

Chapter 8

ISMS Runs Amok, 1999 - March 2000

Again, ISMS stands for "Integrated Safety Management System", DOE's required system of safety management for its contractors. In this chapter, I explain further how ISMS was interpreted and applied at ORNL up to the time that UT-Battelle took over.

ORNL Management Spin on ISMS

As I noted in the last chapter, one problem that DOE and ORNL had in promoting and "selling" ISMS was that it was difficult for Joe Peon to see what it was all about: how was it different from what we had been doing, what exactly were the improvements -- in short, "Where's the beef?" The "ORNL Reporter", the ORNL employee newsletter, explained it all to us in breezy terms in April 1999, as follows.

Safety is no longer an overhead function, no longer someone else's responsibility....The increased emphasis on ES&H that occurred more than a decade ago at the DOE facilities, however well intentioned, resulted in an unintended consequence. "The creation of the many safety-related organizations and positions had the effect of taking safety away from those who had performed the work", said Dennie Parczyk, currently coordinating the ISMS program at ORNL. "People began to think that safety wasn't their concern because someone else was looking after it."....[Said] Marv Poutsma [director of the chemistry division], "They took good managers and removed safety responsibility from their hands".....Parczyk and Poutsma believe that the resulting "stovepiping" of organizations and responsibilities might actually have been the basis for accidents. "And these didn't have to happen", said Parczyk. "Accidents and injuries are avoided when job safety is integrated with the planning and performance of the work."

It is jaw-dropping to think that Dennie Parczyk, who had once been head of rad protection at ORNL (before Butler and Sims), would profess to believe that having safety authority and responsibility be at least partly in the hands of safety specialists -- instead of entirely in the hands of O&R managers -- results in accidents. So jaw-dropping that one might think that he can't really have meant it. But as I hope I will be able to demonstrate in this chapter and the next, while people like Parczyk and Poutsma may not actually believe that, as representatives of ORNL management they did really mean that safety authority should be in the hands in of O&R managers.

10 CFR 835

In early January 1999, our supervisor, Dr. Gloria Mei, asked us to provide our comments regarding how well 10 CFR 835's design requirements section was being implemented. In my reply, I limited my comments to projects and facilities I had worked on in 1998. Besides listing instances where required RPP-128 and RPP-310 reviews were done (i.e., the success stories), I reported as follows. An RPP-310 review was not done as required for the HFIR resin campaign; thus the campaign could be said to be "a failure of the review system to work (i.e., the divisions and [RSS] are on their honor to notify us and the DRCO when a job might have to be reviewed, rather than their informing us about all work they propose to do and having us decide what has to be reviewed)". I had no information about the HFIR beryllium changeout (because of Utrera's failure to keep me posted as Mei had directed). No RPP-128 reviews were done in 1998 for REDC activities, but some should have been done, such as for cask design. REDC seemed to be doing their own shielding calculations, but I didn't think they were being checked by anybody. It was not known on what basis the REDC people were declaring their doses to be ALARA. My conclusion about radiological design reviews was thus that implementation status was spotty.

Regarding the engineered safety features requirement, I said that ventilation was often not examined for adequacy at MSRE. Administrative controls were not always well chosen and were often used for convenience and not truly because physical features were impractical. At HFIR, physical control features

were generally preferred, but there were omissions in incorporating administrative controls into work procedures. I didn't know what they did at REDC, although the REDC rad techs said that they insisted on containments when alpha contamination was a possibility. My conclusion about physical versus administrative controls was that implementation status was questionable at MSRE and REDC.

Regarding the optimization requirement, at MSRE, I said that no optimization analyses had been done, when the charcoal collector cask was an obviously appropriate case; no ALARA (simple dose) evaluation or streaming calculation was done either. The MSRE attitude was that difficulties could be dealt with as they arose later, a problematic approach. HFIR had not had any obvious cases so far, but the beryllium outage might present some. I could not confirm REDC's figures in the one supposed optimization done by them, because cost-benefit analysis was not used as per our RPP-129 and no use was made of ORNL's official dollar per man-rem figures; when this was pointed out to Chem Tech, they made no change. My conclusion about optimization was that its implementation at MSRE and REDC was deficient.

Finally, regarding the requirements of 835 Section 1003(a)(3), I said that "we could not defend all dose received as being ALARA", e.g., the HFIR resin job. The rad techs made many ALARA decisions and so the better they were at making these decisions, the lower the dose should be. My conclusion was that meeting this requirement depended heavily on the skills and attentiveness of workers and rad techs.

AEG-RE Meeting of 11 January 1999

Regarding the recently announced impending reorganization of AEG, Mei told us that she did not know the whole story behind it. She counted 3.5 rad engineers (she was the ".5" because of other duties). She urged us to go to ALARA Working Committee (AWC) meetings, but told us that henceforth we peons were not to attend ALARA Steering Committee (ASC) meetings without permission. She said that we were to pay attention to "interpersonal" things, have a "can-do attitude", and "ask [customers] "What else do you want to talk about?" when we "sell our service". Mei and Utrera claimed that "we're not the police" and that "we can't say that you [line management] can't do this".

The whole tenor of this meeting was disturbing. First, Mei had been told little about the reorganization of AEG even though she was its head. Second, it was a years-long practice for AEG professional staff attend meetings of ASC, whose members were mostly division directors and for whom AEG served as the staff. Our not allowed to attend made it look as if we couldn't be trusted or as if our attendance added nothing to meetings; in fact, Mei suggested that if we all went, it looked as though we had time on our hands, or some such. Third, Mei's exhortations to "sell our services to customers" -- when we had procedurally defined functions and weren't supposed to be "selling" anything -- became a constant from here on. Asking "What else do you want to talk about?" was clearly a sales technique, a way of getting one's foot back in the door after completing the business at hand, under the guise of being "helpful".

Bu the most disturbing thing was Mei's and Utrera's saying we were not "the police". Actually, at many nuclear power plants the nickname for rad techs and health physicists is "the rad police", referring to the responsibility they had for checking up on things and the authority they had to blow the whistle on violations and to stop work. This issue is at the heart of this whole book: that either rad protection people are "service providers" who have to "sell their services" and can only "recommend" to and "advise" their customers (line management), or they are indeed "the rad police" who have oversight and compliance responsibilities and authority. Mei had made noises before with reference to the former paradigm, but not as strongly and as quotationally as she did at this meeting. Utrera's chiming in arose, I thought, from his association with people from Hunt's organization, since Hunt had been saying such things for a long time.

HFIR SAR Review

The Research Reactors Division (RRD) had for years been working on an update of the HFIR Safety Analysis Report (SAR). (Readers familiar with NRC regulation of power plants should note that this was

analogous to power plant SARs.) In January 1999, the Reactor Operations Review Committee (RORC) review of the revised SAR began. We RORC members realized that comments that we had made two or more years before were listed as still to be addressed; many of my comments from that earlier time were listed as "postponed" because, RRD claimed, there was not time to address them before the 1 April 1999 deadline for submitting the SAR to DOE. Further, the new revision had already been reviewed and commented on by DOE's health physics rep Mark Robinson. Some of his comments were to the effect that my earlier comments were inapplicable, etc. -- because he was comparing my comments made on the version of two years earlier to the new revision and RRD had apparently not pointed this out to him. Thus I looked like an inattentive idiot to DOE, when in fact my comments had been on point way back when.

Disciplinary Actions and Performance Reviews

On 19 February 1999, Mei told me to attend a meeting with Mlekodaj and her, without telling me what it was about. At Mlekodaj's office, Mlekodaj told me that Sims had ordered Mei and him to hold an "informal coaching and counseling session" with me because of my removal from MSRE and REDC facility work two months earlier. Mei and Mlekodaj both stated explicitly that they did not choose to do this and did not want to do this -- it was Sims' idea.

I felt that I had been ambushed. I realized that Mei had known that I would not take this well and that I would feel that it was unjust, and that was why she had not been forthcoming about it. I had kept Mei and to a large extent Mlekodaj apprised at all times of what I was doing at MSRE and how MSRE was acting with regard to requirements. I had not been able to defend myself to Sims about the MSRE removal -- this had been done without consulting me or Mei or, I believe, Mlekodaj, although Mlekodaj said that he had spoken with Faulkner at some point just before or just after it happened. The state of rad protection compliance at MSRE was obviously below par and I was the principal person identifying the deficiencies. So I certainly felt that this "coaching and counseling session" was unjust, that in fact I was being punished for pointing out those deficiencies. In effect, I was being declared to be the problem. It was like being punched in the stomach.

At the session, Mei did most of the talking. Her statements mainly consisted of simple, platitudinous statements such as "Be tactful", "Be part of the team", and "Try to please your customer". There were no specific statements about particular MSRE situations or about ways to have handled them differently. Mlekodaj said that we could only present our ideas to line management and "it's up to them to accept or reject them" and that it was important "for our ALARA engineers to be perceived as part of the team". He also agreed to my request that he give me a written statement (which he never did) that once I had given a project or facility my advice, I was permitted to "remind" them but not to nag them if they ignored my advice. The written statement was also to say I was not to persist "except in cases of imminent danger", in which case I would kick the issue up to higher management, specifically to Mei. Mei would then talk to Mlekodaj, who would talk to Sims, who would talk to Dave Milan (Sims' boss at that time). I asked what specific objections were made to my performance by line management; Mlekodaj responded that "they" said that I went into things that were "out of my scope", focussed on "trivia", etc. I asked who "they" were. Mlekodaj said that they were people such as Faulkner, Rushton, and Patton, and some unspecified people in RRD. Mei refused to say even what RRD project or task the RRD complainer(s) worked on.

I pointed out that the generic and bromidic statements by Mei were not useful in identifying specific problems and correcting them. I asked how I had failed to be part of the team (MSRE or REDC), etc., and pointed out how the MSRE people and REDC people had avoided reviews, excluded me, etc. -- that they had in fact kept me out of the team -- and that at MSRE it seemed to be only managers that wanted me out, as I got along well with the discipline engineers and others. I asked Mei and Mlekodaj to look at my last set of MSRE comments (on the cask) with me and to tell me exactly where I was out of scope, focussed on trivia, etc. They refused.

Note that almost the first thing that was said by Mei and Mlekodaj was that this wasn't their idea; they strongly implied that they did not think this session was justified or necessary. Mei could not advise me regarding specific things I had done wrong (e.g., could not point out any specific comment that I had made that was out of a rad engineering scope), but could only utter slogans. Mlekodaj refused to discuss particular items at issue. So it was clear that it wasn't about whether I was right or wrong technically in my comments, or whether I was right or wrong about what the procedures required; all these things we could have discussed months earlier if they had really been at issue. It was clear that the true issue was that I was pointing out violations that Sims, the head of rad protection at ORNL, was agreeing with the line organizations to bury. That may seem to be an extreme statement, but I submit that the facts justify it.

Mei wrote up the notes of this meeting. Since the notes were to be placed in my personal file, I had the opportunity to read it and offer a written response. I did so a few days later, pointing out that the entire issue was made out to be my personality and that the specifics of my most recent comments to MSRE had never been addressed (i.e., that the technical aspects of my comments had never been judged as valid or invalid). (The reader should also recall the MSRE release incident that happened very shortly after I was removed from the project.) I also pointed out that generic statements such as, e.g., "Be tactful", made without any reference to particular instances of untactfulness, were not helpful in indicating to me how I had failed in my relationship with the project. I also that instances of focussing on trivia, etc., were not specified or addressed. I concluded my response by stating that the coaching and counseling had not been helpful since I had not been given substantive guidance on changing objectionable behavior.

Sims read my response and then directed Mlekodaj and Mei to repeat the coaching and counseling session. When Mei told me, I refused, on the grounds that it would be a waste of time. On 17 March 1999, Mei told me to meet with her and Mlekodaj in Mlekodaj's office. I expressed suspicion, but she said that it was not a repeat coaching and counseling session. However, when I got there, I found that it was in fact a repeat session. I told Mei and Mlekodaj that I refused to participate and that it wasn't fair or right that I should be disciplined at all over this, as they well knew. They didn't get angry with me or contradict my statements. Mlekodaj pointed out, however, that if I didn't submit to this, I would be subjected to a higher level of "positive discipline": I would be sent home for a day with pay to think about it and if I still refused, I would be fired. I told them I was going to speak to Sims.

I sped down the hall to Sims' office. Fortunately, he was in. Holding back my tears and my anger, but not my passion, I told him that this was unfair. I reminded him of some of the problems I had with MSRE management, noting, e.g., that Faulkner never asked to meet with me or (per Mei) with Mei regarding any problems he had with my performance. I pointed out that line management's attempts to cut AEG out of their work continued to occur. I noted that generic platitudes were not helpful in guiding people to change their behavior and I stressed that Mei and Mlekodaj refused to go over my last set of written comments to MSRE and to tell me which were trivial, out of scope, etc. After making my position clear to Sims (of course he already knew most of these details), I concluded by exclaiming, "I have swallowed so much", i.e., that I had put up with a great deal -- by being excluded, having nothing done about my concerns, and being removed from work without a hearing. Sims had on his sympathetic face, on this day with an added "this hurts me more than it does you" aspect. He did not tell me why he had ordered the session and its followup, but simply reiterated that if I didn't submit, I would be sent home and then fired. He said I should go back to Mlekodaj's office and sit down. I saw that there was no help for it. I needed to keep my job, so I went back to Mlekodaj's office and sat down.

It was déjà vu all over again. Mei repeated the same platitudes as she had in the earlier session. I again pointed out the need for her and Mlekodaj to identify specific instances of uncooperation by me, but none were put forward. The idea seemed to be that I should make line management happy, however that had to be done -- and I was supposed to figure out how. I again asked to go over my last set of MSRE comments and to be told which ones were inaccurate, trivial, out of scope, etc., but Mlekodaj again refused, saying,

"We're not going to do that". Mlekodaj stated that I should ask him for guidance on problems on a case-by-case basis. The idea seemed to be now that I should go to my section head, not to my group leader, with each and every question and interface problem.

Following this session, Mei wrote up a second set of notes. On 18 March 1999, I wrote up a response to those notes. This time, however, I realized the political nature of the process: it was a "re-education" in the Chinese "Great Leap Forward" sense and it was important that I show that I had in fact been re-educated. Well, so I had -- I was now enlightened about the political nature of the process and disillusioned about my management's commitment to safety. Not wishing to lose my job, though, I wrote that I would try to be more tactful, etc. I was completely sincere about that -- with this mark of work removal against me, I would have to be extra nice to people for a long time to make up for it. However, I did not express my intent to continue reporting violations, although I was inwardly resolved to do so. On that very day, Mei and I signed off on my delayed midyear performance review, of which the coaching and counseling session was now seen to be a part. I am not sure, but it is possible that my performance rating would have been set at "deficient" had I not had the coaching and counseling session first.

Note the irony in this statement from the then-current version of ORNL Procedure HR-012, "ORNL Employee Discipline": "All employees will follow established procedures, rules, and regulations or be subject to disciplinary action. Managers and supervisors in the field are responsible for assuring that employees under their supervision follow established procedures, rules, and regulations and are authorized to administer appropriate disciplinary action to employees who fail to follow such procedures, rules, and regulations. Disciplinary action will be taken when an employee's conduct is inconsistent with established procedures, rules of conduct, prescribed performance standards, and environmental protection or occupational safety and health regulations. The objective of such action will be to achieve correction, where applicable, and to provide constructive direction to ensure future compliance". (The underlining is mine.) MSRE, REDC, and HFIR management demonstrably failed to "follow established procedures, rules, and regulations", while I didn't fail to follow any procedure. Yet I was the one disciplined.

The procedure also said this: "Coaching and counseling are the expected methods for the supervisor to apprise the employee of a problem in work performance, conduct, or attendance. The objective is to help the employee recognize the problem, to develop effective solutions, and to establish the employee's commitment to remedy it....An oral reminder is the first formal level of the discipline system. It is a formal conversation between the supervisor and an employee about a performance, conduct, or attendance problem. An oral reminder will remain in effect for 6 months if no subsequent disciplinary action has occurred....Before the [coaching and counseling] meeting, the supervisor should identify and analyze the problem [and] review it with....management....During the meeting,....he/she should tell the employee, "This is a coaching and counseling session," and identify and discuss the problem. The employee should make a commitment to correct the problem. After the meeting, the supervisor documents it and follows up on the problem". No permanent documentation for my informal session was required according to Section VIII, "Required Records". Yet the record of the session was put into my performance evaluation and file.

In 1999, ORNL instituted a new system of performance evaluation called PADS. It was described as a "new 360-degree, competency-based performance management system". I was suspicious of it immediately when I saw a side-by-side description of the old and new systems. The old (Hay) system was said to put the supervisor in the role of judge, to have feedback "based on two people", not to be aligned with organizational strategies, to have quotas on performance distribution (the first time that it was acknowledged officially that there were quotas on the ratings), to evaluate on the basis of "know-how, problem solving, and accountability", and to force managers to prepare 400-500 promotion packages per year; it was said to "seem like someone else's system", to emphasize "skills and behaviors", and not to connect performance management with job evaluation. The shiny new PADS was said to put the supervisor in the role of coach, to have "rich, balanced feedback" that included multiple perspectives, to

be aligned with organizational strategies, to have no quotas, to "assess" organizational role and career stage, and to force managers to review and "approve/disapprove" only 20-50 "changes in Contribution Stage plus a very few role changes" each year; it was said to encourage "ownership/acceptance" and to be aligned with scientific and business missions. As the reader can see, these descriptions were jargon-filled but substance-light, and they stacked the deck against the old system. Most people thought that the old system was fairer and far easier to understand. While both systems obviously could be manipulated, the new system was more subjective and thus easier to manipulate, as we realized once we saw how it worked. The most important change was the so-called 360-degree feedback. This meant that the employee and his supervisor asked for feedback about the employee's performance from a certain number of his peers and customers. The employee clearly had an incentive to get his friends and allies to put in comments. Still, there was some system (which I never heard or saw explained) to weight the feedback and to have the supervisor use the feedback. Sims himself gave the presentation and training on this to most of ORP and he admitted that some important parts of it were not yet in place. He did not try to "sell" it to us; he seemed tired and resigned and simply told us about it. I think that this was one of the most disliked changes ever made at ORNL during my time there, mainly because of its incomprehensibility.

A "Pointout" to Sims

On 17 March 1999, I told Sims about an incident at Sandia National Laboratory in which an operational review was not done, in violation of procedure. I pointed that this was an illustration of what other sites do in similar circumstances (i.e., when review procedures are violated). I followed up with an E-mail message so that he could have the details in writing. In such ways, I and others were telling Sims that ORNL practices were deviating from DOE expectations, but although he listened carefully, he never seemed to take any steps to correct this.

More about the HFIR Resin Job

At the March 1999 ALARA Working Committee meeting, Wilbur Harris, RRD Division Rad Control Officer (DRCO), gave a presentation on the lessons of the HFIR resin job. The lessons were that there was a need for dry runs and electronic personnel dosimeters (EPDs); that it was important to follow procedures (both RPP-310 and RRD's internal procedures) to ensure that "important steps such as dose calculations and dose checks" were performed; that multi-badging should be done; and that the "HICs" (radwaste containers) were preferable to the concrete boxes used. Also, he noted, portable shields should be considered. According to the minutes, "Harris thanked Westbrook for her valuable insight and help" as reviewer for the resin job and formulator of the lessons learned and recommendations.

