

**BUSINESS CONFIDENTIAL**

Internal Investigation into Health Physics Management Practices

Page 25

February 9, 1996

POEF-150-96-0088

Rick stated that he was unaware of such a change being made on the basis of a pending court case (i.e., the allegation of September 8, 1995). He added that such a change would be unethical.

Rick described a file maintained on the TLD database termed as the "bucket dose." Temporary TLDs issued without a badge number could not be assigned, and were simply placed into a pool, or "bucket." Only if a visitor were to call, state the date that they had been on-site, and request dosage information, could the dosimetry information be potentially recovered.

Rick closed by stating that the figures in the TLD database were probably conservative, if anything.

**Jeff Cunningham (Interviewed February 2, 1996, @ 1400 hours)**

Jeff Cunningham became employed on-site during March 1991. At that time, he was assigned to the dosimetry laboratory to assist in preparing temporary TLDs. New employees received training in how a TLD worked, and continuing training exercises were held by Mike Smith. Existing procedures were explained, and the operation of the machines was taught on an on-the-job basis. Necessary precautions were explained, such as wearing plastic gloves, and the necessity for the usage of yellow lights in the laboratory to reduce ultra-violet exposure to the teflon (these measures were covered in the quality control procedures). Working with him were Linda Smith, Tom Maggard, Carl Henderson, and Shelley McClurg.

Jeff was so employed for no more than a year, before being assigned to work on the 8800 Series TLD Reader. For about six months during 1993, Jeff was acting supervisor for the laboratory. Reporting to him were Linda Smith, Roberta Cooke, Lorrie Graham, and Chris Kelley. Following that assignment, Jeff was directed to work on the quarterly TLD exchange, a job that he continues in.

Dosimetry was not "really up to snuff" upon Jeff's arrival in 1991. These problems became more noticeable as Mike Smith began defining acceptable limits, and standards for investigation reports.

One major problem was in the large number of temporary TLDs issued. An employee was able to receive an unlimited amount of TLDs each day, and, during 1993, approximately 300 temporary TLDs per day were issued. Total processing approximated 70,000 - 100,000 TLD readings annually.

In addition, a large backlog of Investigation/Situation Reports to be processed had built up, due to the frequency of personnel

**BUSINESS CONFIDENTIAL**

BUSINESS CONFIDENTIAL

Internal Investigation into Health Physics Management Practices  
Page 26  
February 9, 1996  
POEF-150-96-0088

changes. There had also been allegations of negligence in the accumulation of that backlog.

Jeff stated, however, that, during his assignment as Dosimetry Laboratory Supervisor, he had never seen anyone scan an improper TLD with a TLD bar code reader. He had seen TLD cards on the wall, but they were no longer in service. Such scanning practices could lead to an unassignable reading, as well as an improper correction factor, in the database.

Jeff stated that, from time to time, incidents could occur that would require the changing of a dosage in the TLD database. Such incidents typically involved temporary TLDs, due to the extended handling measures. A faulty glow curve could indicate an improper reading, and an estimated value would have to be assigned to bring the reading closer to reality. In such cases, the information would be delivered to Mike Smith for evaluation. Mike would review the documentation, and determine an estimated dosage. The estimated dosage would then be sent to Linda Smith, Lorrie Graham, or Chris Kelley. Linda, Lorrie, or Chris would then prepare correction sheets for submission to the X-112 Computer Facility. At the X-112 Facility, the actual changes to the TLD database would be affected. Jeff was unsure of the frequency of such submissions to the X-112 Facility.

Jeff was also unaware of any dosage change requests being initiated on the basis of a pending court case. Such a request, he added, would "give me an aneurism."

