The problem of entering TLD information "out of sequence" was discussed by Graham. When TLD information was entered out of chronological sequence, the computer database could produce information that would have to be corrected manually. Lorrie stated that during her time at the laboratory, however, TLD cards were processed into the TLD database chronologically, a practice that should have precluded any such sequential problems.

On occasion, problems would develop when a bar code on a dosimeter would not "scan." On those occasions, Lorrie would take one of the following actions:

- **TLDs Returned from the Field**

  If the bar code would not "scan", Lorrie would enter the numbers by hand. If the number could not be read (a very rare occurrence), a code would be entered that would allow Lorrie to identify which TLD and which badge required matching.

- **Preparing TLDs for Reissue**

  When preparing TLDs for reissue, numbers were occasionally illegible. Such TLDs were taken out of service.

- When preparing TLDs for issue; the computer would on occasion indicate that the bar-code number had already been assigned. When that occurred, the identification number to which the TLD had been assigned would be noted for further correction. To assist in making these corrections, Lorrie acknowledged that she did maintain defective, unassigned TLD cards on the wall of the dosimetry laboratory. During the processing of temporary TLD information, Lorrie said that the computer would, at times, indicate that the new TLD card numbers had already been assigned (John Bowdle stated, however, that this section of the computer program would not have been "smart enough" to know if the TLD card numbers had been assigned or not). In that case, Lorrie said that she would scan one of the TLD cards on the wall to enter a number into the system which would automatically be "kicked out" of the system the next time that the card was processed.

  In essence, this practice allowed Lorrie to make necessary corrections at a later date. When the number was "kicked out," it served as a "flag" for further

correction the next time that the badge was processed. As time went on, fewer and fewer corrections were required, until, eventually, all necessary corrections had been made.

Lorrie stated that John Bowdle was aware of this practice, as were others. As it would not result in the misassignment of a dosage rate, she had never been directed to cease the practice.

John Bowdle stated, however, such a practice would simply "multiply the work later on." He said that he had never seen a bar code that was absolutely unreadable for direct entry, even if it wouldn't scan. The idea that the computer might indicate that TLD numbers were already assigned was also questioned by John. In addition, the entry of false TLD numbers corrupted the system. Far from "fewer and fewer corrections" being required, the situation would snowball, making it virtually unmatchable.

John stated that although this practice resulted in missing exposures, it should not have resulted in the false assignment of a dosage.

In short, John said, while this practice would not have resulted in false information being entered, a lot of missing information would have been circulating around within the database. To him, this was simply a poor practice.

Lorrie closed by saying that she felt that the information in the DOELAP computer database should be basically reliable.

Lorrie departed the Dosimetry Laboratory during the summer of 1994. She went into the field as a Health Physics technician for a time, until she eventually obtained a position in plant training.

Clyde Dulin (Interviewed February 6, 1996, @ 0845 hours)

Clyde Dulin stated that the DOELAP TLD database was basically valid. "It is mostly intact," said Clyde, for site employees and subcontractors who were assigned security badge numbers by the Security Department. Visitors receiving temporary badges without a "CC" or a "J" contractor/consultant security badge would not, however, be on the database, as there was no identifier attached. Such doses would be held in the "bucket file" of unassignables, created under the direction of Clyde during the 1990 - 1991

timeframe to assure that data would not be lost. This file was researched, and the results of that research were turned over to Dosimetry Laboratory personnel toward the end of fiscal year 1995 to amend the information contained in the DOELAP TLD Database. The vast majority of these dosages (well above 90%) were "zero."

At one time (prior to 1993), assignment of TLD dosages for employees and subcontractors/consultants (File #PRNG26) was a Personnel Department responsibility. During the 1993 timeframe, Personnel Department unilaterally abdicated responsibility, leaving it to the Security Department and Health Physics Department to assume responsibility. This action was not relayed to Security Department or to Health Physics personnel, and was not discovered until approximately nine months after the unilateral decision.

Security Department personnel then began entering the information into the TLD database. Unfortunately, not all personnel information was entered into the computer system.

The Martin Marietta split of July 1993 created further problems for Health Physics documentation. Currently, there are Lockheed Martin Energy Systems, Inc. (LMES) employees who appear on both the LMES and the LMUS computer files; a problematic situation for Health Physics accountability.