I wrote Harris a note to thank him for his kind words at the AWC meeting. I told him that Dale Perkins had actually thanked me after the meeting for, as he put it, "not trashing my guys", i.e., not criticizing the rad techs in front of the AWC folks or in the investigation report. I thought that maybe Perkins was judging us by himself: some in the rad tech organization seldom missed an opportunity to criticize us parasites in AEG, but AEG generally tried to be tactful in speaking to and about the rad techs. I told Harris that AEG had been "directed on pain of death to keep peace with our fellow ORP section", i.e., RSS, and it was "our inclination as "protective professionals" to want to support those on the front lines of work [workers and rad techs]". I asked that Harris tell me if he should hear of an area or task in which the rad techs seemed to think AEG had not done an adequate job, so that I could "mend fences". Harris replied regarding his kind words that "Credit is due where it is due. You do good work". He also stated that he had not sensed that AEG and "certainly not you" had any kind of negative attitude towards the rad techs. This was a great comfort to me.

In May 1999, I attended an ALARA conference at Hanford. I gave a talk titled "Fat, Dumb, and Happy: Unpleasant Surprises in a Supposedly Routine Job", on the HFIR resin campaign. (The expression "fat, dumb, and happy" refers to someone who is going contentedly and merrily along without realizing that he is in danger or that he is missing something important.) My approach in the talk was to present it as a

"lessons learned" event. I pointed out how the failure to pay attention to the high sampling dose rates, to do top dose rate calculations, and to do a dose rate estimate contributed to the violations. I pointed out the deficiencies of the box design. But I also pointed how excluding the rad engineer whose focus would have been on these things also contributed and I commented on AEG's continuing problems with reviews. The mostly DOE-site and mostly rad protection audience was sympathetic. They shared similar experiences, both during the question-and-answer session and privately. Several of them told me that at their sites they had faced such problems in the past but that due to incidents or better discipline of the line organizations by higher management, exclusion from job planning and investigation didn't happen to them any more.

I had given this talk earlier in practice sessions at ORNL, with audiences that included Mlekodaj, Mei, Geber, and I believe Don Gregory. Nobody objected to the tone or to the specifics. I had heard talks at professional meetings by people from other sites who related the same sort of "things didn't work out as planned and we learned our lesson" tales. Roger Davis, HFIR complex leader, was also aware that I would be giving a talk on this topic since I told him so in asking for some supplementary information. So presumably everybody was on board with what I would be saying. But Mlekodaj told me later that Richard Shoun, the Chem Tech DRCO, heard my talk at the conference and complained to Sims that I shouldn't be allowed to give such talks since they showed ORNL in a bad light. I.e., we should be reporting only "good news" about ORNL even to our professional peers.

The ORNL "Line" on ISMS

The reader should look again at the excerpt from the April 1999 article in The ORNL Reporter that I gave at the beginning of this chapter. Anyone who had been working in the DOE complex for more than a few years but was not up on the subtext of messages like the one in the article would have been puzzled by it. I certainly was at the time I read it. Obviously ORNL management was trying hard to differentiate between "then" and "now". But the "then" of a few years earlier (say 1990-1995) was DOE's increasing emphasis on safety. How then could DOE and ORNL justify the retreat of the last few years and -- the crowning touch -- the return of autonomy to O&R managers? Why, through ISMS. As the article's author pointed out, people could not see any difference in how safety was managed then and now; then as now, every worker, supervisor, and manager was responsible for following procedures and regulations, every worker was supposed have a questioning attitude toward safety, etc. It seemed that the only way that the new way could be made to seem more attractive than the old way was by criticizing the old way and making it seem not to have been effective, making it seem.....well, downright dangerous. The "someone else" that safety had allegedly been left to in the past was clearly safety people; the people who would have responsibility for safety in the future were the workers and the "good managers". Of course, since the workers took their orders from the line managers, it was clearly these managers who were to control safety from now on. I believe that this message -- filled with straw men -- was a story concocted and embellished by ORNL management to provide a superficially plausible explanation of the major change in safety authority at ORNL. I found it particularly ironic that ORNL management was claiming to be putting increased emphasis on work planning, when in AEG's experience there had been an increase in avoided reviews and seat-of-the-pants operations.

It was also notable that there was an implied threat in the article: Parczyk was quoted as saying that ORNL had to take responsibility for its own safe operation or "someone will take that responsibility away from us". The author of the article noted that a team of observers, under DOE's aegis, had already visited ORNL as part of the first phase of the ISMS verification process. Obviously, a site's passing its ISMS test was to be DOE's future benchmark of a good safety program.

Radwaste Characterization of HFIR Items

In May 1999, I was involved in a retroactive characterization effort that was typical of RRD's increasing failure to plan jobs adequately. I met with the Radwaste division liaison to RRD; his job was to advise RRD on getting their waste characterized and packaged for transport to a storage site. He asked me to do

a calculation to try to quantify the radionuclide contamination on some HFIR spent fuel racks. These racks had already been surveyed by the HFIR rad techs and cut up and boxed by RRD workers. I agreed to do the calculation, but I pointed out that it would have been easier to do if I had been consulted prior to the survey, as I could then have made sure that representative measurements were taken. He agreed that that would have been preferable. Later, after I had looked at the data and the hand sketches, I spoke with him about how the survey was done and the limitations of the data collected. I repeated that I wished that I had been in on the planning. He said that he himself had watched as the survey was being done and had wanted to ask the rad techs to do some points they didn't seem to be doing, but he had refrained: he was being considerate because as he noted, it wasn't he out there sweating in protective clothing and a respirator. Both in his realization that better data could have been obtained and in his consideration for the workers (rad techs), I felt that he was a man after my own heart, safetywise.

I also spoke with the two rad techs who did the survey about the correction factors of their instruments, how far away "contact" was for the pipelike rack parts, where the "corner" measurements were taken, etc. They willingly told me what they knew, but their answers were somewhat incomplete. I consulted with one of the always helpful ORP instrument calibration people. I did my best, but because of the limitations of the data, the results of my calculations were more conservative than they would have been if a more representative set of points had been taken and supporting instrument information had been available.

Besides my regret about not being in on the planning, I was surprised to be included at all, given RRD's propensity for avoiding AEG involvement. I found out that one of the HFIR rad techs had suggested that the Radwaste liaison consult me. It was no surprise to find that this tech had previously worked in the power plant world and was one who I had noticed before was alert to details; also, he did not share the anti-rad-engineering prejudices of so many of the rad techs. The liaison himself had apparently had no say in involving me at the start -- the racks were RRD's and it was their job to ensure proper characterization. They had directed the rad techs to do the survey and the workers to cut up the racks, without considering how the characterization would be done. The poor liaison was thus left to fill in the blanks.

On 23 March 2000, I met with a Solid State Division person about my potentially doing calculations to allow certification of an HFIR-activated piece of equipment slated to go to radwaste. He remarked that Solid State had approached the Computational Physics and Engineering Division to do these calculations, but their cost estimate was "astronomical". In the course of our discussion, I found that actually he was interested in learning to use MCNP or SCALE and doing the calculations himself, rather than having me do them. I discouraged this, because these computer codes were not easy to learn like Microshield -- getting up to speed could not be done in a short time and this would be a complicated calculation for someone to do who was not an experienced shielder (he was a former rad tech with no degree, as far as I knew). Nevertheless, to be helpful and explain the difficulties, I described in detail how this calculation might be done and I sent him two followup memos. But he never got back to me and I never heard how, if at all, the piece was certified. I think that the Computational Physics people's estimate would have been realistic as regards how many hours it would take, so their cost estimate was probably not out of line. I fear that somebody in the HFIR complex came up with some quick-and-dirty calculation that would not have passed muster if anybody knowledgeable had looked at it too closely. But with no review of the calculation, there was no likelihood of that.

HFIR Annealing Oven Experiment

In August 1999, I toured the HFIR annealing oven experiment with an RRD engineer whom I had found to be cooperative and intelligent in the past. He clearly did not want the experiment to be reviewed, implying strongly that it was unnecessary. The experimental setup had been modified and the experimental plan was not complete yet, so I had to defer signing off on the RPP-128 review until the planning was complete. I reminded him some time later that the RPP-128 review was not done. However,

he did not reply and I was never asked to sign off on this. I never learned if the experiment was done or not. Thus if it was done, it was done without review - and thus in violation of procedure.

Failed Fuel Detector Incident at HFIR

In August 1999, a significant event occurred at HFIR. At this reactor, there are three identical failed fuel element detectors (FFEDs), which "look at" a coolant pipe bearing water that comes directly out of the reactor core. Having one of these go off is usually deemed to be a false alarm, but having two or more go off is deemed to be "something". In this event, all three detectors went off at the same time. From the fact that the alarm did not continue (i.e. there was a spike reading), it appeared that the radioactivity was not dispersed in the water, as if from failed fuel, but was a single radiologically very hot particle or bit that had passed rapidly through the pipe, carried by the water. The reactor was immediately shut down.

On 30 August 1999, complex leader Davis called me from HFIR to alert me to be prepared to come to HFIR on 31 August or 1 September to review a job (as per RPP-310) in which the coolant strainer was to be removed and examined. The thinking was that the hot particle that had passed through the coolant pipe might have been caught on the strainer. On 1 September 1999, since I hadn't heard from Davis about the job, I called the HFIR rad tech office to find out what was going on. I was told by a rad tech that the job was in progress in the reactor bay and that Davis was down there and unavailable. When Davis called me back later, I asked him why he didn't call me to review the job. He was uncharacteristically evasive. He told me that "we decided" that the job did not qualify under RPP-310. I told him I thought that it did qualify because it was nonroutine and the dose rates were uncertain at the start of the job. He said that all they had done was fish the strainer out of the pool using the bay crane, take a quick measurement of the maximum contact dose rate, and move the strainer over to the decontamination sink at the end of the bay.

But later that day, the RRD compliance manager, P. Michael Whaley, called me to ask why the job hadn't been reviewed under RPP-310. Whaley told me something that Davis had not: the job involved a "flashing" operation. A flashing operation is a quick movement of an unshielded hot object; although the dose rate at the body may be very high, the resulting dose is usually low because the exposure time is so short. However, careful planning and often a dry run are required in order to ensure a low dose. In this case, I was told, two big, strong RRD guys picked up the strainer manually between them and toted it some yards over to the contamination sink. They had done so because the bay crane rail did not allow the crane to travel as far as the decontamination sink area. So RRD had sleeved the strainer in plastic as it hung from the crane, set it down on the floor of the bay, and then had the two men heft it over to the sink. This operation should certainly have been reviewed at an RPP-310 Level 3. I was not able to get in contact with Davis again that day to find out what he had to say about this.

The next day, 2 September 1999, I was out of the office all day on previously scheduled major personal business, so I briefed my backup, Utrera. As I found out later virtually by accident, during the day he was called to review and support a job in which a particle, suspected of being the hot particle and already removed from the strainer, was to be taken down to the pipe tunnel to see if it would set off one of the detectors that alarmed during the incident. The rad techs asked him to do dose calculations for them and he accompanied them down to the pipe tunnel with the source. I was upset about this because they never asked me to do any calculations (even the spent fuel rack ones were at the request of the Radwaste guy) and they would usually make excuses when I asked to observe a job. I felt that this was the buddy-buddy system at work because Utrera and Perkins were friends. When I came back on 3 September 1999, I expected to find that Utrera had left me a message regarding the hot particle work of the day before -- the backup rep was supposed to keep the principal rep briefed, per Mei's instructions. But I found out about the test in the pipe tunnel only because some HFIR person happened to mention it to me when we were discussing another matter. I asked Utrera to tell me about it, which he grudgingly agreed to do by E-mail.

I also called Davis to ask him about the flashing. He admitted that he hadn't told me about it during our earlier conversation following the job. He said that the contact dose rate on the particle was "only" 60 rem/hr (yes, reader, that is rem/hr). He argued that the dose rate at the body position would have been below the 5 rem/hr RPP-310 trigger. He stated that the contact dose rate at the strainer was measured with a long-handled "teletector"; apparently the dose rate at the body position had not been measured at all. I expressed doubt that the body dose rate was lower than 5 rem/hr and I reiterated to him that it was a nonroutine job as well. The reader must understand that the strainer was a large cylinder perhaps 18" in diameter and perhaps two feet long, open at one end and with a strainer grating at the other end. Thus with the strainer carried vertically and the grating at the bottom, the particle-to-body distance would be no more than about 18", if that. Davis was not a good liar, so his statements were clearly not credible. This was very troubling, because he was a nice guy and previously had seemed honest to me. I thought he must be under a lot of pressure to justify the decision, which clearly he himself had not made.

Finally, I called DOE facility rep Mike Woods, who told me that he had watched much of the operation. He said that RRD had not intended to do a prejob briefing for the flashing until he and his colleague prodded them to do so. Woods also said that the HFIR people did not practice the flashing maneuver (e.g., with a spare strainer) before doing the flashing. From his description, it seemed that RRD had not planned to do the flashing when they first started the job -- it had been a quick on-the-spot decision. He expressed some concern that RRD was not really planning the response activities but was winging it. Later, a HFIR rad tech told me he thought that Davis had intended to have the job reviewed but had given in when the operations people insisted on having the job go forward. This agreed with my earlier conclusion about the credibility of Davis' justification for not having the review. Several days later, I talked with Wilbur Harris, the RRD DRCO. He said that he was not consulted about the flashing job either. (He of course would by RPP-310 have been involved in a Level 3 or higher RPP-310 review had one been held.)

On 8 September 1999, I told Mei and Mlekodaj by E-mail about the flashing operation and pointed out that it was another example of a review required by RPP-310 but not performed. I also told them about Davis's concealment of the true situation and Utrera's failure to tell me about what had happened at my assigned facility in my absence. I sent them a followup message reporting my conversation with Woods. In a subsequent face-to-face conversation, Mlekodaj and Mei told me that Mlekodaj had spoken to Sims about all this, but Sims did not want to do anything about it. I asked Mlekodaj and Mei to talk with RSS and RRD about this, but they demurred. However, they said that I could send a memo to RRD.

Over the previous week, I had informed my fellow RORC members of what had been happening (some of them heard it first from me, in fact). Secretary/member McKeehan told me that RRD had had NAAF, the HFIR neutron activation analysis facility run by the chemistry division, analyze the spectrum of the particle(s) removed from the strainer. It was found that none of these would have been hot enough to have set off the FFEDs. I pointed out to McKeehan that the FFEDs' normal background was from N-16, with its 6-MeV gamma energy, whereas the radiation they were supposed to detect in the case of an accident was fission product radiation, with energies up to about 2 MeV. In calculating the dose rate at the FFEDs, it would be important to consider the energies, the pipe wall, the lead shielding around the detectors, the slant thickness as the particle first approached and then moved away from the FFED positions, whether the particle was a point source, etc. I reminded McKeehan that RRD had been going to do this calculation even before the particle incident, but they had deferred it to a future safety analysis report review.

Later that day, after speaking to a HFIR manager, I reported the following to McKeehan. RRD had identified what the particle was -- a loose part -- and had found that its three mates were also missing. The manager also told me about other potentially missing parts or pieces of parts that might be down in the core vessel or letdown lines; he said that they thought that if they ran the pumps full on for several hours, any truly loose parts that were there would be flushed out. (He claimed that DOE had bought off on this argument before.) The NAAF manager told me that the actual source might have been a "big chunk of

oxide" as it went past the FFEDs, but formed a bunch of tiny bits afterward due to collision with, e.g., the strainer. Regarding the rad techs' and Utrera's taking the hot particle into the FFED tunnel, even if this particle was the culprit it might not have made the FFED go off due to decay and due to the lack of N-16 background (about 100 R/hr) in the tunnel during shutdown; on the other hand, when they held it up to the FFED, it was not shielded by the pipe wall and was held still there instead of zooming by. So the fact that the particle did not set off the FFEDs did not prove that it wasn't the original source, or part of it. Finally, I expressed concern about the headlong way RRD seemed to be doing things with respect to this event: besides the flashing operation and the three personal contaminations reported since the event (on 31 August, 2 September, and 3 September), in one day they had designed and made an 8-foot "picker" tool to hold the particle and had had the rad techs and Utrera use it to hold the particle up to the FFEDs -- with, as far as I could tell, no documentation of the calculations that went into the choice of the length.

On 10 September 1999, I attended an RORC briefing by RRD. RRD's conclusion was that some mysterious particle had caused the actuation, but the particle was now gone and operation of the reactor could proceed as before. There seemed to be no danger in this, so RORC agreed that restart was okay. After some time, DOE approved the restart.

On 9 November 1999, I sent a message to J. Ed Lee, the RRD HFIR section head. I stated that twice in the past year reviews had been avoided: in the resin job and the strainer job. I pointed out that RRD was well aware after the resin job of the potential consequences of not doing reviews, but still they avoided the strainer review. I summarized the strainer job events and asked to meet with him. Lee agreed to meet, but said that he did not have the same perspective about the strainer job as I did. He asserted that no DOE person caused the work to be stopped (for the prejob briefing) while the particle movement was being evaluated -- he did "without any one else's input except that the job was about to begin".

Either because I copied Whaley on this message or because Lee sent it to him, the next day Whaley sent me a message stating that his discussion with me was more general than just the strainer job and that he had been interested in finding out how ALARA reviews were prompted, etc. He claimed that I had convinced him in our discussion that what RRD had done was okay both regarding compliance with RPP-310 and in meeting "the ORNL intent" of the trigger criteria. He startled me by stating that as far as he could tell "there was never any intent of generating a significant amount of exposure -- which seems to be the basis for when an ALARA review is intended to occur". (I.e., if you don't intend for anybody to get much dose, you don't need a review.) But to be fair, he told me that if he had misinterpreted our conversation, I should let him know. I certainly hadn't thought that from what I told Whaley in our discussion about the flashing and RPP-310 trigger criteria (including the "uncertain conditions" provisions in the text), he would have concluded that no review was indicated -- quite the opposite, in fact. I wondered why he had changed his tune, as it appeared to me.

I sent a return E-mail message to him and Lee, stating that almost the first thing that Whaley had said to me in our discussion was that he was concerned that the strainer movement job, as a flashing job, was not reviewed by Wilbur Harris and me. I noted that he had backtracked after he realized that I had been kept in the dark about the flashing; I pointed out that he had said he would get back to me if he confirmed that it was a flashing job, but he had not done so. Thus his claim that I convinced him that no ALARA review had been necessary did not hold water. I also pointed out that whether there was an "intent of generating a significant amount of exposure or not" was not the point, but rather whether there was some potential for significant dose to be received, even inadvertently. I then stated, with regard to Lee's message, that the RWP for the strainer removal job was clearly not written with the flashing in mind. That implied that the flashing was indeed a decision made on the fly, after the job started. In fact, I pointed out, there was a restriction that no work was to be done under the RWP in an area with a whole-body dose rate of greater than 100 mrem/hr and that this RWP should be compared to the one written a week later to put the strainer back in, when the dose rate limit was given as 1000 mrem/hr. I ended by observing that the work

planning and review procedure at PNNL (run by Battelle) was even more time-consuming than ours (implying that Lee et al. should be grateful for our less clunky process and should anticipate its bulking up when Battelle, which had recently won the ORNL contract, took over).

