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advises us, however, that the individual who authorized that alteration of dosage figures due to a legal action could possibly face both criminal and civil sanctions.

This investigative group was informed that code 10, code 12, and code 15 have distinctive meanings when the changing of dosages is contemplated. Code 10 means that while the "shallow" figure is contested, the "deep" figure is uncontested. Code 12 means that both the "shallow" and "deep" figures are contested. Code 15 means that both the "shallow" and "deep" figures are calculated. When Mike examined the figures in my office on Wednesday, February 7, 1996, he stated that the figures that had been changed to zeros should have been changed to zeros, due to the fact that the 1990 figure, on which the three subsequent dosage figures had been based, had itself been contested. Perhaps he realized that on September 7, 1994, and was simply trying to correct the figures closer to reality. If so, it was an unwise move. The change code on the listing of those figures was 10, indicating that while the "shallow" figure was contested, the "deep" figure was uncontested. Based on the definition of the codes, Mike would have apparently had no justification to change the "deep" figure of the subsequent three dosages to zero. Interestingly enough, when Linda Smith, under Mike's direction, prepared the "TLD Corrections" form, she was told that the figures to be changed to zero were contested, so she entered code 12 beside the 1990 figure. Mike later advised this investigative group that he was unaware of the meaning of code 10, as he only used code 12 (both "shallow" and "deep" estimated) and code 15 (both "shallow" and "deep" calculated). The correction of these figures was discussed with Gary Medukas and Ron Smith, who both said that the existing figures in the database were official figures, and, regardless of the code, should not have been changed when such a request (by Jeffery Walburn) had been made.

On September 9, 1994, one day after the alleged incident, a report of Jeffery's dosage was prepared. We have photocopies of that report in which the page detailing Jeffery's dosage history

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prior to 1990 is dated at the top of the page as September 7, 1994 (the day before the change was made). The page detailing Jeffery's dosage history of 1990 through 1994 is dated September 9, 1994 (the day after the change was made), and has the corrected dosages of the previous day. The remainder of the pages are again dated September 7, 1994. It seems apparent that when the dosage report was prepared on September 7, 1994, someone became concerned about four of the dosages. The next day, September 8, 1994, Chris Kelley and Linda Smith stated that Mike directed Linda Smith to affect changes to those four figures immediately. (Chris Kelley, who was there at the time, has offered to submit to polygraph examination to verify her account of the incident). Once affected, a new page for the 1990 - 1994 dosages was printed on the next day, September 9, 1994. That altered page was then inserted into the report printed on September 7, 1994.

With the assistance of Clyde Dulin, we checked the TLD database for Jeffery Walburn's dosage figures as reported in the March 1995 report. In that report, the dosage figures had been returned to the original 26 shallow/26 deep millirem dosages. Why those figures were subsequently changed back to their previous readings is still unexplained.

Jim Olsen, of Legal Services, was able to confirm that the information generated on September 7 - 9, 1994, had not been supplied to Jeffery. Jim has also reviewed Industrial Commission records related to the Jeffery Walburn compensation case. Upon reviewing the files of the Third Party Administrator, Simon Compensation Services, no copies of the TLD records in question were found. In addition, Jim has confirmed with John Ater that TLD Records are only sent to the Site Legal Officer, the external legal service, Vorys, Sater, Seymour, and Pease, or to Simon Compensation Services. Since John only sends to those entities, and since neither Vorys, Sater, Seymour, and Pease nor Simon Compensation Services has received copies, it appears that the TLD records created on September 7 - 9, 1994, have not been delivered to Jeffery.

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- The DOELAP TLD database is corrupted and unreliable.

Allegation:

Chris Kelley stated that the DOELAP TLD database was corrupted by improper Health Physics practices. Lorrie Graham, a former Health Physics Technician, was said to have maintained extra TLD cards on the wall of the X-1000 Dosimetry Laboratory. Chris alleged that when Lorrie was unable to get a reading with the TLD bar code reader from an individual's TLD, she (Lorrie) would simply take a reading from one of the TLD cards on the wall. "Lorrie corrupted the database," stated Chris. This allegation gave the impression that a large number of false dosages could be listed on the TLD database, seriously affecting the validity of the database.

Reply:

Lorrie Graham's Entries into the DOELAP TLD Database

Lorrie Graham stated that, on occasion, problems would develop when a bar code on a dosimeter would not "scan." In such situations, she 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

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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.

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Validity of the DOELAP TLD Database

Clyde Dulin described the DOELAP TLD database as being "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."

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 Lockheed Martin Energy Systems, Inc. (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 a 98% validity.

Investigator's Conclusions:

Clyde Dulin, Jeff Cunningham, Rick Dively, and Ron Smith describe the DOELAP TLD database as being basically reliable, erring on the conservative side, if anything. While a number of unassignables obviously exist, several experienced Health Physics personnel believe that the database is quite sound (Gary Medukas and John Bowdle, however, maintained strong reservations about the validity of the DOELAP TLD Database).

The function of this database is now relegated to that of a historical file. Thus, while this allegation does contain some truth, the original assessment of large numbers of misassignments has, to say the least, not been proven.

