance Evaluation Program Administrator
DOE Idaho Operations Office
1955 Fremont Avenue, MS-4149
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Phone: (208) 526-0324
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If you have any questions about these onsite assessment resolutions, please contact Henry Tran, who is SLAC's Dosimetry Program Manager and the point of contact for DOELAP accreditation.

Yours very truly,

Sayed Rokni
Associate Director (Acting)
Environment, Safety & Health

cc: James Liu (Radiation Protection Department)
Henry Tran (Radiation Protection Department)
John Cornuelle (Operations Directorate)
Dave Osugi (DOE Stanford Site Office)
DOELAP File (DREP Dosimetry Office)

RESOLUTIONS TO DOELAP ONSITE ASSESSMENT REPORT (09/05/2006)

On August 07 and 08, 2006, a DOELAP onsite assessment of the Stanford Linear Accelerator Center (SLAC) External Dosimetry Program was conducted to ensure that routine practices comply with criteria contained in DOE/EH-0026, "Department of Energy Laboratory Accreditation Program (DOELAP) Handbook." The DOELAP assessors were Jeffrey M. Hoffman and John R. Flood. As a result of this assessment, there were 0 deficiency and 3 concerns that must be addressed in writing. Resolutions to all these finding and concerns will be completed by 12/31/2006. In addition, there were 9 observations during the assessment and SLAC will address these observations internally. The following table summarizes the resolutions to these findings.

DEFICIENCIES/CONCERNS

No. / Type	Descriptions	Resolutions	Schedule/ Status
<p style="text-align: center;">C #1 Quality Assurance</p>	<p>The EPDPM specifies that a “blind” Measurement Quality Assurance (MQA) program be implemented where the processor is tested biennially using dosimeters where “(t)he irradiated doses shall reflect a range of at least 30 mrem – 10 rem photon and 30 mrem – 10 rem neutron.” However, the practice has been at SLAC to only submit MQA dosimeters to Landauer for processing where all dosimeters have been irradiated to 500 mrem as was observed in the records for the May 2004 and May 2006 biennial MQA reports. The MQA program as presently implemented at SLAC cannot reasonably be considered blind with such predictable irradiation levels nor does it comply with the intent of their own requirements as specified in the EPDPM. (Q.8)</p>	<p>Procedure DG# 006 (Measurement Quality Assurance (MQA) Testing Procedure) will be revised to specify different irradiation levels for different MQA testing cycle. Within each MQA testing cycle, a constant irradiation level could still be used for all testing dosimeters.</p> <p>In addition, based on 4 other observations during the onsite assessment (OB #1 – OB #4), the following actions will also be taken to increase the level of assurance with respect to the QA/QC program:</p> <ul style="list-style-type: none"> • Incorporate annual MQA testing frequency instead of the current biennial testing frequency, with a minimum of 	<p style="text-align: center;">Scheduled for 12/31/2006</p>

No. / Type	Descriptions	Resolutions	Schedule/ Status
		<p>5 dosimeters for each testing category.</p> <ul style="list-style-type: none"> • Include testing of the low energy photon category. For each annual testing cycle, 2 categories will be tested alternately (i.e. Cs-137 & Bare Cf-252 in one year, then Low Energy Photon & Moderated Cf-252 in the other year.) • Include routine QC irradiated dosimeters: 10 dosimeters will be irradiated (Cs-137) by PNNL at the beginning of each year. Each quarter, 2 irradiated dosimeters will be included in each shipment for RWT's dosimeters as QC dosimeters. Each year, 2 irradiated dosimeters will be included with the annual GERT's dosimeter shipment for processing as QC dosimeters. 	
<p>C #2 Personnel</p>	<p>The Procedure DG#004 includes a process to document that external dosimetry data review, including the review of zero dose results, has occurred but it does not include the signature of or a reference to the person having technical responsibility for dosimetry data approval. (P.4,</p>	<p>Procedure DG #004 (Dose Processing and Reporting Procedure) will be revised to specify a section with signature of, or a reference to, the person</p>	<p>Scheduled for 12/31/2006</p>

No. / Type	Descriptions	Resolutions	Schedule/ Status
	R.2)PR.15)	<p>having technical responsibility for dosimetry data approval.</p> <p>The format of the signature or identification could be electronically implemented through electronic signature or email.</p>	
C #3 Testing	<p>Since the SLAC application for DOELAP Accreditation includes vendor-provided data and specifications for the dosimeters to be tested, SLAC should include in their written test plan a communication to their vendor specifying/verifying which vendor-supplied dosimeters are to be tested and the associated DOELAP categories to be tested. (T.2)</p>	<p>Procedure DG #009 (DOELAP Accreditation Procedure), Section 5.1 will be revised to include not only to notify (in writing) the contracted dosimetry vendor to participate in the DOELAP Performance Testing with the contracted dosimeter types and irradiation categories, but also to verify and review their application to ensure contracted dosimeter types and DOELAP categories are submitted.</p>	Scheduled for 12/31/2006