During late 1994, the responsibility for entering the demographic data into the PRNG25 file structures became solely a Health Physics responsibility. Rob Litten coordinated this effort for LMUS Health Physics, and provided linkage with LMES Health Physics for a similar effort. During that time, demographic data dealing with current and "near-history" records was substantially recovered. Today, an "educated guess" by Clyde for exposure records on site employees and subcontractors/consultants with security badge numbers would approach or exceed 98% validity.

NVLAP preparation was then coming on line. To operate a more controlled database, a separate Health Physics Visitor Control Center was placed into effect, giving Health Physics ultimate control of the visitor and contractor demographic (and, thus, the dosage) information.

Clyde stated that Rob Litten's practice of reducing dosages of ten millirem or less to zero (based on DOE Order 5480.11, 9.f.(1)) on the TLD database applied to internal dosimetry only. It did not apply to external dosimetry, i.e., TLD dosimetry. Clyde added that dosages gained from external dosimetry above the lower limit of detection (LLD) should never be reduced to zero on the TLD database. He added that the LLD was in the single digits, not ten.

Clyde went on to say that when a dosage was requested to be delivered off-site, there was no policy in place to reduce a dosage to zero. The actual dosage would be released.

Clyde stated that he had no recollection of the meeting described by Linda Smith in which Clyde, Gary Medukas and Mike Smith decided to reduce Jeffery Walburn's dosage from 26 millirem to zero.

To change a dosage reading maintained on the DOELAP database, a "corrections run" would be initiated. Linda Smith, or another dosimetry laboratory clerk, would typically fill out a correction form, and deliver it to the X-112 Computer Facility for entry into the Digital Equipment Corporation (DEC) computer system. Clyde added, however, that it would be possible for himself, Rob Litten, Mike Smith, and the clerks in the dosimetry group to independently issue a correction form to the X-112 Facility for a dosage change. That same individual could also pick up the confirmatory print-out detailing the change from X-112 personnel. Such an action would, of course, be unethical.

Clyde then entered the DEC-10 1022 computer file to find the historical dosage for Jeffery Walburn, as recorded in the March 1995 data for annual personnel dosage reports. Individualized reports with results from the TLD files are sent to employees and contractors on an annual basis, and Jeffery should have received a copy of the dosage listed in this report. His records, recorded on the IHTD20.ID? file, reflected dosages of 26 shallow/26 deep, which were his original readings before the alleged change of September 8, 1994.

Mike Smith (Interviewed February 7, 1996, @ 1230 hours)

Mike was hired into the dosimetry program during late 1990 by former Health Physics Department Manager Steve Warren. "That system has been a series of catastrophes since I've been there," said Mike Smith. "It is an overused, dying system." In addition, "the personnel and knowledge was not great." As time went on, Mike Smith began to devote more of his time to the new NVLAP system to replace the existing system.

During 1994, Lorrie Graham, Chris Kelley, Linda Smith, and Roberta Cooke were working with Mike in Health Physics. "I seem to end up with the problem children." Tom Maggard was the supervisor for the dosimetry laboratory.

Upon Lorrie's departure during mid- 1994, Linda brought a box of approximately 200+ unresolved investigation reports to Mike. These investigations were generated by the technicians, and brought to

Mike for resolution. Between 500 and 1000 such reports were evaluated by Mike per quarter, and it was a large-scale, on-going job.

The sheer volume of these reports prevented Mike from conducting an extensive investigation for each one. On occasion, he would have to change exposure figures, due to an improper reading. The change would be arrived at by finding the largest dose in the employee's history, and using that to estimate a revised dosage. This revised dosage would be a conservative dosage, and would most likely be higher than the actual dosage received.

The subject of the dosage change of September 8, 1994 was then discussed. Jeffery Walburn had three sets of exposure readings of 26 shallow/26 deep, which had been based on a 1990 exposure reading. On September 8, 1994, Mike had allegedly directed these last three sets of readings to be changed to 0 shallow/0 deep, due to a legal action that Jeffery had launched against the corporation. The figures were later -- apparently surreptitiously -- returned to their previous readings. Mike stated that he had no recollection of the incident, nor of a meeting with Clyde Dulin and Gary Medukas in which it was jointly decided that Jeffery Walburn's dosage should be zeroed out to assist the corporation with a pending court case. Neither had he any recollection of having changed those readings back to the previous figures. He stated that he had never directed a dosage change due to a court case under any circumstances. Mike qualified his lack of recollection by saying that he had authorized "thousands" of legitimate dosage changes during calendar year 1995 (far fewer changes are currently necessary). Mike stated that Clyde Dulin, or Linda Smith might have been able to change a dosage on their own. He, himself, would not have known who to contact in the X-112 to affect such a change.