Prior to the NVLAP system change-out, scheduled for October 1, 1995, Jeff stated that he had been preparing TLD cards on a daily basis. The NVLAP system was necessary for Nuclear Regulatory Commission (NRC) compliance, and was a number one priority. As Jeff had previously scheduled vacation for late September, however, he departed on a Caribbean cruise on September 17, 1995, intending to return on September 24, 1995. On September 24, 1995, however, Jeff had an attack of appendicitis. He went on to have his appendix removed, and returned to work on Monday, October 2, 1995. Jeff added that he'd heard that it had not gone entirely smoothly.

Jeff stated that he had been heavily involved in the development of the NVLAP external dosimetry system for the 8800 Series TLD Reader. As he had received training from both HARSHAW and Newport News Shipyards, he was qualified on that basis to be a Subject Matter Expert.

Currently, Chris Kelley, Linda Smith, and Steve Lummer were all qualified on the NVLAP system. Chris and Linda were qualified

BUSINESS CONFIDENTIAL

Internal Investigation into Health Physics Management Practices  
Page 27

February 9, 1996

POEF-150-96-0088

prior to the NVLAP audit of May, 1995 (although Chris was nominally qualified, Linda was, in fact, not), with their Performance Evaluation Checklists (PECs) being signed off by Jeff as the trainer, and Mike Smith as the evaluator. Those records were verified by the auditor, Jan Cussimano.

Regarding the availability of overtime, Jeff stated that overtime opportunities would generally be determined by technical expertise and qualifications. Availability was also a factor. In essence, while several individuals might have the same job classification and title, not all might have the necessary expertise and training.

Jeff closed by saying that the NVLAP system is far more sensitive than was the old system. It has the ability to measure for a much more detailed evaluation than had the old system, and supports the NRC certification. He added that, while the validity of the old DOELAP system was "not that good," as it had a lot of "unassigns," the validity of the new NVLAP system is "good, and getting better."

Rob Litten (Interviewed February 5, 1996, @ 0830 hours)

Rob Litten's work primarily deals with internal dosimetry. He would, however, work with the DOELAP 8000C TLD computerbase when problems occurred. He began working with the database during the late 1980s. Problems observed with that database processing data out-of sequence, running programs twice, etc.

Rob initiated the practice of the "bucket dose," a computer file that receives all unassigned dosages. Such dosages would be available should a visitor contact Health Physics with a visit date, and request information regarding his dosage. Substantial dosages (exceeding 100 millirem), however, would be set aside for investigation, along with many others.

Rob stated that he had heard rumors regarding the practice of "reading" TLD cards affixed to the wall of the dosimetry laboratory. He had never witnessed the practice, but had seen bar codes on the wall of the laboratory. Such a practice, Rob felt, could result in a misassignment.

Rob stated that errors were made in individual dosages, due to damaged TLD cards. In those cases, a correction would be made with an estimated value to bring the dosage rates closer to the actual value. These corrections would be made on the conservative side; over-estimating the value, rather than under-estimating the value. On occasion, dosage readings might be reduced to zero, depending on the validity of the glow curve.

BUSINESS CONFIDENTIAL

BUSINESS CONFIDENTIAL

Internal Investigation into Health Physics Management Practices  
Page 28  
February 9, 1996  
POEF-150-96-0088

Rob said that the dosage rate of an individual should never be changed due to a pending legal action. He added, however, that 26 millirem (the dosage recorded for Jeffery Walburn on an occasion during the Spring of 1994) was simply insignificant. In fact, dosages of 10 millirem or less, being below the lower limit of detection (LLD), were compared by Rob to being in the "grass" on a radar system. As such, these numbers were often reduced to zero on the database, as their value was meaningless (Ron Smith was unaware of, and disagreed with, this practice). Health Physics personnel apparently base their authority for this practice on Department of Energy (DOE) Order 5480.11, Radiation Protection for Occupational Workers, section 9.f.(1), dated December 21, 1988, which states as follows:

"When in-vivo and/or in-vitro measurements confirm the retention of radionuclides in the body, with respect to evaluating conformance with the limiting value for occupational exposure, the annual effective dose equivalent due to all radionuclides retained in the body from these intakes shall be assessed for as long as the annual effective dose equivalent is 10 mrem or greater."