A person (not Whaley) subsequently told me something in conversation that was not confidential in the sense that it could be traced back to the informant. However, in another E-mail message in which I passed on what this person had told me, I nevertheless gave as my reference "someone from RRD whose name is being withheld by request". I was startled when Whaley then sent me a message stating that although he was "about as painfully up-front, honest, and blunt" as I was, he had become allergic in the past year to being associated with controversial issues. So he would appreciate in the future his name not being used in E-mail messages about situations that could prove to be controversial. He stressed that he was asking for discretion, not secrecy. I did not understand what he was talking about -- not only was he not the informant, why would he be so sensitive about such issues, when he had been no stranger to challenging and demanding exchanges in the past? He was indeed blunt (he was the one who had sent me the "gross conceptual error" response to some other comments of mine), but he was also forthright and intelligent, as I knew from our various RORC-RRD meetings, and I respected that. I also recalled the comment of the former RORC chairman who had served on the interviewing committee at the time Whaley was interviewed to be compliance manager: Whaley was the obvious best choice out of the five candidates because he was much better prepared at the interview than the other four and was on top of the various compliance issues, besides having a thorough knowledge of HFIR from his years in operations. From all this departure from the Whaley norm, I felt that something serious must be up, so I asked him about it.

I was even more surprised by what he told me. He asked me to keep it confidential, which I did (not even telling Mei or Mlekodaj or the others in the RORC). However, after six years, I think he will not mind if I state the gist of what he said. He had previously become concerned about a "miscommunication" with the DOE site reps on some unspecified issue, which I took to mean that RRD had not told all the truth about it to DOE. As a result of raising the concern within RRD, he was demoted from section head to group leader (which I had not been aware of). Then he referred another issue for P-AAA screening that his new manager (not his immediate supervisor) did not want to get out, to the extent that this manager had stifled a Radiological Event Report (authored by RSS). As a result of the referral, Whaley was demoted from group leader to compliance engineer. He pointed out that there was an intense reorganization within RRD at the time and that his actions were perhaps not the whole story, but he felt that they played a significant role. He interviewed for three other positions in RRD, one of which he had already held in the past and another for which he had been a backup, but he was turned down each time. As a result of all this, he felt he couldn't afford to have his name associated with a controversy such as the strainer job.

REDC's Rejection of Geber

Following my removal from REDC work at the behest of Chem Tech, Mei appointed Geber as the new AEG rep to REDC. He was the logical choice on the basis of workloads. But for some mysterious reason, Mei alone could not make the appointment, or even Mlekodaj or Sims alone: both Sims and Dave Milan, who was the deputy director for ES&H and thus Sims' boss, would be approving it. Weeks after Geber was appointed by Mei, Mlekodaj was still waiting for Milan's and Sims' approval. This ludicrous approval process was obviously adopted so that Sims could have cover for appointing Geber in the face of opposition by, apparently, RSS since the REDC Chem Tech and Chemistry people presumably did not know Geber. (It may be that other parts of Chem Tech weighed in, however; the reader will recall that Geber had tangled previously with Dan Ramey of Chem Tech.)

In late February or early March 1999, Geber (as acting AEG rep) and Mlekodaj met with Gary Kelly (REDC complex leader), and Shoun (Chem Tech DRCO), regarding two REDC people who went over their ALARA dose goals. Mlekodaj informed Kelly that Geber was the new AEG rep, which seemed to take Kelly by surprise, and Kelly and Shoun then told Mlekodaj that he should "ask Brad Patton [the

REDC facility manager and Chem Tech section head] before sending another ORP person over there [to REDC]". Following this meeting, Geber quoted Kelly as having stated that he wasn't going to call for AEG support unless there was a requirement in Table 310-1 (the trigger table in RPP-310) and that he thought the RPP-310 text (the "first-time" operation stuff, etc.) was too vague. Kelly also stated that if he had to have AEG support, he wanted someone who could dress out and wear a respirator. Note that Kelly's statement confirmed my report to Mei and Mlekodaj that he had told me in November 1998 that he looked only at Table 310-1 and ignored the rest of RPP-310. There were also echoes in Kelly's respirator-dressout statement of Perkins' long-ago statement to me that he wanted a rad engineer that he could boss around and "give some dose to", as if I didn't fit that description. Both Geber and I could dress out (being rad worker trained); Geber was respirator-qualified and I had been respirator-qualified at my previous job and presumably could be again. So Kelly seemed to be raising an issue that wasn't there.

Geber also said that Shoun had been given a branch office at REDC (which had been suggested by Chem Tech previously as a way to get the DRCO more involved in REDC), but Shoun told Geber that he spent no more time at REDC than he had before. The true reason for Shoun's lack of involvement in REDC, as he told me on an earlier occasion, was that REDC did not keep him informed of what was going on there. Later, Mlekodaj told Geber that Kelly claimed that Patton called the shots at REDC, but then Patton told Mlekodaj that it was Kelly who called the rad protection shots at REDC.

On 25 March 1999, Mei wrote a memo to Mlekodaj and Sims regarding a presentation by Patton to the ALARA Steering Committee in which Patton discussed radiological work and ALARA issues at REDC at length without once mentioning AEG. Mei noted various statements made by Patton implying that rad engineering review and support were needed for the work, especially in the planning, yet in fact the obvious reviewers and supporters, AEG, were not involved in that work. She also pointed out that an upgrade involving design work was not reviewed as per RPP-128. The next day, Sims told Mei by memo that "ALARA [AEG] persons were probably not considered for utilization [in planning work]...[sic dots]"; that "facility management and ORP complex persons must regain confidence in the ALARA [AEG] folks"; that there must be "an opportunity for ALARA to earn respect"; that the "RSS complex folks probably need to demonstrate a more supportive stance and not think they can do everything (they don't have time)"; and that RSS "should" have some involvement in talks between AEG and REDC management.

Note the implications of knowledge of and tolerance for violations that Sims showed here. He knew about the avoidance of reviews by REDC and its complex people (he had been told by Mei, Mlekodaj, and me at various times) and implicitly said so in this memo. He did not say that he had ever directed RSS to be supportive of AEG or even that he had directed them to comply with RPP-310; he implied that this was something that AEG somehow had to manage to get RSS to do. He implied that he tolerated the "AEG RPP-310 review optional attitude" of REDC management and its RSS complex people, in that he said that AEG had to "earn respect" and "regain the confidence" of these people if we wanted to be involved. He implied that RSS people could do everything that AEG people did if only they had time, i.e., that they had the qualifications to do AEG work but just not the time. Finally, he declared his intention of involving RSS again as the gatekeeper between line management and AEG, when he knew RSS had always been a problem in this regard.

On 29 March 1999, when Geber had been acting AEG rep to REDC for three months, Mei told me that she had heard that Sims and Mlekodaj would be meeting with Patton to "reach some decisions" about who was to be the AEG rep for REDC. A few days later, Mei told me that REDC had requested (presumably at Perkins' suggestion) that Utrera be assigned to REDC. But Mei had replied that Utrera was fully occupied at the time and was going to be working full-time on the HFIR outage in less than a year, so she proposed to assign Geber, if Sims and REDC agreed.

Now, during the time that Geber was acting rep and we believed that he would be appointed officially, I talked with him about REDC. In particular, I advised him to get up to speed on REDC work activities by looking at the Rad Work Permits (RWPs) and the associated doses. He did so and realized that my suspicion that REDC had been avoiding RPP-310 reviews was justified by the data he found and analyzed. Also, although the complex leader was supposed to sign the RWP for the Level 2 review, Kelly had failed to do so in multiple instances. Geber informed Mlekodaj of all this. Mlekodaj directed him to write up his findings as a report to Mlekodaj. When the report was finished, Mlekodaj took three copies of it to a meeting with Sims and Hunt and discussed it with them. Each of the three retained a copy. That same day (or soon on the next day), Patton called Sims about the report and complained that it was inaccurate and intemperate. He insisted on "fact-checking" it. Sims ordered Mlekodaj to gather all the copies in ORP and deliver them to him. Geber was asked to revise the report and he did make several minor changes (e.g., taking out the word "egregious"). The report was then re-issued as a revised draft, with very limited distribution, for Chem Tech to fact-check.

Note that the report was prepared as an internal ORP report and as such should not have been circulated outside ORP until ORP management had had a chance to reach a conclusion as to what to do with the information. Mlekodaj said that he and Sims were surprised that Patton had seen it; given the velocity with which the report reached Patton, Hunt evidently gave it to either Kelly or Perkins and one of them gave it to Patton. The report was never fact-checked and remained in "draft limbo" until at least early 2001, when a DOE team auditing the rad protection program asked Chem Tech and ORP if the report had ever been checked. Kelly reportedly replied that he had done so; however, neither he nor Chem Tech was able to produce any written documentation of this for the audit team and the report seems never to have been issued or rejected. It is still in draft limbo to this day as far as I know.

Thus Chem Tech, without addressing or refuting any of the contentions in the report, managed to get it mothballed. And thus the violations documented in the report were never put down as "official" violations in occurrence reports.

Not only was the report sidelined, so was the "reporter". Chem Tech declared Geber persona non grata and adamantly refused to have him as the AEG rep. They blamed him for the report even though in digging into past data, he was only getting acquainted with REDC work and doses, and in producing the report, he was only obeying his section head's directive. Nevertheless, ORP agreed not to assign him to REDC. This left Mei as the only possible rep choice, given Utrera's workload. She now had MSRE, HRIBF (the accelerator), REDC, the Spallation Neutron Source, and other work, plus her supervisory duties. Thus two AEG people, Geber and I, who were experienced and energetic, were now excluded from the most difficult and varied facility work -- because line management willed it so.

AEG-RE Meeting of 8 March 1999

Referring to some radwaste matter that Don Gregory of RSC was working on, Mei suggested that although Gregory was not telling us anything directly, he was surely telling Mlekodaj (his supervisor), and that if Mlekodaj thought that it was important for AEG to know, he would tell us. Utrera snickered at this, I believe because Gregory, while polite to us, completely excluded us in his work and because Mlekodaj was lax about telling people things they needed to know. So we, including Mei, were unlikely to hear anything by either route that -- by procedure -- we needed to know.

FWENC TRU Waste Facility

On 8 April 1999, Mei and I attended an all-day design review meeting for the transuranic (TRU) waste processing facility being designed by Foster Wheeler. It was to be built on the ORNL site, but since the contract was between DOE and Foster Wheeler, Mei and I were independent reviewers, along with other people from around the country. We attended other such meetings on 16 September 1999 and on 9 March 2000. Our participation was requested by Foster Wheeler at the behest of Gary Riner, the DOE program

manager. I felt that I enjoyed good relationships with other engineer-reviewers on this project at this and other meetings. I heard some strong agreement with my comments from some of these people, both in the formal meeting and in side discussions.

AEG-RE Meeting of 12 April 1999

We discussed another "Midnight Massacre", i.e., Geber's removal from REDC work. Mei stated that she didn't know if Chem Tech was the only entity behind it or not. She said that communication and willingness to work together were a key issue. But, she added, "so many things are out of control" and she "didn't want to discuss the event". She noted that "they" (line management) may go to a "third party" for reviews "if they decide to change the procedure" (RPP-310). She said she had pointed out to Mlekodaj that she had heard different things from him than she did from Sims and Hunt (which suggested that either they were not telling him the truth or he was not telling her the truth).

Mei told us that the fuss was not a technical problem or disagreement, but RSS's trying not to lose personnel, since "there's only so much food on the plate". That is, RSS was trying to get some of our work to support themselves. She said that when Sam Gheesling retired, AEG-RE went from 4 full-time rad engineers to 3, so Walt Ohnesorge was still kept as a consultant. But he was only part-time, so AEG-RE really suffered a net personnel loss. Also, one of the Source Control techs was now going part-time. Mei did not want to press Mlekodaj further regarding budget problems, "didn't want to stir the pot again". Referring to her discussions with Hunt, Mlekodaj, and Sims, she asked that we (Geber, Utrera, and Westbrook) not quote what she was about to say [sorry, Gloria, I must quote you now, for the greater good and because so much time has passed]: that the complex leaders said that AEG had less operational experience than they did. I stated, and Geber and Utrera agreed, that we had a broader base of experience; that independence leads to more objectivity; and that institutional review is the general DOE complex practice and provides better documentation.

Mei said that AEG-RE needed to communicate with complex leaders as well as with rad techs. Instead of talking to AEG, RSS talked to the customers and it went up the customer management chain. She had surveyed the complex leaders regarding our individual performances (which I had not known she would do). She stated that there were three things that AEG-RE needed to do to prepare for its future: to emphasize its strong areas (such as shielding), to produce examples of when AEG was a better choice as reviewer than RSS, and to rate the complex leaders and group leaders (this last an idea of Mei's and Mlekodaj's). In stressing the need for examples, Mei said "I want a story, a real story [to tell]". I cited as an example that Davis, HFIR complex leader, once remarked to me that he hadn't gotten around to reviewing one job and another complex leader, Willie Hays, once said he didn't have time to review all the drawings submitted to him on a project (i.e., the complex leaders sometimes found themselves too busy to do a thorough review of the written plans for work). Mei said that Betty Slaten and Deanna Hatmaker spent 50% of their time doing QA for RSS and the dosimetry and records section respectively (while our section did not appear to have any such person for its activities). Mei re-emphasized that all this discussion was confidential and that AEG-RE should "keep our good skills" in mind. Mei also mentioned that Mlekodaj wanted Gregory to do the DRCO liaison work (after John Alexander of ONS retired) but she had managed to "grab" the glovebox safety work, now assigned to Geber.

Note that Mei was conceding powerlessness with regard to personnel assignments, such as Geber's to REDC, but was not yet giving up the fight. She was making it very clear to her troops that the complex leaders had been given some of the review work in order to keep them employed and that AEG-RE was going to have to struggle and assert itself to retain even part of the review pie. The only real discussion of qualifications on the part of RSS seemed to have been that they had "field" (operational) experience and AEG allegedly did not. AEG was being forced to define itself with respect to RSS, to demonstrate its superiority in review to the rad tech organization -- as if the default preference in review would be a rad

tech or rad tech supervisor, in contrast to how this would be viewed at other sites. The strategic challenge for AEG would thus be to define itself in contrast to RSS -- without offending RSS, of course.

Suggestion Box: Ethical Questions

On 21 April 1999, I urged Mei and Mlekodaj to reply to a denigrating 20 April 1999 suggestion in the Suggestion Box regarding AEG. The suggestion was clearly from an RSS person and it stated that the rad engineers should have rad tech training and maintain qualification as rad techs "since they make suggestions on how we should perform certain aspects of our work". The suggestion was replied to – inadequately and patronizingly – by Hunt rather than Mlekodaj although the question had to do with AEG qualifications. Mlekodaj told us orally that he would put a reply in the Suggestion Box if we would provide input for it.

On 22 April, we four rad engineers each provided input to Mlekodaj as requested. I suggested that he state in his reply that (1) the suggestion that the rad engineers take rad tech training was impractical, (2) one engineer (Utrera) did maintain tech training, but the benefit of having the other two do so was outweighed by cost and time considerations, (3) the rad engineers had training beyond the tech level and had also been trained in practical as well as theoretical aspects, (4) rad engineers had some facility knowledge that techs didn't and vice versa, (5) rad engineers also had broader knowledge of the whole site that enhanced consistency among facilities, and (6) the rad techs and rad engineers might be viewed as performing similar but not identical roles, such as forwards and guards on a basketball team.

Geber agreed with my input and added that Mlekodaj should state that two rad engineers (Geber and Utrera) were members of the national DOE RAP (emergency response) team, in which capacity they performed tech functions such as surveying, taking air samples, etc., during hours of field work every year. He said that he, as a rad engineer doing AEG work, logged about 100 hours of field work annually. Utrera too agreed with my approach, arguing that rad engineers did not duplicate what rad techs do but supplemented it. He said that a "new and unadulterated perspective" brought to the table by AEG would result in a better "product" and that AEG might improve the work because we did not take for granted things that operations personnel had grown to accept and we sometimes challenged the status quo.

Mei told Mlekodaj that the Suggestion Box suggestion said that "management" had circulated an E-mail message to RSS complex leaders concerning things that the rad engineers (AEG) could be doing to help RSS become more effective. She then pointed out the following. AEG was not on the distribution list for that E-mail message, so AEG did not know what it said. The purpose was not to help RSS become more effective but to help the RSS complex leaders and AEG work together more effectively. Improvement of RSS effectiveness might be between RSS and "the customers", but what AEG was hoping for was better communication between the RSS complex leaders and AEG and a commitment from everyone to work together. With reference to the part of the suggestion that said "...I suggest that since our rad engineers make suggestions on how we should perform certain aspects of our work...", Mei said that when a rad engineer performed an ALARA review or provided rad engineering support, the engineer might make suggestions to RSS just as RSS might make suggestions to us and that there was a lack of recognition that "we are all on the same team". She suggested that AEG and the complex leaders sit down and talk about this as part of a management review process, so that management could hear them both; she said that getting down to actual cases would clarify things. She reminded Mlekodaj that she had told him the week before that she felt "helpless" in the face of this long-drawn-out problem (the RSS attacks).

Despite the prompt and emphatic response of all four AEG rad engineers and despite his promise, Mlekodaj never did put a reply in the Suggestion Box. This was very demoralizing to us since it was important that Hunt's reply not be accepted as the "official" word on the subject.

1999 Ethics Training

In 1999, the required annual Lockheed Martin ethics training session was set at multiple times so as to accommodate everybody's schedules, with a different ORP supervisor teaching each one. Due to my schedule, I had to attend the one that was given by Perkins. On the way up the stairs to the training room, I greeted one of the rad techs I knew who worked in Perkins' group. He said to me that it was "ironic" that Perkins was chosen to give ethics training, considering "all the things he's done". In the session, Perkins stated that in the last Lockheed Martin survey of employees, Lockheed Martin as a whole had scored low on "trust" (of corporate management by employees). He couldn't get the required video going, so he just dispensed with that part of the training, not even summarizing for us what it said. He zoomed through the rest of the training, cutting the case studies to what appeared to be the minimum required and delivering "canned" answers even though some of them didn't make much sense in the context of the particular case.

The tech's comment referred to the various ethical complaints made against Perkins and the various ethical issues raised regarding him. For example, at one time or another, he had had friends and relatives hired by the temp agency that had the contract to send rad techs or rad tech trainee candidates to ORNL. This was brought to the attention of management by several people (never me) who knew of this and reported it either to ORP management or to the ORNL Ethics Office. This was well known throughout ORP, but no punishment ever seems to have been visited on Perkins.