Mike added, however, by looking at the figures, the dosage figures that were zeroed out, in fact, should have been zeros. The reason for that was that the original 1990 figures on which the subsequent figures had been based had been contested themselves (Ron Smith and Gary Medukas strongly disagreed, and said that no justifiable reason existed for changing the figures). The only way that the dosages would have then been returned to their previous figures would have been if someone had said that the changes had not been consistent with policy.

On Saturday, September 30, 1995, Mike was working overtime in preparation for the new badge changeout, which was going into effect on October 1, 1995. During that morning, he had departed plantsite at approximately 0700 hours to attend a class at the Chillicothe Branch of Ohio University. Mike didn't recall what

time he had returned, but he thought he might have worked all night into the following Sunday morning. "I don't have a habit of overcharging the company, if that's what you mean," said Mike. He added that he would not charge the company for time spent attending college.

Mike stated that at the time of the NVLAP audit of 1995, Health Physics had no one qualified on the equipment. Chris Kelley had a limited amount of training (PECs, etc.), but was not fully qualified.

By September, 1995, when Chris Kelley and Linda Smith received external dosimetry authorizations, they were competent to work on the equipment. "They've gone through the basic training," said Mike.

Mike stated that he had not spent much time in the dosimetry laboratory; very little, in fact. The priority had been to "get the new system up and running," and that was where his efforts were directed.

Mike appeared shocked when the allegation concerning the dosage change of September 8, 1994 was mentioned. "Don," he said, "there is no way that I'd cheat at work." Mike later stated that he was shocked, not only that such an incident might occur, but that he might be accused of directing such a thing.

Mike Smith (Interviewed February 9, 1996, @ 1000 hours)

Upon being given a copy of the report prepared on September 7, 1994, Mike Smith stated that he did not recall the situation. He added, however, that had the report been given to him on September 7, 1994, and he had observed the December 31, 1990 figure of 23 shallow/26 deep, he would have directed those figures to be changed to 26 shallow/26 deep, and the subsequent figures of 26 shallow/26 deep that had been estimated from the 1990 figures to be reduced to 0 shallow/0 deep.

Mike Smith stated that he would have changed the figures if he had known it involved a court case or not, in order to supply correct data. If he had said something like, "It's for a court case. Zero is easier to read," it would have probably been in the context of an off-hand, satirical remark.

Mike stated that he had no information to show why these figures had been subsequently changed back to their previous numbers. He added that he was unable to see any justification for returning

them to their original status, as the original numbers had been in error.

Mike Smith (Interviewed February 13, 1996, @ 1445 hours)

Regarding dosage codes, Mike Smith stated that he used code 12 and code 15 almost exclusively. Mike said that code 12 meant that the dosage was estimated, while code 15 meant that the dosage was calculated. Mike was unaware of what code 10 implied.

Mike said that, if initiating a "TLD Corrections" form in person, he would advise dosimetry laboratory personnel of the dosages to be changed, and whether the original dosages were calculated or estimated. Laboratory personnel would then "look up" the code, and place it by the corrected figure on the form.

Mike stated that he had been required to give a deposition during the Fall of 1994. He didn't specifically recall being asked about Jeffery Walburn at the deposition. "No," Mike stated, "if they asked me about Walburn, I didn't remember."

Mike denied that he had lied under oath during the deposition. "Absolutely not," said Mike. "I didn't do this. This is insane. I don't remember lying under oath. I don't remember changing these doses. And I certainly don't remember saying, 'Oops,' and changing them back. This flies in the face of what I've done here for five years."

Mike stated that he felt that Linda Smith, if anyone, would have been the most likely to have changed the dosage figures on Jeffery's historical file back to their previous numbers. Mike stated that on the previous Friday (February 9, 1996), at 2200 hours, Jeff Cunningham told him that Linda was angry at him, because she thought he had lied at the deposition of November 22, 1996. "She thinks I lied at the deposition. She's mad at me, because she thinks I've had a hand in it (Linda's lawsuit)."

Mike added that within the last two weeks, Ron Smith had advised him that, as a result of the settlement of Linda's lawsuit, she had been promoted.