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It is obvious that the dosimetry laboratory has had very limited supervision. By Mike Smith's own account, supplemented by the accounts of Gary Medukas, Linda Smith, and Chris Kelley, Mike was rarely ever in the laboratory. This may have contributed to the problems of the database getting out of control.

In conclusion, the absolute validity of the DOELAP TLD Database cannot, at this time, be verified.

Jeff Cunningham was closely involved with implementing the new NVLAP TLD Dosimetry system. He described the system as being far more sensitive than the old DOELAP 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."

Management Recommendations

As a result of this investigation, several items have come to the investigative group's attention.

- 1) Management needs to give specific direction regarding the changing of dosage figures. Poor understanding of dosage codes 10, 12, 15, etc., and little guidance on "correcting" information to be released to an employee or a court subpoena will, otherwise, continue to be a problem.
- 2) Management needs to establish TLD database change controls.
- 3) Management needs to establish an audit trail of pre- and post-data involving dosage changes.
- 4) Differing opinions as to the validity of the historical DOELAP TLD Database may require management to obtain an independent evaluation. In particular, the actions taken by Lorrie Graham are questioned, with some "experts" believing minimal corruption has been caused, while other "experts" believe otherwise.

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- 5) No individual operator accountability was established in the dosimetry laboratory, as all employees shared the same password.
- 6) Chris Kelley allegedly advised Sally Cunningham about the questionable dosage change during 1995. Sally did not pursue this information, stating that Chris had asked her to drop the issue. Obviously, an issue of this magnitude should not have been dropped, regardless of the request to do so.
- 7) General filing conditions in the Health Physics operating area were very poor (i.e., investigation reports, TLD cards, etc.). This is a Records Management issue also that needs to be addressed.

These are problems that must be addressed to avoid a repeat of the incident of September 8, 1994.

The remainder of this report is the result of interviews conducted with the above employees, and presented in chronological order.

Sandra Fout (Interviewed February 1, 1996, @ 1210 hours)

Sandra Fout stated that she had first spoken to Chris Kelley about this matter on Wednesday, January 31, 1996. Chris had approached her with a certain amount of hesitation, and had been very emotional and upset during their conversation.

The incident began, basically, as a harassment complaint by Kelley against Mike Smith, her supervisor. Chris believed that Mike had been inconsistent in offering overtime. While Mike's friend Jeff Cunningham had received approximately 455 hours of overtime for calendar year 1995 (and Smith had charged nearly 608 hours himself), Chris had received virtually none. In addition, Mike would avoid talking to Chris, and delivered work instructions to her through intermediaries.

Chris also alleged that on Saturday, September 30, 1995, Mike was working overtime, when he departed plantsite to attend a class at the Chillicothe branch of Ohio University. He was gone for approximately five hours. On the following week, however, Mike's time sheet reflected 13 overtime hours for the preceding Saturday. By Chris's observation, Mike had failed to delete the five hours of absence when computing his overtime.

Mike had also, as of January 29, 1996, placed Chris in the field. Chris had worked in the dosimetry laboratory for nearly two years,

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and had enjoyed the work involved far more than she had enjoyed field work.

Then there was the problem of employee harassment against Chris. Chris is an ~~unmarried mother~~, and had heard fellow employees refer to her ~~child as a "bastard."~~ Health Physics Technician Steve Lummer, B/60491, had described her as being a ~~lesbian~~ for refusing to see him socially.

Sandra Fout realized that a more serious problem might be present when Chris alleged the existence of irregularities in the Health Physics computer database. On one occasion, Mike Smith was said to have approached Health Physics personnel on September 8, 1994, and direct them to alter the dosimetry reading of a plantsite employee on the database. The employee, Guard Force Officer Jeffery Walburn had complained of a burning in his lungs following an incident in the X-326 Material Access Area (MAA) earlier in the year. His dosimeter reading of 26 millirem (a negligible amount), entered into the computer database, was altered, on Mike's direction, to a reading of zero millirem. When Linda Smith, the employee charged with arranging such changes in the database, had asked why the change was being made, Mike allegedly replied that it involved a court case, and that zero sounded better than 26 millirem.

Another allegation involved the "reading" of TLDs. Chris alleged that when the bar code of an employee's TLD could not be "read," the common practice was to hold the TLD bar code reader to a TLD card (contained within a TLD) that was affixed to the wall of the dosimetry laboratory in order to place a reading -- however false -- into the database.

After receiving this information, Sandra Fout assigned Rich Ginther and Lisa Parker to the task of inquiring into the situation. As their inquiries progressed, Sandra determined that, due to the serious nature of the information she was receiving, a security investigation should be initiated.

Rich Ginther and Lisa Parker (Interviewed February 1, 1996, @ 1300 hours)

Rich Ginther and Lisa Parker had been assigned the task of inquiring into Chris Kelley's allegations on Wednesday, January 31, 1996. After speaking to Chris, they spoke with Linda Smith, John Bowdle, and Rob Litten, during which time they felt that they were confirming much of Kelley's account.

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