Clyde Dulin stated, however, that the above statement applied solely to internal (i.e., urinalysis) dosimetry, not to external (i.e., TLD) dosimetry. He went on to say that dosage readings above the LLD (which was in the single digits, not at ten) should not be reduced to zero.

Rob went on to say that Guard Force Officer Paul Walton, B/58328, had recently requested his dosage records. Rob then asked me if he should release those records to Paul. After ascertaining that the standard practice was to release such records to employees after they signed a release form, I directed him to follow that standard practice, and release the records to the employee.

Regarding training for the NVLAP computerbase, Rob believed that both Chris Kelley and Linda Smith had been trained on the system prior to the NVLAP audit of May 1995 (Linda had not). He said that they had probably been trained on the operation of the system, although they might not have had hands-on training prior to the audit.

Rob stated that on Saturday, September 30, 1995, he had worked overtime to prepare for the NVLAP TLD changeout. Working with him were Chris Kelley, Linda Smith, Mike Smith, and Lois Howard. Most of the employees departed during the afternoon, but Rob and Mike worked late. More assistance was needed, so Angie Litten, Elaine Litten, and Linda Blount were brought in to assist in assembling

BUSINESS CONFIDENTIAL



**BUSINESS CONFIDENTIAL**

Internal Investigation into Health Physics Management Practices

Page 29

February 9, 1996

POEF-150-96-0088

TLD badges. Mike Smith went on to work all night long into the morning of Sunday, October 1, 1995 (Ron Wetherell later verified that Mike's hourly claim for that day had been 13.5 hours overtime. and that Rob's hourly claim had been for 18 hours. If both had worked together, it would appear that Mike may indeed have subtracted his time off-site from his hourly claim).

Rob speculated that more overtime was available on the NVLAP system than on the existing TLD database, as the old system was phasing down, and the new system was phasing up. Jeff Cunningham was far more skilled on the new system than were Linda or Chris, and that fact accounted for his higher overtime figures.

Sally Cunningham (Interviewed February 5, 1996, @ 1030 hours)

Sally Cunningham stated that she had met with Chris Kelley on two occasions during 1995. At that time, Sally was handling employee concerns for LMUS.

On her first visit, Chris wanted to know if a supervisor, Mike Smith, could force her to work overtime, against her will. The answer was, of course, "yes." Cunningham suggested that Chris speak with Smith to work the problem out to their mutual benefit.

On her second visit, Chris had concerns regarding favoritism by supervisors toward employees. Chris felt that the former U. S. Navy nuclear personnel were receiving favoritism in promotions and overtime. Jeff Cunningham, a former sailor, was working on a "new TLD system," and no one else was receiving training for it. Chris' concern was that this situation would result in Jeff being placed in line for promotion over the other employees.

In addition, a disabled employee was with her, and that employee had complaints about nicknames being used against him, regarding the disability. He also felt that he had been reassigned, simply due to his disability.

To handle these issues, Sally spoke with Health Physics supervision. She was unable, however, to prove Chris' allegations, although she was able to prove that the disabled individual had not been moved due to his disability.

Chris also spoke of an incident where a supervisor had directed the dosage of an individual to be changed to facilitate a pending legal action. Sally attempted to contact Linda Smith for more information, but Linda never called her back (Linda stated, however, that Sally had never, to her knowledge, made any attempt

**BUSINESS CONFIDENTIAL**

**003440**

BUSINESS CONFIDENTIAL

Internal Investigation into Health Physics Management Practices

Page 30

February 9, 1996

POEF-150-96-0088

to contact her). Sally believed that Chris had later requested that she drop the issue.

Sally stated that Health Physics had employee problems of long duration. During the past five years, a lot of new employees had entered the department, while department managers and division managers were being continually reshuffled. This combination, she felt, had been responsible for a certain amount of the employee unrest.