In late 1999 or 2000, the rad tech temp agency contract was up for re-bid. Several companies bid on it besides the incumbent company. The ORP evaluation committee consisted of the three RSS group leaders (Perkins, Bryce Powers, and Jerry Gray) and the head of the rad tech training group in RCS (Scott Taylor). The latter was included because of his experience in preparing and training the rad tech candidates. This committee awarded points to each company based on agreed-on criteria. The incumbent company came in second, mainly due to its unsatisfactory performance in the past. Although Perkins still argued for the incumbent, the result prevailed -- until RSS head Hunt overruled the decision. An ORNL lawyer became involved somehow and a re-evaluation was redone, with the result that points were reallocated and the incumbent got the contract again. This incident was demoralizing and embittering to many in ORP, especially Taylor, who had to train the sometimes unqualified people the incumbent sent. Beyond that, this incident was widely considered emblematic of the power that Perkins had within ORP and his influence on Sims and (especially) Hunt.

AEG Seminar of 28 April 1999

Geber gave an AEG-sponsored seminar on glovebox safety. As usual, RSS was invited; as usual, very few RSS people attended.

The RPP-310 Exemption for Chem Tech

On 20 May 1999, a watershed event in ORNL safety history occurred: Sims approved an exemption to RPP-310 for Chem Tech. This incident, which was summarized in Chapter 7, is related in detail below.

Mlekodaj told us that Sims had discussed with him a request by Chem Tech to allow rad tech complex leaders and group leaders to do the Level 3 RPP-310 reviews instead of AEG. Mlekodaj argued against it, pointing out that RSS had already been shown to be complicit in Chem Tech's avoiding reviews, e.g., as shown in the Geber report on REDC that had aroused Chem Tech's fury. Mlekodaj thought that Sims had tabled the idea of an exemption, so he was shocked to receive a copy of a memo indicating that the exemption was a done deal.

A day or so later, Mlekodaj told us that Sims had explained to Mlekodaj that he had granted the exemption because of financial intimidation by Chem Tech: Chem Tech threatened to outsource rad protection if Sims did not accommodate them. Mlekodaj added that while Sims had talked with him about a potential such waiver, Sims had not shown him the proposed exemption memo or discussed it with him

before signing it. This meant that only Sims reviewed the final wording. Mlekodaj later remarked that Sims had caved in to the Chem Tech exemption "in a millisecond".

The exemption memo was actually from Chem Tech to Sims and thus the wording was Chem Tech's. In the memo, Chem Tech said its personnel were "always alert" for means to do work "in a more efficient, safe, and cost-effective manner", such as by suggesting "improvements of ORNL-level procedures". In that vein, said Chem Tech, "a number of Chem Tech personnel and members of line management have suggested" that RPP-310 could be improved, "especially by redefining the requirements for ALARA reviews and alternatives to the participation of AEG in radiological work planning". Ten changes were then suggested: three were from "shoulds" to "mays", one was a change from "shall", and the others were a substitution of "ORP independent reviewer" for "AEG representative" and of complex leaders or RSS for AEG. The ORP independent reviewer was specifically to be "of job title Complex Leader, Group Leader, or equivalent". The existing RPP-310 stated that "AEG should be consulted" as to the level of review because the intent of RPP-310 was that AEG should decide disputed cases; the exemption memo proposed to change that to "line management, RSS, and the [line] radiological control officer [DRCO] will determine the level of review".

To indicate approval, Sims merely had to sign and date the memo on a line at the end of the memo. By signing, Sims would be agreeing that Chem Tech could, at its option, use another RPP-310 reviewer set than AEG and that the "independent" reviewer would be an RSS supervisor "or equivalent". In the memo, "independent" and "equivalent" were not defined, nor was any requirement included that the reviewer be someone outside the reviewed facility's RSS complex. Having line management and RSS determine the level of review (i.e., determine which trigger levels or other review-prompting conditions were applicable) thus completely excluded AEG and even Mlekodaj (who was the ALARA Program Manager and rad engineer section head) from the determination. It was clear that the procedure was being changed so as to eliminate any necessity for AEG involvement and to allow judgments not previously made by RSS to be made by RSS. The only quibble Sims had was a handwritten note on the exemption; my copy of the exemption is the draft version before Sims signed it, so I don't have the note, but as I recall it only gave Sims the power to designate the RSS reviewers and did not otherwise change the provisions above.

Mlekodaj argued against the exemption on the grounds not only that elimination of AEG would lower the level of safety scrutiny of operations, but also that the exemption violated another procedure, RPP-110, and thus ORNL's 835 Rad Protection Program. RPP-110 was the rad protection procedure that governed the interpretation and application of the other rad protection procedures. First, RPP-110 required justification for exemptions to the RPP's. There was a sort of justification given in the memo, but it was superficial and specious; there were vague statements that allowing complex and group leaders to do the reviews would allow for "greater flexibility with the addition of applied expertise" from reviewers who were "accustomed to covering daily work in the field". This, it was claimed, would still "ensure a high level of radiological safety". But no specific examples or cases were given as to why more flexibility was needed or why covering daily work in the field would be more useful in reviews than AEG's experience was. (The reader should recall that RSS was always involved in the reviews at every level anyway, so adding an additional RSS independent reviewer was only adding more tech expertise while eliminating any rad engineering input.) Thus Chem Tech had not justified its need for the exemption. Second, RPP-110 stated that exemptions could be granted only for "should" statements, not "shall" statements, yet at least one of the RPP-310 provisions Sims was granting the exemption for was a "shall" statement. Thus Sims was violating RPP-110, and thus the 835 Rad Protection Program, and thus 835 itself.

Soon after, I wrote to Mlekodaj regarding my concerns about allowing the RSS complex and group leaders to do the operational reviews instead of AEG. I wanted to formulate a statement of AEG's position for Mlekodaj to adopt and I hoped to persuade Mlekodaj to keep fighting the exemption. But I think that at this point he did not really need any persuasion. The exemption appeared to mark the beginning of

Mlekodaj's grappling with the problems that Mei, Geber, and I had been reporting to him – he finally "woke up and smelled the coffee". It seemed at last to be clear to him, as it seemed to have been for some time to Mei, that Geber's and my problems with Chem Tech were not the result of a personality clash, but of an effort by Chem Tech to reduce outside examination and documentation of their work. Or rather, while it was clear to him before, he was now energized to do something about it. Mlekodaj also had been aware of RSS' complicity with Chem Tech in avoiding reviews at MSRE and REDC, but here too he seemed to take a "This Means War" attitude toward RSS since RSS was clearly in on the exemption plan. In June 1999, perhaps in response to criticism of the exemption, Sims designated Betty Slaten as "the" ORP independent reviewer under the exemption. That is, he authorized only Slaten to do any reviews under the exemption. She was a former rad tech with a degree who had become a complex leader; later, she had become a certified health physicist. At some recent point, RSS had reorganized and her complex had been folded into others, leaving her without a command. She then became a quality assurance specialist and special projects person for RSS. This was what she was doing when the exemption was approved and it was undoubtedly why Sims appointed her the independent reviewer who was "equivalent to" a complex leader. This appointment lasted until the spring of 2000, when the complex leaders and eventually even a nonsupervisory rad tech were authorized to do the reviews under a revised RPP-310.

Shortly after her appointment, Slaten consulted Mei on how AEG did Level 3 reviews, since she had no experience in doing them. I thought it unbelievable that a single person (Slaten) could do all the Chem Tech RPP-310 reviews that should have been done, especially on the short notice that would undoubtedly be provided most of the time.

PNOVs (Preliminary Notices of Violation)

At the May 1999 Hanford ALARA conference I mentioned above, a representative of Fluor Daniel Hanford gave the reason that they had a strong rad work review program at his site: following an incident of which poor work planning was determined to be a major cause, DOE gave them a compliance order to establish such a program. Still, the rep said, they had had another such incident and another compliance order. This second compliance order, called a Preliminary Notice of Violation (PNOV), gave as one cause of the event "failure to adhere to work process procedures and controls". I told Mlekodaj, Mei, and Geber about the Fluor Daniel rep's statement. ORNL, going forcefully in the direction of less rigor in work planning, was evidently getting away with things that Fluor Daniel was getting popped for.

1999 Whistleblower Actions

I had been concerned about the erosion of safety coverage and authority at ORNL, but with the advent of the exemption -- and especially its flimsy justification and the admitted financial intimidation of ORP by Chem Tech -- I began to worry in earnest. On 10 June 1999, I called Mike Woods, a DOE-ORO facility rep at HFIR and REDC. I told him about the Chem Tech RPP-310 exemption and "the Geber report" documenting REDC's review omissions. He said he would speak with his supervisor about this.

The next day, Geber told Mlekodaj and me that Woods had called and asked to meet with him to talk about REDC. Since Woods had not mentioned my name, I did not tell Geber that I had talked to Woods. But when Mlekodaj, Mei, Geber, and I then discussed this, I saw that it would be better for them not to wonder who had been speaking to Woods. So I told them that it was I who had called him. Mlekodaj expressed regret that I had done it, saying he had hoped to "handle this issue internally [within ORNL]". I explained that I thought a prod from DOE would make Milan and his boss Jerry Swanks be less tempted to let the exemption stand. Mlekodaj said that he, not Geber, would meet with Woods and try to persuade him to give Mlekodaj time to work on changing the minds of upper management. Later, Geber told me that Woods had called Mlekodaj to say that he'd spoken with Ed Cumesty, a DOE-ORO official, who said that "DOE was not going to get into this". So on 14 June 1999, I called Woods again. He told me that he himself had not talked to Cumesty, but that Mark Robinson (DOE-ORO rad protection rep) might have;

Woods' group leader, Rick Daniels, was gathering information and would talk to Cumesty when the story was clear.

Later in June 1999, Mlekodaj told me that he went to see first Milan and then Swanks to protest the Chem Tech exemption and tell them about the RPP-110 violations. Swanks was supposed to get back to him, but never did. Mlekodaj was so discouraged by this non-answer -- which in itself was an answer -- that he did not pursue this avenue any more.

On 2 July 1999, DOE's Robinson sent an E-mail message to Mlekodaj asking him how REDC had done in the past 3-5 years in the area of ALARA "as recognized by you/your group". He also asked if Mlekodaj or his group had evaluated ALARA performance for different organizations and facilities and if awards were given for good or creative ALARA practices. He explained that he was "trying to get a feel for how REDC is perceived/ranked in relation to other facilities at ORNL". Mlekodaj replied frankly that AEG would put Chem Tech at the bottom of a divisional ranking of ALARA performance and that REDC would be near the bottom in a ranking of Chem Tech facilities. He said that it seemed to be a general Chem Tech attitude that their staff and rad techs knew everything and that if ES&H people did anything other than rubber-stamping what they had decided on, then the ES&H people were holding up production and not adding value. Mlekodaj further stated that in such cases, the ES&H people were either bypassed or replaced. He asserted that REDC had operated as an "island" unto itself; "outsiders" were not welcome. He said that "personality problems and some other misunderstandings" had complicated the relationship with Chem Tech, but he was trying to keep those issues separate from that of REDC exclusion of AEG.

Mlekodaj also told Robinson that while REDC had won five ALARA awards in the past several years, the Chem Tech DRCO, Shoun, had made all those nominations. Mlekodaj admitted that the ALARA Program had by design been "very free with these awards" and had approved essentially all nominations. He pointed out that Chem Tech's having won these awards did not alter the fact that they "do not seek, and indeed, frequently try to block" the participation of ALARA professionals. He added that internal ORP politics also came into play. He offered to arrange for Robinson to meet with all of the ALARA staff if Robinson wished to get a better idea of Chem Tech's ALARA performance.

Note that Mlekodaj essentially confirmed to Robinson -- i.e., to DOE -- what I had said about Chem Tech's exclusion of informed and professional rad protection review; that he said explicitly that Chem Tech's and REDC's performance was deficient; and that he made it clear how meaningless ALARA awards were. While he admitted that "personalities" and "perceptions" were a factor, his emphasis was on Chem Tech's bodyslamming of ES&H people. Note too that Robinson, a DOE person, had thus been provided with this information from multiple sources (by Mlekodaj and, through Woods, by me). I was proud of Mlekodaj for having stuck his neck out, first by going over Sims' head to Milan and Swanks and now by speaking candidly to DOE.

On 7 October 1999, I called DOE's Daniels because Woods hadn't returned my phone call of several days before. Woods then called me back. He said that if ORNL was just "violating its own procedures", he didn't see where DOE should get involved (!). He said that if there was a P-AAA violation, then DOE would, of course, be interested. He told me that he would find out whom in DOE I should call to voice an official concern, but he did not get back to me. Note that although I had explained to him in our first conversation about how the 835 Rad Protection Program included the procedures, he seemed to think -- without asking for any particulars regarding specific provisions or interpretations of 835 -- that violation of these procedures was ipso facto an internal matter. It seemed an odd way for a regulator to think.

AEG-RE Meeting of 12 July 1999

Mei's big idea at this meeting was that we should make Sims aware of AEG's capabilities and accomplishments, "with project focus". Her "exhibits" were the ALARA course for engineers, the gamma

spec work, etc. She opined that "We need a strategic plan to get some business". Again, Mei's response to this problem was to persuade, to put on a show -- in short, to sell ourselves. I kept telling her that we should not have to sell ourselves -- that we should get to do the work not because we were nice, agreeable, sociable people, but because we were qualified, experienced, and savvy people.

Mei had reported to Mlekodaj and Sim a few days earlier the results of the student survey from the June 1999 ALARA course, given by Geber and me. On a scale of 1 to 10, with responses from 9 of the 14 students, the course got an average of 9 in four categories (good training environment, understandable presentation, explanation of objectives of the course, and achievement of objectives of training) and 8 in one category ("well illustrated"). All the respondents said that the course would help them in their jobs.

Building 3019 Work

Since Chem Tech ran both 3019 and MSRE, many safety questions regarding 3019 and its proposed U-233 repackaging project were raised over the next two years by safety people other than me, particularly about the ventilation system. Geber was the AEG rep to 3019 and was supposed to review both the design and the operational details of the U-233 repackaging project, but he was not kept informed by Chem Tech of the progress of the work. In mid-1999, Geber asked my opinion about some sketches and descriptions of the U-233 storage wells. I pointed out a potential scattering problem. But Geber refused to point out this technical issue to the 3019 people because it might tick them off (I believe because he felt "burned" after the REDC debacle). Later, he asked me about the ventilation and I noted an underventilation problem. (The reader should note this point because of what a fellow layoffee would later tell me.)

In a September 1999 AEG-RE meeting, Mei said that AEG was really not involved with the 3019 U-233 repackaging operation any more; there was a management assessment in progress that did not include us and the procedure for the operation was not complete yet. She said that Rushton (who used to head the MSRE work) was moving to 3019 and bringing in an outside contractor to review, e.g., a Microshield calculation by complex leader Nancy Sweat. Geber stated that the first 100 canisters ("packages") to be dealt with were chosen based on representativeness, but that just the inspection was to be done so far (Phase I) since the repackaging plan was not yet nailed down.

Two weeks later, Mei and I met with Linda Gilpin, the criticality specialist with whom I had worked on MSRE. She was participating in the "pre-readiness [management] assessment" for 3019. There was no rad protection person on the assessment team even though there were many radiological implications to the work. Gilpin had asked Chem Tech about doing RPP-128 and RPP-310 reviews for 3019. They told her that they did not see the need for an RPP-128 review and would be doing the RPP-310 review later. We explained to her that Sims had appointed Slaten as the official ORP RPP-310 independent reviewer as per the exemption, so Slaten would be doing that review. But AEG should still be doing the RPP-128 (design) reviews, which were not covered by the exemption. Gilpin passed this on to the head of the assessment team, who asked Chem Tech about the two reviews. DRCO Shoun told him that while the exemption did indeed not cover RPP-128, Chem Tech had (unilaterally) decided that RPP-128 did not apply because it covered only new or modified facilities and they did not think Building 3019 was being "modified". I later explained to Gilpin that RPP-128 covered all special tools, shields, etc., because it was intended to cover the 835 design requirements; the completely new special shielded handling machine for drawing the cans up out of the 3019 wells and the special tools certainly qualified for review under RPP-128.

AEG-RE Meeting of 13 September 1999

Mei said that Bechtel Jacobs was phasing out its contracted use of ORNL rad techs in favor of bringing in subcontracted rad techs and other safety people. The "surplus" ORNL techs were offered the chance to "transition" to Bechtel Jacobs' subcontractors, but most declined because of the lower pay and benefits. AEG had no ORNL overhead applicable to MSRE, so Mei was fully charging out her MSRE time. It was

clear that there was additional financial pressure on RSS to find work for techs formerly assigned to MSRE and other projects; even Mei was likely to lose her MSRE work and thus part of her support.

Regarding electronic personnel dosimeters (EPDs), Utrera and rad tech Bob Schoenfeld "informally trained" Metals and Ceramics Division people to issue EPDs and were to make a training video to substitute for an in-person trainer. Schoenfeld had been detailed from RSS to work with R. Vince Bishop of our section on procedures and had been designated as the EPD backup for Utrera. Utrera expressed his frustration at being the nominal manager of the EPD program but having to cede responsibility to Bishop, as explicitly directed by Mlekodaj; he therefore hoped to "wash his hands of it" and be just a consultant when the operational phase of the program started. He said that originally Davis of HFIR, Schoenfeld (then at HFIR), and he were involved, but now Perkins and Steve Hamley were in the picture to help "sell" the EPD program to divisions other than RRD. Geber noted that the rad work permit (RWP) system had support from Bishop but was "owned" by RSS – as with the EPDs, the fear was that our section would put in the development work on the program but RSS would then dictate how it was run or would even take it over. Utrera agreed that that might occur, but philosophically observed that when something like that happened, he "just trudged on to something else".

Geber and I were frustrated because Utrera had never shown the rest of us how to set the EPDs, despite Mei's telling him every few months to do so; Utrera was frustrated about being nominally in charge of the EPD program but not really getting to call the shots; and of course we were all frustrated because Perkins was getting "his nose into the tent" as usual and if not checked, would soon take over the whole thing. There was also the concern about "informally training" non-rad-protection people to issue dosimeters that had to be set correctly to alarm on appropriate setpoints. A note about Schoenfeld, who was one of my favorite techs although he had been one of the "have to have the review yesterday" people when he worked at HFIR: he told me that he had left HFIR to work for Bishop because he had had it with RRD. I thought that things had come to a pretty pass when this tough and competent person saw fit to bail out.

AEG-RE Meeting of 7 October 1999

Mei stressed "Program Focus and Teamwork", saying that AEG needed to be "cost-effective" because of potential "competition". She noted that AEG "provides professional services", so AEG had to be "customer-friendly". But still, we had so much work that we might hire a subcontractor to help with, e.g., gamma spec work. We all (including the Source Control tech who was also AEG's gamma spec tech) discussed whether RSS was in competition with AEG in this work; our tech thought not, since RSS was completely tied up in characterization work for a single division. But Utrera pointed out that Chem Tech was in competition with us on that and that even someone in the ORP dosimetry and records section forgot about AEG's capability and went to Chem Tech for this service.