Regarding the NVLAP certification of May, 1995, Mike stated that the "Laboratory Technical Supervisor" mentioned was Jeff Cunningham, and the other "Staff Member" listed as being "fully trained and qualified to process dosimeters" was Chris Kelley.

Gary Medukas (interviewed February 8, 1996 @ 1230 hours)

Gary Medukas stated that he became Health Physics Department Head during October 1993. From that time until the July/August timeframe, Mike Smith reported directly to Gary. "I did a lot of coaching and counselling with Mike," said Gary. "He wasn't very polished as a manager," as he simply hadn't had the experience.

Gary said that Mike Smith spent little time in the dosimetry laboratory and the DOELAP TLD database. Mike's major priority was in bringing the NVLAP dosimetry system on line, and virtually all of his time was spent there.

Gary stated that he "did not give that system (the DOELAP system) very much when it came to accuracy. The system built around that database was not very reliable." The problems revolved around people. Problems developed with reading the old badges, imputing the data, preparing the badges, and the Guard Force interface.

There were multiple issues: lost badges, and badges that were never read. At times, if an employee who was assigned a permanent badge received temporary badges on occasion, both the permanent badge and the temporary badges would be read, giving a false high - and conservative - reading. In addition, missing readings were assigned the highest previous reading, giving a false high - and again conservative - reading.

A bad reading might occur through the use of worn-out TLDs. In addition, the original algorithm placed into the TLDs could not, to Gary's mind, detect some of the material on site. Due to these problems, valid readings were not always gained. In such cases, the highest - and a conservative - previous reading would be assigned to the dosage.

At the time of the May 1995 NVLAP audit, Chris Kelley was not, to Gary's mind, trained to process dosimeters. Jeff Cunningham might have been qualified, but no one else would have been. Gary did not know why the auditor, Jan Cussimano, would have thought otherwise. At the time of the audit, Health Physics was not processing the new badges, and thus Health Physics employees would not have been required to have training completed.

Gary recalled a request for a dose history for Jeffery Walburn being requested. Such information would have been supplied on a POEF letterhead. Gary said that (to his knowledge), whatever information would have been on the database would have been supplied to Jeffery. Corrections could have been made, but he doubted it, as dosages in excess of 500 millirem were recently

released to two employees on a legal request. No attempt was made to correct those figures.

Gary added that he had no recollection of a meeting with Clyde Dulin and Mike Smith in which the issue of Jeffery Walburn's dosage was discussed. Gary stated that he would never direct such a change, and that, after all, "26 (millirem) is a meaningless number." The fact that the dosage was later changed back from 0 - 0 to 26 - 26 also seemed unusual to Gary.

The issue may exist of Linda Smith being former Health Physics Department Manager Mark Granus's mother-in-law, and thus may be holding Mike Smith responsible for Mark's termination. When asked about the significance of this issue, however, Gary stated that Mark Granus had not been on bad terms with Mike Smith upon his (Mark's) departure. Mark did not hold Mike responsible for his termination, as he knew very well who was responsible. In addition, it was unclear what Linda's feelings for Mark were; in short, she probably "thought he was an asshole, but he was a good father." As a result, Gary thought it unlikely that Linda would take measures against Mike out of deference to Mark.

The Medical Department advised the investigative team that Jeffery Walburn had requested his Health Physics records on September 16, 1994. The cover sheet on that request indicates that the requested information was transmitted to Jeffery on November 3, 1994. That request would have been transmitted to the Health Physics Department, but when Gary Medukas checked the records, the response letter could not be located. Gary found that to be "odd."

The question still remains what, if anything, was supplied to the employee per that request. If the database remained the same as of that date, then the employee was provided the altered data.

Jim Thompson (Interviewed February 13, 1996, @ 1345 hours)

Jim Thompson stated that he had personally been involved in the routine changes of dosages. When asked specifically if he would correct data that was being requested by an employee or a court subpoena, he stated that he could imagine "going over these reads" when a court case was involved. "If I'm going to send something out, I'm going to review the data," Jim stated (this is the same position held by Mike Smith. Having said that, Jim had no recollection of the incident of September 8, 1994.

Jim recalled an information request regarding Jeffery Walburn's bioassay data from Industrial Hygiene. He believe the request to

have originated during the latter part of 1994, but didn't recall any request for dosage information, however.

Jim stated that he was the privacy officer for Internal Dosimetry only. Dr. Walter Lyon was the privacy officer for the medical department, and handled those requests on his own.

DFB

cc: Dale Allen
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