Ron Smith (Interviewed February 5, 1996, @ 1215 hours)

Ron Smith stated that only a limited amount of information had been entered into the new TLD database. The integrity of that database was sound.

Several problems existed with the old TLD database. Due to past practices of issuing temporary TLDs when a TLD was misplaced, some quarterly dosage readings may be missing. "What has been read from the TLD cards into the TLD database should be correct," Ron stated. There were simply some gaps in historical records. Efforts were currently underway to examine those records back to July 1993 to bring them further into compliance. That responsibility had been assigned to Mike Smith, with a completion date of October 1, 1995. Mike, with the assistance of Clyde Dulin, had successfully researched the majority of those records.

Ron had not heard of the practice of "reading" TLD cards from the wall of the X-1000 Dosimetry Laboratory. He added that he had arrived in late 1994, by which time Lorrie Graham, the employee who had allegedly been involved with the practice, had bid out to training. He said that a large number of unassigned readings were in the database, and that such a practice might account for the size of that number. All doses that were not listed as "zero" should have been investigated by now, Ron stated.

Regarding the NVLAP system verification audit of April, 1995, Ron recalled Mike Smith saying (prior to the audit) that he needed to get his employees trained. Ron had also seen and approved the training material (PECs), and had felt it to be of good quality. He had no personal knowledge of the training taking place, however.

Ron was also familiar with the necessity of being able to correct dosages in the TLD database. He was not, however, familiar with the practice of "zeroing out" dosages of ten millirem or below. He had recently signed a dosage rate for a contractor that was listed as eight millirem, a figure which had obviously not been "zeroed out." He was also not aware of the practice of "zeroing out"

BUSINESS CONFIDENTIAL

~~B~~USINESS CONFIDENTIAL

Internal Investigation into Health Physics Management Practices  
Page 31  
February 9, 1996  
POEF-150-96-0088

dosages to assist the corporation in a legal action. "You don't play with TLD records," said Ron.

The issue of overtime assignment was then addressed by Ron. Jeff Cunningham and Mike Smith had accrued extensive overtime during 1995, he said, due to their work with the new TLD database. Jeff and Mike had experience with the new system, while dosimetry laboratory employees were more experienced with the old system. This may have led other employees to the conclusion that they were being discriminated against on this issue, without taking into account that only Jeff and Mike had the required expertise to work with the new system.

Ron dismissed the allegation that Mike Smith had made a false overtime claim for his work on September 30, 1995. Mike had, if anything, typically worked more hours than he claimed compensation for.

Regarding recent job reassignments, Ron stated that Chris Kelley and Steve Lummer were the only qualified Health Physics technicians. As Steve had just come in from the field, Chris was assigned to work in that area. Ron had earlier mentioned the assignment possibility to Chris, and she had voiced no preference between field work and laboratory dosimetry. Although the decision had been Ron's, he did not know how a document had been generated two weeks before his decision reflecting the move.

Lorrie Graham (Interviewed February 5, 1996, @ 1400 hours)

Lorrie Graham was assigned to the X-1000 Dosimetry Laboratory in May 1993. Her duties involved the "changing out" of TLD badges, and entering the information into the TLD database. Working with her were Chris Kelley, Linda Smith, Roberta Cooke, Carl Henderson, and Richard Caudill.

Lorrie stated that Mike Smith rarely ever entered the Dosimetry Laboratory. On one occasion, three months passed with Lorrie seeing Mike only during lunch break. Much of her work was thus self-directed.

Part of Lorrie's assignment involved the analysis of glow curves. When a glow curve appeared to be inconsistent, information for an investigation report would be prepared by Lorrie. Upon consolidating the information, Lorrie would deliver the resulting paperwork to Linda Smith, who would evaluate the information, and determine corrective actions.

BUSINESS CONFIDENTIAL

003442