Mei said that the AEG-RE budget for Mei, Geber, Utrera, and Westbrook was \$338,000 (with a nominal cost per monthly employee of \$80,000 (not including benefits?)); Source Control was now 100% charged out. AEG RPP-310 and RPP-128 reviews "and other normal functions" were being done on overhead; anything else, including Bechtel Jacobs work (e.g., MSRE) was to be charged out. Mei appeared to say that AEG-RE could undercharge the number of hours spent "since we're on [subsidized by] overhead" and thus AEG-RE could thus charge less than subcontractors did. She denied meaning that when I asked her about it explicitly, but that was how it was captured both in my notes and in the official meeting notes (written by someone else). I urged Mei to develop a written chargeout policy with Mlekodaj and not to undercharge. Mei said that some complex leaders now direct-charged customers since their funding (i.e., the rad tech surcharge) was insufficient. She said that AEG-RE should ask a complex leader for a charge number if he asked for help and advised us to "try to deal directly with" facility management since recently a complex leader and rad techs took credit for work that AEG had done. (She gave no details.)

Mei said that Sims was requiring his people to inform their supervision if they went offsite for lunch, so we were to put our offsite lunch destinations (e.g., McDonald's) on our computer schedules so she could see where we were. She said to be sure to respond to pagers, especially in cases of "urgent emergency"; when the tech and I asked what was "urgent" and said that there were few truly urgent cases, Mei cited Chem Tech's Patton's "urgent" need for data requested by an auditor. The tech said that that data was on the Web and always available to generators, including Patton's people, so he did not need to ask us for it.

As we can see from the statements above, Mei and presumably Mlekodaj were thrashing around trying to find funding for AEG within ORNL. We always had a lot of work to do, but somehow we were always running short of money to do it with. It seemed to me to be the kiss of death ever to ask a complex leader for a charge number before giving him any help or to use overhead money to subsidize chargeout work. The pettiness of being expected to be instantly on call for the likes of people who couldn't be bothered to look up data already on the Web and who might appear to require instant responses to non-emergency pages even during the lunch hour was perhaps the best demonstration of how low we had sunk.

Failures To Obey Rad Directions

On 12 October 1999, rad tech David Craft wrote an Radiological Event Report (RER) against Herman Phillips of Chem Tech, a supervisor whose own supervisor was Dan Ramey. The RER stated that Phillips had received a higher-than-expected dose because he ignored Craft's signals to come out of a hot cell. On 20 October 1999, rad tech Tom Lay wrote an RER stating that a person in the Computational Physics and Engineering Division failed to exit a radiological area when told to do so, even though the individual knew before he went in that he was under a stated time limit. We in AEG found these defiances of rad directions outrageous, especially since the RER subjects had signed the RWPs that stated that the rad tech would direct them when to exit. But neither one seems to have been penalized at all; both were reportedly indignant at the suggestion that they were at fault, e.g., Phillips claimed that Craft's signals were unclear. However, it was so rare that anything like this had happened previously that we had trouble believing that two different rad techs in two different areas had suddenly developed an inability to communicate. More likely, the general line management push-back attitude was spreading and people were starting to think they could decide for themselves when they had to leave an area. So we believed the techs' versions, especially since Craft was reportedly angry at the supervisor's ignoring him, which he would not have been if it had all been a simple misunderstanding. Rad work was starting to look like the Wild West.

More Suggestion Box Items

In a 15 October 1999 suggestion in the Suggestion Box, addressed to Hunt, a suggestor referred to himself as a "grunt" (or peon). He said that he was happy with his raise but not with the recognition he was receiving, asserting that "if you don't have a phd or CHP then the job you do is not [considered] important". Hunt replied that he agreed that "we don't do a great job in recognizing the accomplishments of our employees ("grunts" or otherwise)" and stated that "since all of our [RSS] supervisors were once "grunts" themselves" he would try to "stimulate that memory in case they have forgotten [what it was like]". He also said that "since most of our activities fall under the Price-Anderson Amendments Act" (P-AAA), the job the suggestor was doing was important "for both ORP and the Lab". A second suggestion stated that "A number of employees...received more money from some type of performance award than most of us received in raises....". Hunt replied: "Each year the division is given some discretionary funds to distribute both as lump sum awards and additions to programmed increases. For the past 2 years, the rules on distributing these funds limited them to those employees with premium ratings...."

Note that in the response to the first suggestion, Hunt's reply might be taken to imply that there was P-AAA liability for ORP, not just for the Lab and not just for line management, and even for everybody in ORP and not just ORP management. Setaro (quoting Sims, I believe) had said when 10 CFR 835 came out that the top levels of rad protection management, but not the "grunts", had P-AAA liability (i.e., were subject to civil and criminal penalties). I believe that Setaro was correct. Thus Sims and line managers,

but probably not anybody lower down, might be subject to penalties under 835. I was surprised by the second suggestion since I was not aware that there was any performance award other than "Most Valuable Player" awards and similar awards that seemed to be given for particular project-associated work. It was explained to me that this suggestion, which indicated another type of award, reflected a feeling within RSS of unfairness, i.e., that complex leaders and group leaders favored some supervisees and others resented it. I thought that this was at least somewhat credible since various other suggestions in the Suggestion Box indicated dissatisfaction with the fairness of unnamed RSS supervisors.

On 18 October 1999, Hunt posted what I regarded as an inadequate and only partly correct reply to a Suggestion Box query about dose-splitting. Dose-splitting is dividing work and thus dose between two or more workers; this reduces the dose to any one individual but may increase the total (collective) dose to all. I discussed this with Mlekodaj, begging him to add his comments to Hunt's. I noted that Hunt's responding to the suggestion, instead of leaving it to Mlekodaj (the ALARA Program Manager) or to an AEG person to answer was insulting because this was a quintessential ALARA question. I included some wording as "raw material" to help Mlekodaj compose his reply. Mlekodaj told me that he would "consider" doing it, but he did not. Finally, in early December 1999, I asked him if I could post a writeup, as a suggestion, and he agreed. I started the suggestion off with the words "Good news! Dose-splitting is not anti-ALARA after all!" so as to begin on a positive note. I ended it with some guidelines for dose-splitting, mainly intended to assist rad techs and complex leaders with making decisions in the field -- some of them had told me they had no written guidance on this subject whatsoever.

I sent my suggestion/writeup off and waited, but it did not appear in the Suggestion Box. Mlekodaj told me that it had come through, but Hunt had apparently deleted it without allowing it to be posted for all to see or replying to it. (Note that Sims or any of the three ORP section heads had to read and respond to a suggestion before ORP as a whole could see it posted.) He told me to ask Hunt what had happened. Hunt replied to my query by E-mail: "The purpose of the Suggestion Box is stated at the top of the Suggestion Box webpage as follows: This ORP Suggestion Box is provided to allow individual, anonymous suggestions to ORP management and is accessible to anyone at ORNL. ORP management will review the submitted suggestions, post those deemed appropriate, and respond to them....[The suggestion] you reference in this note were reviewed by me, deemed inappropriate for the Suggestion Box, and deleted".

I was rocked back on my heels by that. What a jerk Hunt was, posting the snide original suggestion by one of his people -- and many other attacks on AEG disguised as "suggestions" -- but refusing to post a technical and constructive response by one of Mlekodaj's ALARA people! Mlekodaj had blessed my suggestion, but Hunt had not even discussed it with Mlekodaj, the ALARA Program manager, before he zapped it. I went to Mlekodaj and showed him Hunt's response. He shook his head. I asked if I could send the writeup as an E-mail message addressed to all of ORP. I had never sent an all-ORP message (and never did again), but this was important. Mlekodaj agreed. So I sent it off to all -- with the result that some ORP folks who never looked at the Suggestion Box did see the dose-splitting writeup.

Mlekodaj's RPP-310 Review Counterproposal

On 6 December 1999, Mlekodaj, Mei, Geber, and I met to discuss the RPP-310 exemption. Mlekodaj stated his intent to propose to Sims that RPP-310 be changed to state that when a review was required, the O&R division should ask the AEG leader (Mei) to assign a reviewer; if the reviewer was unacceptable to the division, Mei could assign someone else or ask Mlekodaj to assign someone. The review "pool" would include not just AEG, but also Gregory, Hamley, and Bishop. Geber and I opposed this scheme, but Mlekodaj stated that his reason for including these three people in the pool was that "the work would stay in RCS" (which Gregory, Hamley, and Bishop were members of) and not go to RSS. He also said that Sims' designated RSS reviewer under the exemption, B. Slaten, had performed probably only one Chem Tech review in the seven months of the exemption. I pointed out to Mlekodaj et al. that this paucity meant that Chem Tech was likely still avoiding required reviews, that the exemption (based on its fairly

explicit criticism of AEG) eroded Mlekodaj's authority to assign AEG people as appropriate, and that an 835 implementation guide said that consistency of rad protection coverage was important. I asked Mlekodaj to tell Sims that Mlekodaj wanted to keep RPP-310 as it was and to regard the exemption as only a pilot project, which Geber seconded. But Mlekodaj felt he had no choice but to propose that "a division gets to pick its own reviewer as long as the reviewer is in RCS", in order to protect RCS jobs.

1999 Employee Concerns Activities and New Developments for AEG

On 25 October 1999, I submitted a concerns form to the ORNL Employee Concerns office. I was then called by and met with Mylissa Buttram on 27 October. She was a pleasant person, but obviously not a technical person in any sense and not familiar with any aspect of P-AAA or safety management. Nevertheless, I attempted to explain the whole AEG problem to her, including the retaliatory actions against me and my group. As I hope the reader can appreciate, I was trying to make a good-faith effort to work within the system by going to Employee Concerns. I was not at all sure that Buttram could or would do anything to resolve my concerns and I was apprehensive that she and her organization were actually an arm of line management and would quash my concerns. But I felt that in all fairness I should try.

On 27 October 1999, Buttram requested that I send her all the information I had in the form of documents. This would have been a huge collection and xeroxing effort, so on 29 October 1999 I told Buttram by E-mail that I could not dig out all the information in the short term, although I could piece it together over time if necessary. Instead, I provided her with a detailed written chronology of my reporting of concerns to my supervisors and managers. I also told her that I had discussed every issue with Mei, that Mei would often tell me that she had passed the information on to Mlekodaj; and that I spoke with Mlekodaj frequently and with Sims occasionally. In particular, I said, I had told Sims about occurrences of RPP-310 review avoidance, difficulties on the MSRE project, and my frustration with some project and facility people who were not cooperating as required by procedure. I detailed the exemption and Swanks' inaction. I concluded by saying that the O&R divisions dictated to ORP, based on financial control, and Sims tolerated it. I thus told Buttram a great deal about the situation and provided her with substantive leads to pursue, if she chose to.

On 11 November 1999, having spoken with Buttram by phone and having sent her some documentary information by mail, I met with her again to go over some of the concerns. On 6 December 1999, I told her by E-mail about Mlekodaj's RPP-310 review counterproposal and also explained why Gregory's, Hamley's, and Bishop's background or work of the last several years would not make them appropriate choices for most such reviews. I said that I had strongly protested Mlekodaj's proposal on the grounds that to cede the independence of review (i.e., the power to select reviewers) was to say that RCS jobs were more important than worker safety.

An ORNL Employee Concerns Program Web page dated 13 December 1999 stated that "A key principle of ORNL Values and the Corporate Code of Ethics and Standards of Conduct is that all individuals have the opportunity to raise concerns and make disclosures without fear of retribution"; that ORNL "is committed to providing an environment where people feel free to speak out on concerns including health, safety, environment, . . . harassment, misconduct, unfair treatment, etc."; that "each person at ORNL has the responsibility to surface [sic] concerns that arise in the workplace and should be assured that these concerns will be addressed in a responsible, timely, and confidential manner"; that "We believe that dealing with employees' problems as concerns and not treating them as "complaints" is an important part of the way we do business"; and most significantly, that one of the appeal alternatives was to request a "Peer Review" and that the findings of the Peer Review Board were binding.

On 28 December 1999, Buttram asked me by E-mail to submit three names of potential panelists for a "Differing Professional Opinions" (DPO) panel that she would assemble (apparently this was the "peer review" mentioned above). She had proposed this method of resolving my concerns because as I noted

earlier, although she was obviously well meaning she was not a technical person and had no real idea of what I was talking about. This seemed to be her way of solving the problem presented by my concerns. Buttram stated that she would also be asking Milan, Sims' boss, to supply names of potential panelists.

On 4 January 2000, I replied to her as follows. My concern was broader than just the RPP-310 exemption for Chem Tech. Swanks seemed to have foreknowledge of the exemption and it appeared he would not be taking any action regarding the RPP-110 violation. The O&R divisions were pressuring Sims to cede his safety authority to them and there had been actions taken before and after the exemption to suppress dissent (e.g., reviews or reports that would be troublesome to the O&R divisions), including threats to outsource rad protection. The ongoing RPP revision had troubling aspects such as excessive broadening of the "actor" indications in the procedures (e.g., "ORP" instead of the narrower "RCS" or "AEG"). I noted that the ORNL interpretation that the line manager calls the safety shots, with the safety people acting only as advisors, did not seem to correspond to what was in the DNFSB ISMS document; being "responsible" for ensuring safe work, as the line organizations were, did not mean having total authority over the choices made of controls (safety measures). I suggested to Buttram that a Washington person knowledgeable about ISMS or a Conduct of Operations person from outside ORNL be on the DPO panel. I also suggested that a non-Oak-Ridge person knowledgeable about rad work planning be on the panel. I sent her the names of several candidates from outside the Oak Ridge area, all seasoned rad protection professionals in the DOE system. But I also reminded her that convening a DPO panel would not be adequate as the only action: the concerns should also be given a P-AAA review. For this, it would be best to appoint a P-AAA person who was not Hamley since Sims et al. were his superiors. Finally, I noted my disillusionment with ORNL management due to the change in safety philosophy and the personal attacks against me and my AEG colleagues.

I had doubts about Buttram's good faith and ability to resolve this issue: she didn't seem to have a clue about how safety management worked, she seemed to drag each step out for weeks on end (almost three months at this point), and she started the DPO process even though I did not think I had agreed to it (it was only one avenue of resolution of several that we had discussed). But I tried to respond in good faith; I came up with some reasonable non-ORNL names and hoped that at least one would be chosen.

Buttram did not get back to me until 20 February 2000, when she sent me a list of DPO panel candidates apparently nominated by Milan. I discussed this slate in a 21 February 2000 note to her, as follows. Several candidates (Hamley, Slaten, Hal Butler) were subordinates or contractees of Sims'; since he was one of those whose actions were a subject of my concerns, there was a conflict of interest for them. A candidate from Y-12 had been spoken of by Sims as someone he would like to hire, so presumably they were friendly. Several might be biased due to known prejudices or associations (both for and against my position or that of Sims and Milan). Having one member from each of the three DPO categories cited (Peers, Technical Experts, and Management) might be unfair, i.e., maybe the three categories should not be equally represented; an actual law judge might thus be a better choice to make the determination than a panel. I also said that Sims had told Mlekodaj that "someone" had gone to Employee Concerns with RPP-310 and other issues. I particularly pointed out to Buttram that she had not spoken with Mlekodaj yet (as Mlekodaj had told me), which I thought peculiar -- i.e., why wouldn't Employee Concerns consult with other individuals involved in my concerns, such as Mei and Mlekodaj, to verify the soundness of my information? And I reminded her yet again that my concerns should be reviewed for P-AAA implications.

On 30 March 2000, I had not heard anything from Buttram for over a month, I felt that I was being played for a fool and I was disgusted with her and her group. I reminded her by E-mail that it was almost six months since I had first spoken to her. I noted again that she had interviewed people who were subjects of my concerns, but not others who might support my statements, and that no progress had been made toward resolution of my concerns. Therefore, I said, I would have to consider "alternative actions". I told

her to put my concern on hold. I didn't know exactly what I was going to do, but I had had it with ORNL's sham of a concerns process.

I believe now that Buttram was not calling the shots on this but was being told what to do by someone higher up. I think that there was an intent to delay resolving this matter until after UT-Battelle (UT-B) took over in April 2000. I am not sure why, except that it might have been thought that UT-B might be able to persuade me to drop my concerns because they were starting off fresh.

Another Major Revision of the Rad Protection Procedures

In November 1999, we began the process of revising the Rad Protection Procedures to make them consistent with DOE's recent revision of 10 CFR 835. The revision was to be submitted to DOE by 1 April 2000, so we had at most six months. First, a revision author was named for each procedure. The author was to revise his procedure(s) in draft form, put the draft out for internal ORP comment, resolve the internal comments, put the new draft out for ORNL-wide comment, and resolve the ORNL comments. Then ORP procedures honcho Bishop would submit the procedure to the Directives Review Committee (DRC), whose approval made the procedure official. This would all be done electronically (by computer).

I was the revision author for RP-128 (design reviews), RP-129 (rad optimization), RP-215 (fetal protection), and RP-340 (specific work controls). Protocols regarding the revisions were imparted to us by Mei in an AEG meeting in early October 1999: we were to use familiar words, have an average of 15-20 words and a maximum of 40 words per sentence, change "RPP" to "RP"; etc. We were to have it all done by the end of October so that ORP-wide review could be completed by the end of November. In particular, we were supposed to have all ORP comments resolved before going on to ORNL-wide review. A disgruntled commenter was supposed to meet with the revision author and if the issue still could not be resolved, the two people were supposed to go their group leaders first, then to their section heads, then to Sims. Mei quoted Sims as saying that P-AAA auditors didn't compare requirements and procedures, they just looked at the 835 requirements, so any "extra" requirements were to be removed. She said that even things from the 835 implementation guides should all be "shoulds" unless they appeared explicitly in 835 itself. I observed that O&R people asked how ORP could demand things in the RPPs that weren't specified as requirements in any document in their Work Smart standards set, such as a good practice that was standard around the country; Mei replied she was not clear as to whether a mere good practice could be a shall, but she thought so. RPP-110 would (as before) define "shall" and "should". Mei opined that a should would still be treated as a shall unless exempted by Sims; if there were no clear 835 requirements in a procedure, the procedure would become merely guidance. I muttered bitterly about making so much "only guidance" and hence optional, including many requirements of long standing.

On 12 November 1999, I attended a rad protection procedure meeting regarding five RPPs, including my RP-340. Nearly all those attending were from RSS. It was decided to combine the five into fewer procedures. Although the reason given was to reduce the number of pages, it seemed to me that from some of the statements made, the real reason was that much of the material was to be thrown out (i.e., items that were now being made optional and thus were viewed as unnecessary to state at all). I had agreed to the reslotting of parts of my procedure into others and I sent a followup memo reiterating the reslotting as agreed on at the meeting. However, I found out later that unbeknownst to me, some parts that I was told were to be retained were thrown out by Perkins. I was angry, but I had no recourse.

In December 1999, my draft of RP-128 (on design reviews) went out for internal ORP comment. We had thought that there would be few ORP comments since the rad techs had nothing to do with this procedure. But there were various comments on this from the RSS complex leaders and also from Gregory. On 6 January 2000, having responded to all RPP-128 comments about two weeks earlier, I asked Mlekodaj why the procedure seemed to be hung up in upper ORP management. Mlekodaj said that he and Hunt were to meet to resolve issues but had not set the meeting yet. He seemed startled when I told him that

none of the apparently disgruntled commenters had met with me to discuss their disagreements, as they were supposed to do, but had gone directly to Hunt with their dissatisfactions. So Mlekodaj sent Perkins a memo pointing out that the protocol was to meet with the author first; he asked Perkins and any other unsatisfied commenters to get in touch with me.

Perkins proposed to have a meeting of four RSS complex leaders, Perkins, Gregory, me, and, if they would attend, Mlekodaj and Hunt. Obviously, with all that RSS representation the deck would be stacked, as it had been at the earlier five-procedure meeting, and it would be difficult to resolve comments on an individual basis. Besides that, Perkins unilaterally chose a time that would be difficult for me to make (11:30-12:30) because I had a meeting at my child's school at 1:15 pm. Mlekodaj agreed with me that it would be counterproductive to meet with all those RSS folks at once. Sims chipped in the next day in a memo to Mlekodaj and Hunt, telling them to resolve the affair. So Gregory sent a memo about setting up a meeting -- but to Mlekodaj, not to me. In it, Gregory made the revealing statement that he deemed our differences to be "philosophical", so he did not think it was of any use to discuss them with me. He wanted to refer the issue to the section heads, his stated motive being not to change the design reviews themselves, but to make sure that "line managers and auditors can tell whether we are in compliance with the procedure", i.e., to ensure clarity. But his changes were all either shall-to-shoulds or they made the wording more vague, which would allow much more elastic interpretations. For example, he suggested that I replace a fairly specific design requirement with the generic 10 CFR 835 wording. This seemed odd to me because if the procedures only echoed the exact words of 835 and gave no guidance as to how to implement them for ORNL-specific cases, why have procedures at all? Why not just reprint 835? As I pointed out to Mlekodaj, some of the changes Gregory said he was just reiterating in his memo were actually further changes beyond what had been in his comments; e.g., I had already revised a definition in response to a comment of his and he was now proposing an additional, looser revision of it. I also noted that Gregory himself had said he wanted to wait until the last comment day to see if the resolutions went his way; then he had asked for and got an extra day to make further comments. This was contrary to the RPP revision protocol as it had supposedly been set up by Sims.

So finally on 13 January 2000, I met with Gregory to resolve comments on RP-128. He seemed to have been appointed as the point person for the RSS people, even though he was in our section, RCS. At the end of our discussion, I thought that we had reached agreement on all but one point. But Gregory told Mlekodaj later that he was not in agreement on several points. Again, the protocol was that if people in two sections disagreed on a draft RP, then the two people's section heads would resolve the comments; if they couldn't, then the issue would go to Sims. Since both Gregory and I were in Mlekodaj's section, Mlekodaj could have and should have resolved the issue himself. But for some reason Mlekodaj did not feel he could simply overrule Gregory. Thus the protocol was again violated, this time by Mlekodaj, in deference to the power of RSS. I think that Gregory had never done an RP-128 (radiological design) review and he did not seem to have experience in, e.g., accident analysis or design of nuclear facilities other than instrumentation aspects, while I had had long experience of this in both the DOE and NRC worlds. Yet Gregory's comments on what should be included in RP-128 were given equal weight with mine by Sims. Although Sims ended up overruling Gregory on several points, Sims also required me to make several wording modifications based on Gregory's comments, modifications that I thought were completely unnecessary in this long-established procedure and were thus a sop to RSS.

In addition, the issue of whether certain provisions taken from the DOE Order 5400.5 (covering radiation protection of the public and the environment) should be included in RP-128 – as they had been for years in RPP-128 – were referred by Sims to the director of the Office of Environmental Protection (OEP). I suppose this was Sims' way of avoiding having to decide himself, in the face of Gregory's and certain RSS people's clamoring for these provisions to be taken out. As I pointed out to Sims, this RP was a formal mechanism for ensuring that all rad requirements were taken into account during design, since the environmental people generally did not have much to do with rad design issues and were not

knowledgeable about them (as I had seen on the MSRE project). Sims met with the director of OEP, who agreed with me that it was a good idea to have the provisions in RP-128. Only then did Sims back me on this point. It was all very disillusioning: rad design was the one area where AEG (and I in particular) should have been regarded as authoritative, but the RSS people and their allies consumed a great deal of time agitating about rad design practices and applications with which they seldom if ever dealt.

I had submitted the first draft of RP-129 (on radiological optimization) to Bishop on 15 December 1999, but due to the many more important procedures he had to put on the Web, it did not go out for ORP-wide review immediately -- or so he said. I found out in January 2000 that what had actually happened was that Sims had held it up: Mlekodaj told me that Sims had decided to check and approve every shall himself before letting it go out for ORP review. I told Mlekodaj that this appeared to be a case of my procedures getting extra scrutiny by Sims et al. just because they were my procedures, and Mlekodaj said that that seemed to be so. But he said that RP-347, Geber's glovebox procedure, was getting the pre-scrutiny also. I reported this development to Mei and Geber, pointing that having our procedures treated this way -- and not the RSS authors' procedures -- was professionally insulting.

This was especially true of RP-129. I had written the original version of it years earlier and as I noted, I was arguably the only one in ORP who really knew how to do rad optimization and who understood the DOE and other guidance associated with it. Because using optimization was an 835 requirement, RPP-129 had to remain a procedure and not become just a guidance document. Thus to save time and effort, Sims directed Bishop to put a note on the draft version of RP-129 posted for ORP comments to say that no comments would be accepted that advised making it a guidance document. But on 27 January 2000, Hunt did post such a comment. I was never able to find out whether Hunt had just missed the note or he had posted his comment despite the note to see if he could knock RP-129 out of the manual.

We authors could respond to comments either a few at a time as they came in or all at once at the end of the comment period. In the interests of making sure every commenter got the chance to tell me in a timely fashion if I had misunderstood his comment, or to add a comment, my practice was to respond to comments as they came in. This was all done on the Web and everybody in ORP could see all comments and responses. So I responded right away when Gregory posted a comment that said that the two types of values mentioned in the procedure were not assigned dollar values at ORNL; while he conceded that he might be wrong about that and said that he apologized if so, he still took up his and my time in posting and responding, when all he had to do was to ask the ALARA Program manager -- his supervisor, Mlekodaj. But the most contentious comment was complex leader John Scircle's assertion that while 835 seemed to require optimization for designs and modifications, there was no such requirement for operations. In my response, I explained in detail how it was in fact DOE's intent that this requirement apply to operations as well as to design, as was clear from the 10 CFR 835 definitions and guidance documents. Scircle and others did not like this and they began a new series of comments. I thought that their comments illustrated their ignorance of the ALARA process as DOE had specified it and as the International Commission on Radiation Protection had propounded it. But ever in the teaching mode, I hoped that my explanations would inform and persuade them and we would all be on the same page. Alas, you cannot persuade people whose minds are made up. There were other comments (e.g., that individual dose did not matter in optimization) that showed the lack of knowledge of the commenters.

The comment period for RPP-129 was supposed to have ended on 3 February 2000, but on 4 February Bishop sent out an all-ORP E-mail message stating that "due to the high volume of last-minute comments, the ORP review of RP-129 has been extended through the end of the day". I was dismayed because I was not consulted about this -- I needed to have the comment period close so that I could finish resolving the comments and get the procedure on to the next step, ORNL-wide review. Such an extension had not been granted in the case of any other procedure, certainly not for any of the RSS-authored procedures. We in AEG were upset about this additional example of preferential treatment of RSS (the only ones making the

last-minute comments), in contradiction to the agreed-on review protocol. I protested to Mlekodaj, but although Mlekodaj was Bishop's supervisor, he professed to be unable to rein in Bishop on this.

On 6 March, I noticed that the comment version of RP-129 on the Web had a sentence that was not in the marked-up hard copy draft that I had given Bishop; also, everywhere that the procedure had had "AEG", now "RCS" appeared. I sent a query to Bishop about this. The next day, Bishop told me that he no longer had my marked-up copy (which he said he had given to Mlekodaj) -- the only thing he had was a copy with the added sentence penciled in that Mlekodaj gave him to put on the Web. He also said that Mlekodaj told him he "still had to hash out some things with" Hunt about the procedure. I wrote Mlekodaj to ask how it was that he still had things to "hash out" with Hunt. I pointed out that another procedure for which I was author, RP-128, still said AEG and not RCS. I also pointed out that it was not practical or customer-friendly to change "AEG" to "RCS" when it was in fact AEG and not the rest of RCS that would be handling this procedure -- that is, people outside our division liked to be directed to the "smallest applicable unit" and not have to "drill down" by repeated phone calls through the layers of management to get to the group that was actually doing the work. There was also the problem of who kept the records: in fact, it was AEG, not RCS in general, that was tasked to do so in this case. I told Mlekodaj that my not even being told about the change to "RCS" or allowed to argue in favor of my position was disrespectful to me as the revision author. I added that if changes were made to RP-129 behind my back, then I -- the one person in ORP who understood formal radiological optimization -- couldn't be the author of RP-129 any longer. Mlekodaj never responded.

Note the surprising news that Hunt -- the head of the rad tech organization -- had anything at all to say about a procedure that it was very unlikely any rad tech or rad tech supervisor would ever have to look at or interpret since they would normally not be involved in its execution except as providers of dose data. Mlekodaj's deferring to Hunt on this suggested Hunt had approval power over every procedure regardless of content, or at least that Sims required that Hunt be allowed to look and potentially object to its content.

In January 2000, at 1:00 pm on the last day for ORNL-wide comments on RP-215 (the fetal protection procedure), I was called by Teresa Powers of the Health Division. She was the lead nurse or assistant to Dr. Phillips, head of the Health Division. She told me that she had only that day been given a paper copy of the proposed RP-215. She said that parts of the procedure did not agree with what the Health Division did and that Dr. Phillips wanted to meet with me at some unspecified future time to discuss it. She stated two or three specific things that the Health Department wanted changed. I found it rather hard to follow what she was saying about what needed to be done, but I had the impression that she intended that these oral comments be incorporated without the Health Division's having to trouble to put them in writing.

Her main points seemed to be that the Health Division sent the original of the pregnancy declaration to ORP, rather than just a copy as the procedure stated, and the Health Division thought that the way the procedure was phrased meant that someone could interpret it as implying that the Health Division sent confidential medical information to ORP. The Health Division regarded the declaration form as a medical information release form since it was to be signed by the woman and it allowed the release of two items of medical information, the fact that the woman was pregnant and the date of conception. How the wording of the procedure itself implied that the Health Division was sending confidential information was beyond me, but although I tried to reassure her tactfully, she was adamant. I told her that I would go ahead and change the wording to say that only the declaration was sent, as she had asked, but I said that she should also put this in as a comment in the Web-based system so that it would be on the record. Another point was about the timing of the declaration withdrawal form. I will not go into the details, but if we had done as the Health Division wanted, it would have contradicted both what I thought 835 required and what the 835 fetal protection guide stated. Because she seemed confused about this, I again told her it would be preferable to put her comment in writing.

However, since I had my orders as to how comments were to be put in (and certainly all ORNL commenters were told in the online area from which her paper copy had been printed how this was to be done), I felt that I could not allow the comments to be given only orally. So I told Powers about the Web-based comment system for ORNL-wide procedures and pointed out that someone in her division must be on distribution for the draft procedures and so must know about the input system. She agreed that that was so, but seemed vague about just what that was. I explained that the Web-based comment system had been set up so that the comments and responses would be "public", i.e., could be seen by anybody in ORNL. I explained that this was so that there would not be any back-door commenting and resolution during the main comment period and so that if a commenter from one division proposed something that another division would find hard to implement, the second division could see it and counter-comment.

But I also pointed out helpfully that there was a period after the comment period closed during which comments were resolved and that during this later period any dissatisfied commenter could get back to the author or ORP and urge that his comment be reconsidered. Also, there was the Directives Review Committee review, at which any division could bring up any remaining issues. So, I said, there were three opportunities for the Health Division to provide input, but the best time was during the still-open comment period. I stated that I was willing to meet with Dr. Phillips and Ms. Powers, but the best course of action would be to enter the comments through the Web-based system so that all the comments on RP-215 could be formally dealt with at once. She did not know how to access the Web-based comment area on the Web, so since she was at her computer, over the next ten or fifteen minutes, I talked her through the steps to get to the RP-215 comment box. From her responses, I believed that she felt herself competent to use the system. I thought that our conversation was cordial and when we said goodbye, I had the impression that she intended to enter the Health Division's comments over the course of the afternoon.

I reported the whole conversation to Mei that day. The next morning, Mei asked me why I had told her that the RP-215 comment period ended the day before, when the ORNL master procedures listing showed the date as several days hence. I showed her that Bishop's ORP Revision Central page gave the date of the day before, as I had said. We then found out from Bishop that the ORNL procedures honcho, Susan Bly, had told him to move the date out several days to accommodate a division that had not managed to get its comments in on time, which he confirmed was the Health Division; he just had not changed the date on Revision Central yet. Mei told me that Powers had called her, but gave no details. So I assumed Powers was just verifying that the process I had described was correct. That day or the next, Powers got the Health Division's comments in. I made most of the changes that they wanted; only the withdrawal timing one had to be rejected. In my comment resolutions, I included an explanation for the benefit of other divisions as to the basis of the handling of the declaration by the Health Division and ORP, to make it clear that the woman's medical privacy was protected. Because of this and because of my extended help to Powers, I thought that all was copacetic.

But several weeks later, Mei told me that soon after I had talked with Powers, Dr. Phillips had called Sims and told him that I had not been cooperative with Powers. Specifically, Dr. Phillips was reported to have said that I had not "guaranteed" that the Health Division's proposed changes would be incorporated as was and that I had refused to meet with Dr. Phillips. I was dumbfounded by this baldfaced lie. Mei then told me that Sims referred Dr. Phillips to Mei and Mei had talked with Powers (it might have been both Dr. Phillips and Powers because Mei slipped and said "they" at one point). Mei told me that I was not in on this last conversation because "they" did not want to talk to me. I pointed out to Mei that I had reported the details of the conversation to her contemporaneously and that I had explicitly told her that I had told Powers that we could meet, had talked her through the comment system, etc. Mei did not deny it and she did seem sympathetic -- I think that she believed me -- but she reiterated the old mantra that we must be supportive of and polite to our "customers". I was frustrated -- since I had been helpful to Powers.

I said all this to Sims in an explanatory memo. I forwarded it to Mlekodaj, telling him that while I didn't blame Mei, who had been caught in the middle of all this, I thought she should have insisted that she and I meet with Phillips and Powers. I told him that I thought Dr. Phillips' calling Sims like that was not professional: his division had had two weeks or more to get their comments in and he could have waited to see if and how his division's comments had been resolved before he, in effect, dragged me in front of Sims. But he chose to make it look as if I had just blown off Powers. I think Mlekodaj later just shook his head over this; yet again, he and Mei had been passed over in favor of another division's going straight to Sims, who, it seemed, could be counted on to soothe and placate the offended division. Sims sent me back the following reply to my memo: "After your communication with the Health Division, Dr. Phillips obviously believed that the only way he could get his concerns addressed was to contact me and ask for my help. He did that and I believe his concerns have now been addressed". When I saw this, I told Mlekodaj that I was indignant that Sims had not said anything to acknowledge my side of it but implied that Dr. Phillips had acted reasonably in calling him directly. I also said that I realized it was a waste of time to talk with Sims any more, even to defend myself.

I think now that Dr. Phillips was so used to getting his own way that he was incensed when Powers told him that I advised her to put her comments in on the Web -- that I was not just taking the least thing that the Health Division said as my prime directive and priority. Putting comments in on the Web was as per the ORNL procedure revision comment rules, but Dr. Phillips appeared to regard his division and himself as special and privileged, above the tedious requirements placed on the lowly other divisions, and we in ORP were supposed to cater to and accommodate that. It was very telling that the comment period was moved out by Bly just for them and without prior consultation with ORP (who still had to meet the revision deadlines), when the Health Division had had the same opportunity as any other division to comment. It was very telling that Dr. Phillips went straight to Sims. It was very telling that Dr. Phillips misinformed Sims as to the nature of my interaction with Powers (whether Powers misinformed him or he chose to twist the truth, I don't know) to make it look as if he were the injured party.

On 3 April 2000, I met with Perkins regarding my comments on RP-420, of which he was the revision author. This was an informal comment resolution session -- there was no formal internal comment resolution process any more, it seemed. He made only one or two minor changes with respect to my mostly substantive comments and of course he made no reply to my (written) comments in writing. The only way I could get any further changes made would have been to take the matter up with Mlekodaj -- who of course would not have stood up to Perkins and Hunt because he would have lost when they went to Sims. So I spared Mlekodaj the grief of agitating for changes that would not be made.

I was not the only one having trouble with my procedures. Geber was the revision author of RPP-347, the glovebox procedure, which, again, was one of the procedures that Sims checked every shall of himself before it went out for ORNL-wide comment. Still, Chem Tech and others piled on in the ORNL-wide comments to get all the requirements and specifications they could take out of the procedure. Their objections were couched in revealing language. Chem Tech stated that the procedure should be entirely guidance because "ORNL, ORP, and the divisions that operate gloveboxes would best be served by such a change", besides which "835 has no mention of specific glovebox controls". While Chem Tech allowed that there should be some review process for gloveboxes, this could be accomplished "without the other potential liabilities brought about by the procedure as it exists", the procedure being "audit bait" that "we could live without". (I found breathtaking the implied assumption that if 835 did not mention a type of rad equipment specifically, it should not have any "shalls" whatsoever associated with it.) The chemistry division too opined that this procedure had no ORNL Work Smart driver and was not required by 835, hence could be made merely optional guidance; they too thought that the document contained "too many shalls", was too restrictive, had areas of vagueness that paved a dangerous path for too-stringent interpretations, etc. The chemistry DRCO said that the procedure should just state that line management should issue appropriate controls for their gloveboxes (with "appropriateness" being undefined and

apparently up to the judgment of line management). Yet another commenter stated that requirements for gloveboxes were already given in the Facility Authorization Bases (even though those were top-level documents and did not contain procedural steps for reviews, etc.). Although Hamley was an ORP person, he was allowed to comment in the ORNL-wide review as the (hired) DRCO of the Metals and Ceramics Division. He made comments about filtration, air flow, and the pressure-testing of glovebox windows that showed that he didn't understand the engineering aspects of glovebox safety. He too said that one procedure step had "compliance liability without adding benefit" -- I guess because he himself didn't understand the benefit.

These people had clearly heard what DOE was trying to tell them when DOE promulgated 835: take out all requirements that you don't want to be held to and potentially fined for. But they were also ignorant of what 835 was saying: 835 did not mention requirements specifically for gloveboxes (just as it didn't mention detailed requirements for many other engineered safety features), but that did not mean that DOE did not intend for specific requirements to be put into individual sites' procedures. Besides that, if the review and use requirements were left up to the O&R divisions, then there might be no restrictions at all on what radionuclides could be used, in what form and quantities, with what filtration and leakage check requirements, etc. For the technical reader, let me make this perfectly clear: these commenters were literally advocating that all such specifications be taken out of any ORNL-wide procedure and left to O&R people to decide on a case-by-case basis. (The rest of the RP-347 story will be related later.)

For RPP-138, "ALARA Suggestions", Geber and Mei wanted to put in guidelines for handling suggestions, but Mlekodaj ruled against it, saying that he agreed with most AWC members that ALARA awards were "attaboys", not necessarily rewards for actual achievements or actually adopted suggestions.

The most beset author of all, perhaps, was Mei, as revision author of RP-310 (on operational reviews). It was clear from the start that ORP would have to satisfy powerful Chem Tech in order to get the revised procedure through and that Chem Tech was not above torpedoing the deadline in order to get its way. On 29 March 2000, Mei wrote to Chem Tech section head Patton, asking him to let her know if he was satisfied with her resolutions to his comments on RP-310. She said that ORP was preparing the final draft for Directives Review Committee (DRC) approval, adding that "your feedback is important to us. Thank you in advance". It was unusual to solicit responses to comment resolutions from particular individuals in this way -- what was done was to post the resolutions on the Web for all commenters to see and then any dissatisfied ones had the responsibility of getting in touch with the procedure authors to express their dissatisfaction. This was the efficient way to handle things, of course. But Mei was told by Mlekodaj and I believe Sims to treat Chem Tech with kid gloves and to be sure to have their buy-in before the procedure went to the DRC for approval. Patton surely knew this, as the subsequent series of E-mails showed.

On 31 March 2000, Patton wrote Mei that two areas of his comments were not addressed in her resolutions. He stated that "our reviews would be improved if the procedure provided for ALARA reviewers from a larger group of qualified personnel without going through a special approval by RCS [i.e., AEG]". He claimed that the signature of the ALARA reviewer on the RWP was not necessary since "the RWP is only documentation of the controls developed through the ALARA review process and approval should be [from] the RSS and line management [only]". (The underlining is mine).

Mei actually had addressed all his comments in her resolution -- but not to his satisfaction. In his response, he gave no reason or justification for his assertion that the reviews would be improved by a larger pool. He implied that the RCS review was a "special approval" when in fact it was the (formal) operational radiological review that was called out in the DOE ALARA program implementation guide for 835. His statement about what the RWP represented operationally was erroneous because an RWP is an authorization and requirements document (since it informs supervision and workers and since all rad workers sign it on entry) even more than it is mere "documentation", i.e., simply a record of what has

been agreed on. Besides, if the controls have been developed through the ALARA review process, it is essential for the ALARA reviewer to see that what appears on the RWP is what was agreed to – otherwise, line management and RSS, as had happened in the past, might agree to certain measures one day and then rewrite the RWP to eliminate them just before the job started or after it was partly done.

On 31 March 2000, Mei wrote Patton to state that contrary to what he had apparently said in a phone conversation earlier in the day, the proposed revision of RP-310 did allow for a larger pool of Level 3 and above reviewers than the previous revision. She pointed out that the reviewer "will be mutually agreed on by the project (line) manager and the RCS head, or their designees" (the underlining is again mine.). This, she said, would provide the best guarantee of using personnel "with [the] most adequate skills and training" for the particular operation and would "meet our customers' need". She also pointed out that the RCS representative's signature was required only for Level 3 and above reviews (so that routine work was not reviewed by RCS) and that the RCS rep (the "ALARA reviewer") also provided a written summary report of the review, which otherwise would be undocumented. Finally, she pointed out that having the reviewer sign the RWP and thus acknowledge that the review was complete allowed the work to go forward even if the report was not complete yet.

Note that ORP was making the huge further concession of allowing the line manager to have veto power over who was selected as reviewer, since the choice was to be by mutual agreement of line management and the RCS head (Mlekodaj). Mei made the case in her memo that ORP had an interest in ensuring the competence of the reviewer for reviewing the particular type of work. The customer-friendly provision of having the review completion and authorization be indicated by the RWP signature and not having the start of work held up by the issuance of the report had of course already been in the procedure for years.

(I will continue the story here a few days into April 2000, although this chapter in other respects stops at 31 March 2000.) On 5 April 2000 (after all the procedures were supposed to be in to the DRC), Mei told Patton by E-mail that she and Sims had just had a meeting on RP-310. They agreed to change "RCS representative" to "independent ORP representative" and to add a footnote to Table 310-1 stating that "The line manager has the responsibility for selection of an independent ORP representative who has experience appropriate for the review being done. The ORP is available to assist the line manager with this selection". She stated that one section in the procedure would be deleted and another would emphasize the requirement to document the review. Note that ORP thus agreed to make two highly significant and safety-detrimental changes: (1) line management would be allowed to select their own "independent" ORP reviewer, instead of having an appropriate reviewer be assigned by his own management (ORP), and (2) the reviewer pool would be officially opened to anybody in ORP, i.e., not just AEG and not just RCS. This meant -- as no one in my management chain denied when I said it -- that even the least experienced rad tech could perform an independent safety review of even the most dose-heavy job. It also meant that line management could reach into ORP and pick a reviewer who had shown himself to be accommodating in the past. This was clearly not an academic issue, given our experience with Chem Tech's and RRD's trying to pressure AEG into giving them Utrera instead of Geber or me.

But greedy Chem Tech was still not satisfied. Patton replied by E-mail to Mei that he liked the changes but wanted to omit the requirement for the independent reviewer to sign the RWP. He stated that if additional approvals were necessary, then "it should be higher levels of line management and RSS management" that reviewed them. On 5 April 2000, Sims responded to Patton, thanking him for "persevering" through the revision to RP-310. He asked if Patton's final demand that the requirement that the independent ORP reviewer sign the RWP for Level 3 and higher reviews be eliminated was a "showstopper" issue for Chem Tech, since he didn't want to go to the DRC until they were on the same page. He said that if Chem Tech "could live with" the requirement, it was the right approach because the independent reviewer ("who would be chosen by you") would have become familiar with the work package and would thus provide additional assurance that the RWP contained instructions consistent with

the approach agreed on and reviewed. (This was a point I myself had made to Mei and Mlekodaj.) But he further pointed out that the signature made the whole work authorization process more "audit-proof" and shouldn't take much time since ORNL was averaging five or fewer Level 3 and above reviews per year. He observed that this was the way the process had been for years (i.e., when AEG alone was doing the reviews) and that "most other DOE labs have such a practice "so this isn't from out in left field".

Sims was on very firm ground here: the signature was standard at ORNL and also elsewhere and it made sense from a confirmation and audit point of view. He was somewhat incorrect in his mention of "higher levels" of line and RSS management: these higher levels were not involved in a Level 3 review (as they would be for the Level 4 or 5 reviews), so they would not need to sign the RWP for a Level 3 review. Besides, for campaigns and even for some tasks, there was more than one RWP; thus having higher levels of management sign every one was impractical, as it would not be for the lower-ranking independent reviewer. What would probably happen in practice would be that the higher-level people would delegate their signature authority on later RWPs to the same levels of line and RSS management that signed them anyway. The point of the reviewer signature, at ORNL as at other DOE sites, was that the work could not proceed until the authorization – the RWP – was issued, so requiring the reviewer signature avoided misunderstandings (or worse) about whether the review was finished or not. Thus Patton, by trying to eliminate the reviewer signature, was in effect creating a loophole by which work could potentially be started by line management without the review's being completed, while line management would have deniability as to knowledge of whether it was completed or not.

Sims also demonstrated his ignorance of how many Level 3 and above reviews should be done on the basis of work experience at ORNL: there should have been many more than just five reviews per year and I believe that it was in fact more than five, even with all the avoidances. He also was ignorant of how the reviews and the RWP signings were done. The reviewer did not necessarily "need to watch part of the job" (and in fact I was often discouraged from even attempting to look at the job site and was usually discouraged by the facility people from trying to watch the job itself, most often by not being told when it was to start). Besides this, if there was not a real need for the reviewer to watch the job, it would not add value for him to do so since there are usually delays in starting jobs, even when supposedly ready to go, and observers could thus stand there for hours waiting for the job to start. Finally, the RWP was often signed more than a day before the job was to start – this was not best practice, but it was a customer-friendly practice that the rad techs sometimes bullied or coaxed the reviewer into.

Although Sims supported the reviewer signature principle, he brown-nosed at the end by saying to Patton, "You represent ORP's largest customer and we want to be of service. Can you live with it or should I try to come up with another approach?" Thus he -- the director of a safety division -- was making it clear to Patton -- a section head of an O&R division -- that Patton had veto power over a safety procedure, and moreover a procedure that was applicable not just to Chem Tech but to all of ORNL.

The reader should also note that the Mei-Patton-Sims series of memos postdated the date of 1 April 2000 by which the procedures were supposed to have been submitted to DOE, so Chem Tech's fussing over this procedure was holding up the show. Mei and Patton had supposedly worked out all differences previously, so Patton's objections were considered by AEG to be a last-minute offensive by Chem Tech to change the procedure even more drastically. Patton should have been the one to have to make a strong case for the change, not Sims for retaining the long-standing provision. Also, since the comment period had ended and major comment resolution was already over, it was a special privilege for Chem Tech to be permitted to demand a major change at this point, without the knowledge or consent of other divisions (not all of which were represented on the DRC, even if this point were brought up when the DRC considered RP-310).

Why should Chem Tech be able to do this? Well, note the obsequious nature of Sims' memo and especially his specific statement that Chem Tech was ORP's "biggest customer". Not only did Chem Tech wield a lot of financial power, the head of Chem Tech was the most powerful member of the DRC and could have held the procedure up indefinitely; based on past experience, I believe that the DRC could even have dictated the content of the procedure, meaning that the mostly line management members of the committee could have incorporated Chem Tech's preferred wording by simple majority vote, regardless of the views of ORP (the supposed experts) or the rest of ORNL. This memo is thus prima facie evidence of ORNL safety people's cravenly caving in to line management demands.

This was sickening to us. When Mlekodaj forwarded Sims' memo to Mei, Geber, and me for information, I wrote to Mlekodaj in response: "Thank you for forwarding the message. It is always best to know the worst, even though it may turn your stomach. Is it true that the Brad Pattons of the world can now choose their own independent reviewer? If that is so, then the reviewer is not truly independent, is he? The point of an independent safety review is that the person should not only not be involved in the work but should also not be beholden to the work management. Somebody who knows that his next chargeout may depend on how well he pleases the line management of the work he's reviewing might persuade himself to fudge his conclusions, mightn't he? [And] why is Dr. Sims being so deferential to Brad Patton? His fussing over Brad's comfort and welfare is so egregious that it sort of enhances the nausea factor, if you know what I mean. Also, how could an "independent" reviewer dare to challenge facility line management when his own manager is so Uriah Heepish?" I think that says it all.

On 5 April 2000 too, I gave Mlekodaj, who had met with Sims that morning to advise against acceding to Chem Tech's demands regarding RPP-310, four additional points he could make. First, if Sims held firm on RP-310 and made Chem Tech take the decision to the DRC, then even if ORP lost, a decision by the DRC to overrule ORP would be recorded in the minutes of the DRC meeting and would be referenceable in any future incident investigation involving weaknesses in work planning. This would thus let ORP off the hook but would put ORNL higher management on the hook, for allowing it. Second, ORP represented higher ORNL management, not just line management, and the larger interests of the Lab, not just the parochial interests of the divisions. Third, if AEG lost yet more review work to the complex leaders (not just to B. Slaten and not just Chem Tech work, as under the exemption), then ORNL was establishing that the set of qualifications necessary to do a competent review of varying jobs and facilities was at most only that of rad tech supervisors, i.e., of rad techs with some years of tech experience but not necessarily any higher formal training, and that rad engineers thus added nothing beyond tech supervisors. I noted that this was contrary to what other major DOE sites did and it would encourage the O&R divisions to marginalize AEG even more. Fourth, if work was taken away from AEG, AEG was more vulnerable to layoffs. I do not know if Mlekodaj made these points to Sims.

HRIBF Review Violation

On 3 November 1999, Mei told Mlekodaj that the facilities she covered directly looked "okay considering the expectation re facility activities performed in accordance with procedures". She noted that she and I visited the HRIBF facility in May 1996 and discussed the new rad operations with facility personnel. She said that the facility did not get in touch with AEG regarding an RPP-128 (design) review (of new equipment) later as expected. (HFIBF "went hot" in Summer 1996.) Mei opined that this was either because "facility management followed DOE review/approval process [i.e., they considered a review by the accelerator review committee to be all they needed], or because of the pressing schedule".

I thought that Mei did not make it sufficiently clear that we had made HRIBF management fully aware of the review requirement. So the same day, I sent a message to Mei and Mlekodaj, stating that in the tour mentioned, she and I did indeed discuss RPP-128 and RPP-310 reviews with the facility manager, Garrett, and the complex leader, Gonzalez; thus Garrett and Gonzalez did know that the facility and its new operation were subject to both RPP-128 and RPP-310. I noted that ORP was not supposed to keep

asking the divisions if they had any work to review, but rather, the divisions were supposed to know and follow the RPPs and to get in touch with AEG for reviews. I disdained the notion that the HRIBF's being an accelerator facility or the facility's being busy should excuse their not having the reviews; I stated explicitly that this was a review avoided (i.e., a procedure violation). I also noted that Mei took over HRIBF from me at about that time (I had recommended that she do so because Gonzalez preferred to call Mei, apparently because she was a supervisor like him, and he was not forthcoming with me when I called him. I was busy with MSRE work, so at the time it made sense for her to take over HRIBF). I said that Gonzalez had said to me more than once that the rad techs could do their own shielding adequately with lookup tables and did not want to have AEG overdo the work, e.g., by doing computer calculations.

Mei's willingness to excuse HRIBF's not having their reviews done -- not even quoting any statement directly from them but apparently thinking up some excuses for them -- was saddening. She was very diligent and serious in her work, but her passivity and disinclination to engage managers in frank dialogues about their procedure violations was discouraging. (However, see below for an effort she did make.) Mlekodaj, of course, also avoided such potential confrontations. This was the end of the matter: I believe that neither Mei nor Mlekodaj took this up with HRIBF management. This was never reported as a violation nor was any other action taken with regard to this.

AEG-RE Meeting of 8 November 1999

I explained that the Defense Nuclear Facilities Safety Board (DNFSB) was getting interested in Chem Tech's attitude toward safety, as per statements by Mlekodaj and Linda Gilpin. (The DNFSB, as noted in a previous chapter, was an agency created by Congress to oversee safety in DOE's defense facilities; the only part of ORNL to qualify as a defense facility was Building 3019, because of the U-233 stored there.) Mei said that the MSRE people still wanted her to go to their meetings since Westinghouse (BJC's new subcontractor for rad engineering support) was yet not on board. The Spallation Neutron Source was at the 30% design review stage and they wanted a 50% FTE for six months for the review. Mei thought that either one AEG person or a team effort of one AEG person and Don Gregory would serve.

Meeting at HFIR Regarding RPP-310 Violations

On 16 November 1999, Mei and I met with the RRD reactor operations manager, J. Ed Lee, to discuss the failure to have the resin job and the strainer hot particle jobs reviewed as per RPP-310. RRD DRCO Harris and HFIR complex leader Davis were also present. I went over the features of the resin campaign and the strainer job, pointing out the clear indications for reviews in each case and the additional procedural violation of dividing the campaign into suboperations to avoid review as a campaign. I pointed out how the involvement of Harris and me would have made a difference in the outcome.

Regarding the resin job, Lee admitted that "we would have done things differently if we had known what we know now", but he did not specify what would have been done differently. He did not say that in the future RRD would take care to have the reviews done as per RPP-310 or that they would consult with AEG regarding the interpretation of RPP-310. Regarding the strainer hot particle job, Lee explained that he was called about the job, came over to the bay, and made the call himself to do manual movement of the strainer to the sink. I reminded him of what the DOE facility rep had told me about the operation. But Lee denied that RRD had not intended to do a prejob briefing for the flashing until DOE prompted them to and Davis claimed that the DOE people were "not even there" for part of the operation. Mei and I pointed out that RPP-310 called for a Level 3 review for this type of job on two counts, but Lee insisted that it was his decision to make and his interpretation of the procedure that applied. I noted that Davis had obviously thought that a review would be required since he had alerted me to be ready for it, but now Davis backtracked and said that "we" (RSS and RRD) determined that a review was not necessary. Lee re-emphasized that it was his prerogative to decide if a review was needed or not.

Lee blew off Mei and me -- there is no other way to describe this meeting. I had always thought he was a good guy, safetywise, but I saw now that it was all talk (this was confirmed later by others in RRD, one of whom said he was "very slick"). Harris was mostly silent, but then he too had been excluded from planning and decisionmaking on this job. But Davis! Davis was right there in the middle of it all and had rolled over. This was a nice guy, a capable supervisor, but here he was covering up for line management. This was a truly sad and frustrating day for me.

Note that around this time in 1999, Lee found out about the RPP-310 review exemption that Sims had granted to Chem Tech. According to Mlekodaj, Lee asked Sims if RRD could have an exemption too, but Sims told him to wait: in the upcoming revision to start in October or November of 1999, the procedure would be changed in the direction of accommodation. As I described above, sure enough, it did.

ORP Safety Meeting of 30 November 1999

Steve Hamley gave a presentation, sanctioned by ORP management, on the subject of satisfying one's customer. As noted earlier, Hamley was a former rad tech who, after earning his degree, had become ORP's conduct of operations specialist and had done audits at other DOE sites. He was a pleasant person and always seemed concerned about worker safety, so when he began his presentation, I thought he was going to exhort everybody to have high performance standards or some such. Instead, it was the opposite.

Here are some excerpts from his printed notes and spoken statements.

- "R&D and Ops are the good guys!"
- "To provide effective, cost-effective health physics support to the R&D and operating divisions" and "To make you (line management) look good" are not inconsistent statements
- It is R&D and operating divisions' job [not the safety divisions' job] to "decide how safe is safe enough" and "to accept the risks of their decisions"; he declared that "this is not a problem for me [to accept]"
- "People will always make the right decision given the right information"; "if they make the wrong decision, I gave them wrong (or not enough) information"
- We [ES&H and O&R people] are all part of the same team with "common goals and objectives"; there is no "them" and "us" in ES&H [work]; a "them" and "us" concept adds no value, "helps us make no decisions"
- The "them and us" concept adding no value "is particularly true of P-AAA", since "to a regulator there is no organizational structure below "ORNL""
- In his 22 years of experience, groups "have always been able to find ways to refuse to do things they want to do"
- "If your services have to be mandated, you are an endangered species at ORNL"
- "If your recommendations or ideas are not accepted, you've wasted your time as far as the at-risk person is concerned, and wasted R&D funds" and thus "everyone loses"
- "If all you're perceived to do is to kick them [line management], reconsider your position"
- "We [ES&H] have no regulatory authority"; "even rad protection procedures are negotiable"
- "It's more successful, and a lot more fun, to be part of the operation"
- One is not going to win all battles and should not "fight to the point where they dread to see you coming", because "at-risk personnel will be safer in the long run"
- Exceeding one's job scope "will be unwelcome and is unprofessional"
- "Update" the responsible line manager "every time you find a potential problem"
- "Be willing to accept the line decision if they understand and are willing to take the risk – it's their job"
- One should "agree to disagree" if compromise can't be reached [i.e., yield to the customer's position]
- "If the customer has a problem, you have a problem"
- "If you need one, ask for another chance – [on a] trial basis"
- One should not "make the same mistakes twice"; a mistake is defined as "what the person buying your services thinks it is"
- One should "periodically visit" one's "customer", not call except to set up a meeting, not E-mail them, and "not expect them to come to you"

He said that he "did a lot of technically good work" with the Lockheed Martin "Evaluation Group" doing plant evaluations starting in 1991. But the group was called "Nazis" (for their approach). While ES&H "did not improve much", he learned a lot. The group still exists, does the same process, and is so in

demand that they have been hiring. (This seems to be paradoxical, but that's what he said.) However, the "customer" decides to buy services and decides whether to accept the results; he claimed that it is still the same service and the same results. "There [should be] no surprises" -- even moderate findings that are a surprise are resisted, while more serious findings are accepted "when ops folks have been on board from the beginning". He said he became more successful when he started "to really listen to the ops folks" and "to learn to observe and fix simple problems simply". After he presented a final report, he would call and ask if he could be of further assistance. Hamley also presented a pseudo-graph that had no markings on its abscissa or ordinate, but purported to show quasi-quantitatively where safety and cost were in balance.

I was disturbed by the toadying note throughout this presentation. It was true that somewhere along here he said, "Sometimes you make people look good by keeping them out of trouble, even if you have to kick them in the pants once in a while", but the weight of the counterstatements was overwhelming. Hamley seemed to have bought the "customer service" concept hook, line, and sinker: that he who has the money calls the tune, even in the area of safety. He said, in effect, that a safety person has to "sell" himself to his "customers" so that they will "buy" his services and there will be repeat business, e.g., his recommending that the auditor call after an audit ("evaluation") and ask if there is anything he can do to help and his saying that the auditor/safety person should visit (cultivate) the customer to find out what is going on and not expect the customer to call the auditor/safety person. These statements were completely contrary to the idea of making line management responsible for knowing and following procedures, which is supposedly a tenet of ISMS, and to ORNL's RPP requirements for line management to make sure that safety coverage is provided, e.g., to call the safety people for reviews and generally follow their advice.

Hamley implicitly blessed the "blame the victim" approach, in that he said that if line management makes the wrong (safety) decision, then it's the safety person's fault: the safety person must have erred by not giving enough information or by giving the wrong information. (Talk about being an enabler.) He also said that the safety person is supposed to defer to management and not push too hard, i.e., if they don't want to listen to you, you should shut up. He said that people whose services have to be "mandated", e.g., required by procedure, are "an endangered species", i.e., that such mandates were being or would be eliminated and so persuasion was all that was left. He said explicitly and repeatedly that line management has veto power over safety findings, as far as the choice of whether to correct or implement prescribed corrective actions is concerned; note that he did not explain who it is who does provide oversight if not the safety people. He emphasized teamwork, but it was phrased entirely in terms of "understanding" line management's problems and concerns and defining your success by how they viewed you ("a mistake is what your customer thinks is a mistake"). He gave his listeners to understand that the safety person was not necessarily to be included by right and by necessity as part of the team, but at the sufferance of management. He even implied that stroking line management was the way to ensure protection of the worker; implicitly, if they got ticked off at you and refused to follow your advice and a worker got hurt because of inadequate safety precautions, it was your fault for "making them do it" (again, talk about enabling....). In short, this ORP rad conduct of ops person completely succumbed to -- and on behalf of ORP management was promoting -- the notion that not only all safety responsibility but all safety authority lies in the hands of line management and that any hope of ES&H survival and adequate worker protection lay in being friendly and agreeable to the customer (the "kick in the pants" notwithstanding).

Since this was presented as part of a safety meeting attended (in its two sessions) by about 90% of ORP and there was no subsequent official discussion or missive regarding Hamley's statements, everybody in ORP understood that this was the official party line. The veiled threat of loss of jobs was clear. The whole thing was so blatant and explicit in its lapdog approach to safety, it made me want to throw up.

AEG-RE Meeting of 8 December 1999

As I put it in my notes, "Mei takes another step down the slippery slope", with "happy, shiny pessimism". Mei said that things did not look good, but that we were to be called SMEs (subject matter experts) and

that "as long as we are the SMEs, we will survive". She stated that if the customer asks for someone other than the assigned person, AEG would go with a team approach or would "discuss it".

HFIR Beam Room Modification

In the 8 December 1999 AEG-RE meeting, Mei told me to attend a meeting to plan for an RPP-128 review of a planned HFIR Beam Room modification. She said that "they" had originally asked for Utrera to do the review, but she told them that I was the designated rep. On 13 December 1999, I attended the meeting. It was followed by a tour of the HFIR Beam Room with Dr. Jaime Fernández-Baca, DRCO of the Solid State (physics) Division (which managed the Beam Room although it was located in the HFIR building). On 17 February 2000, I toured the HFIR Beam Room again with James Weir, the Solid State Beam Room facility manager, to consider whether the "tearout" (prior to modification) required a rad review. I was happy to tell Solid State that the tearout itself did not require an RP-310 review. I did not consider that we wasted our time because future work on the mod would likely need a review and Weir gave me information about the equipment that did prove useful in a future review.

Solid State was very cooperative at this time and later; they were very willing to discuss provisions for dose reduction, etc. In the last several years I was at ORNL, I thought that the "we have nothing to hide" attitude of Solid State contrasted dramatically with RRD's ""you have no right to know anything we don't choose to tell you" attitude. That is why I think the "they" Mei referred to were Perkins and RRD, who ran the reactor and serviced the Beam Room although Solid State managed it.

3047 Work

In late 1999, Geber was the RPP-310 reviewer for a 3047 hot cell window pull. While visiting the area during final preparations, he noticed that part of the plastic tent taped to a wall was pulling loose. Since everybody was so busy, he asked for a roll of tape, moved over a ladder, and retaped the plastic himself. The rad tech, Craft, was angry at this although in a later meeting Geber had with the facility manager, Chem Tech's Phillips, Phillips did not seem perturbed. But later, I was told, Hunt complained to Mlekodaj about Geber's "interference" by resealing the tent. Geber also told me that Mei and he were in a meeting with Phillips and others and Geber made a joking-chiding remark to Phillips about (if memory serves) Phillips' group's not having reviews or not informing AEG promptly about things. Mei later admonished him for being rude to Phillips (i.e., not being nice to the customer). But, Geber protested, Phillips not only was not upset by his remark but actually smiled at it. Geber thought it was because Phillips knew that it was true but was not really embarrassed by his (Phillips') actions.

We always viewed Craft as an excellent rad tech. But he seemed jealous of his turf and like his supervisor J. Slaten, and many other RSS people, was at pains to keep AEG out of any field role. Again, note that I and undoubtedly Geber and Mei had been told by some rad techs and some O&R people that it was not "ALARA" for us to enter rad areas without a really, really good reason -- i.e., our viewing of the work site generally was not worth even the picayune dose we might receive, in their opinion, because our entries "added no value" whatsoever. I agreed with the "need a good reason for entry" as a general principle, but I disagreed that the only reason to enter a rad area was to do hands-on work: as many line people themselves said, tours for the purposes of observation, training, and inspection were important too. I believe that there had been discussion in the past and probably in the Geber incident described above of barring AEG people from entering rad areas without the permission of the complex or group leader.

R&D Values Pamphlet

In January 2000, the ORNL Corporate Fellows Council (of elite researchers) prepared a pamphlet titled "Oak Ridge National Laboratory's Values in the Conduct of Research and Development". This was distributed by the ORNL Ethics office and it stated the following (the underlining is mine).

- "Our values hold that we do not agree to serve as peer reviewers unless we are technically qualified...., that we do not serve as reviewers if there are real or apparent conflicts of interest". "Possible conflicts of interest includeeconomic gain, or protection of the interests of sources of financial support."
- "Our values call for us to....listen carefully when a colleague expresses concerns, and to assist each other in reaching his/her potential however we can, including careful and balanced mentoring of junior colleagues"; "we stand for integrity, sensitivity, and fairness in monitoring and supervisory roles".
- "These values, along with emphasizing the importance of environmental, safety, and health protection, are reflected in a number of ORNL's standard management practices, such as operational imperatives, integrated safety management, quality assurance,...and employee complaint procedures."
- "At ORNL, we value "customer satisfaction", but – if a choice must be made – "our integrity has a higher value; that if a sponsor requests that we edit our reports in ways that depart from what we have concluded is the truth, our scientific integrity has a higher value than sponsor satisfaction."
- "In a time when maintaining one's financial support can be a powerful determinant of the work environment, we need to guard against temptations to shape our conclusions to please users, including omitting findings that might displease a sponsor. Work must be reported honestly and founded in fact."
- "In conducting R&D at ORNL, our values cannot be assured unless they are shared by the staff and embedded in what we do day-to-day, regardless of procedures for management."

Note that this is what the top researchers were telling all the researchers, but analogous statements were not being made to the ES&H staff (e.g., the Hamley presentation above). I found it ironic that the top researchers were emphasizing scientific integrity and truthfulness while safety managers were emphasizing keeping jobs by pleasing and cultivating the customer.

P-AAA Matters

On 11 January 2000, Hamley wrote an E-mail message to various ORNL people dealing with the P-AAA Screening Team's consideration of two ORP occurrence reports, both involving Rad Work Permit violations and both of them incidents that I have described elsewhere. According to Hamley, the four members of the screening team were present for the discussion of these two violations, along with Patton of Chem Tech and two people from the Instrumentation and Controls Division (I&C).

The first event discussed was an I&C californium (neutron) source left out for two days although the associated RWP required it to be put away during business hours. While the I&C worker was said to have understood the requirements regarding use of the source and the lapse was said to be due to the worker's forgetting to put away the source, the screening team found the explanation inconsistent with the worker's having signed in on the wrong RWP and his also having remembered to sign out on it when he left. Also, the ORP and the I&C investigation reports both showed that the source was put back on 22 October 1999, while it was taken out on 20 October per the ORP report but on 21 October per the I&C report. The team voted that this was an "internally-reportable" potential violation of 10 CFR 830 (the "you shall do what you say you will" Order).

The second event was the personnel entry at Building 3047 (managed by Chem Tech) in which a supervisor entered a hot cell but refused to exit when signaled to do so by the rad tech. (This was possibly the Phillips-Craft incident described above.) The RWP used for this entry was a "standing" (routine- or frequent-use) RWP that had no specified dose limits or stay times. The supervisor's story was that he did not recognize the signals from the rad tech to exit and moved to a low-dose-rate area of the cell instead. The stay time that the rad tech had in mind was 5 minutes, while the supervisor ended up staying 12 minutes. Hamley remarked in the message that the stay times and dose limits[?] "were not consistently understood and were not discussed in the pre-job brief[ing]", while noise might also have contributed to the mixed signals. The reporting criterion was given as "100 mrem more than expected", i.e., if only 99 mrem more than expected was received, it would not have to be reported. One problem noted was that the work planning did not include "a consistent understanding" of the work requirements, which were not documented on the RWP. Hamley concluded that he thought that the use of the standing RWP, which was appropriate for stable and routine work, was not appropriate for entry into a hot cell with widely varying

dose rate levels, especially when the stated purpose of the entry was partly "to find the reason for an unexpectedly high dose rate" (per Patton). Hamley noted that Patton proposed "interesting corrective actions", but Hamley did not say what they were.

Three of the four committee members voted the hot cell violation (of 12 October 1999) to be internally reportable under 830; two voted it also to be internally reportable under 835 (Section 501(b), "the degree of control shall be commensurate with the hazards"); one member voted for it to be "NTS-reportable" (to DOE) on the grounds that if it was reportable under the stated criterion, it was ipso facto NTS-reportable. The team then left it only internally reportable "pending review of recent RWP violations". Hamley noted that the screening team, including their legal counsel, "tend to believe that there are recurring issues with work planning, communication of radiological controls to workers, documentation of radiological controls, writing of RWPs (especially scope and conditions of termination such as dose limits and hold points), and review of and authorization of RWPs". There was likely be a recommendation for a "batch" (bundled) NTS report related to RWPs. Finally, he noted, it was not just the RWP itself that made for the difficulty, but "a problem with the process that results in an RWP at the point of use". I saw that he did not mention the similar occurrence that took place just a week after the hot cell violation, i.e., the refusal of a Computational Physics and Engineering Division person to leave a rad area when directed to do so by a rad tech, even though the two incidents, taken together, could be said to be the start of a pattern.

After I read Hamley's message, which Mlekodaj forwarded to Mei and Mei forwarded to us, I wrote to Hamley (12 January 2000) to ask if the P-AAA Screening Team had looked at the 1999 HFIR resin job RWP violation. I pointed out that there were serious work planning deficiencies in that job, including a failure to do obviously necessary dose and dose rate calculations. I gave as my opinion that RRD did not take this seriously and did not adopt any effective corrective actions. I noted too that I thought that RRD's attitude was also shown by the 1999 case of the hot particle in the strainer, where a job that should have been reviewed as per RPP-310 was not. I said that RRD showed a pattern of increasingly little attention being paid to work planning, although I also said that RRD was not as bad as Chem Tech in this respect

Hamley replied that the P-AAA team had looked at the HFIR resin campaign RWP violation, but that "we have not considered the HFIR job since shortly after the event", i.e., they didn't keep an eye on what happened after that, and "the awareness of underlying programmatic weaknesses has been changing and growing over the past 18 months". He said that "The Screen [sic] Team does not investigate events, but we do gain knowledge as more and more similar events cross the table". He said he told the team that the writing of the RWPs alone was not the problem; "the real problems are those of work planning", "which are resulting in observable problems in the RWPs". He added that he would have to check his notes of the meeting at which the team considered the HFIR resin RWP violation in order to say what their conclusion was, but that their conclusions might be different "after seeing multiple similar events". However, he then confused me by saying that one reason the hot cell incident was left as internally reportable rather than NTS-reportable was that the team thought they "have a problem that needs ORNL-wide fixes".

Hamley went on to say (although this did not seem to be related to the discussion at hand) that he saw no reason to have too many signatures on an RWP; he opined that an RWP's potential seven required signatures was too many and that half a day was too long to take to get the seven signatures. He averred that line management pushed for broad-scope RWPs and "shortcuts" in order to minimize the "perceived" (excessive) amount of time needed to generate and sign RWPs. He said that Patton agreed with this last observation and wanted broad-scope RWPs but would be happy with job-specific RWPs if "ORP made the RWP appear quickly after the controls are decided". He thought that it was good for the screening team to hear this from Patton because the perception that the permitting process took too long once the controls were decided "is not limited to Brad [Patton]". He concluded that "Perceptions are not always truth, but it's an area where improvements can possibly be made and we should look at it".

In his message about the screening team, Hamley was notably not spouting all that "please the customer" stuff. But there was a strong element in the screening team's deliberations of deferring to line management and operational needs. If the team really believed that the worker deliberately left the californium source out, then this was a serious violation of the rules. On the other hand, if he did really just forget to put it back (or, e.g., thought a colleague was going to do it and took the blame on himself when the colleague failed to do so), then attention should have been focussed more on the mechanisms of source control in the division. It apparently wasn't the screening team's job to do a thorough investigation or to prescribe corrective actions, but they did have to "investigate" to the degree that they could verify the failure mode, in order to be able to determine if an event was a P-AAA violation or not. It was not clear from the message which side they came down on. Regarding the hot cell entry, as I have noted before, it was not credible that a supervisor of long experience did not understand the signals of a rad tech of long experience and that the two of them did not confer before the entry about the stay time. We had seen before that people had professed not to understand directions or recommendations when they didn't want to carry them out. Here "confusion" was offered as the reason for a violation, which shifted at least half the blame off the Chem Tech supervisor and onto the rad tech; the more distributed the blame, the less accountable any one person or entity can be. The result, in both cases, was that the incident was only internally reportable -- in other words, too trivial to bring to DOE's official notice. I believe that both of these incidents, but especially the latter, would have been taken much more seriously at other sites.

Regarding Hamley's reply, the screening team thought that leaving out a source that read 54 mrem/hr inside a room when others were in adjacent rooms was serious enough to report internally and that at least one member thought that getting 100 mrem over a planned 100(?) mrem in a hot cell was NTS-reportable -- but in the HFIR resin job case, exceeding a stated RWP collective dose limit of 300 mrem (mostly to one person) in a 4 R/hr field, not having reviews for a campaign that would take possibly several man-rem, and flashing an object reading 60 R/hr at contact were not reportable, apparently. Also, the screening team considered the hot cell entry "failure to exit" violation mentioned above, but not the "failure to exit" violation that occurred only a week later, although Hamley said the team wanted to look at any series of related or similar events. What he meant by "awareness of underlying programmatic weaknesses" and the team's "gaining knowledge" was not clear, but it implied that the team did not typically evaluate "minor" events in isolation but waited for a pattern to develop before making a finding.

The quote from Patton about the hassle involved in getting signatures reflected his push for operational convenience on behalf of his powerful division -- even, it seemed, within the P-AAA Screening Committee. For some time before this, RWPs had been generated from the Web and could be signed on the Web, meaning that usually it was not necessary to get a physical signature from everyone on the same piece of paper as in years past. Even when physical signatures were necessary, line management's chafing at having to take half a day to get all the required signatures was pretty thick. Also, seven signatures would have been required only for the higher level reviews, i.e., for operations involving higher dose or higher uncertainty; in that case, why would half a day be too long, especially since high managers could sign for subordinates or even give oral permission in case of a true emergency? From what Hamley and Patton were telling the team, the team might have gotten the idea that half a day for RWP signatures was beyond the norm of rad work around the national DOE complex -- which is not so, I believe.

In all this, I was concerned that the P-AAA screening team might be acting as "enablers" of violations instead of as an oversight entity -- might be providing cover to O&R divisions by thinking up rationales to avoid reporting violations. Hamley's focussing so much on RWPs and how much of an inconvenience they were to O&R divisions seemed to speak volumes about where the team's priorities lay.

ISMS and the ORNL Stop-Work Procedure

Although at ORNL the ability for any worker to stop work if he perceived that conditions were unsafe could theoretically be mentioned in any organization's procedure, including the RPs (the former RPPs),

the official ORNL stop-work procedure was part of the safety and health procedures authored by OSHP (the Office of Safety and Health Protection, their name prior to 1 April 2000). Sometime before 20 January 2000, I read this newly revised procedure and was disturbed by the level of control that line management was given. I then spoke in person with Ann Shirley, head of OSHP, about it. I expressed surprise that according to the new procedure, when work was stopped for a safety reason, the division director of the line organization alone could now authorize restart, without any safety manager concurrence or approval. Shirley said that she didn't like it either, but this was in accordance with the new ISMS philosophy in which the line manager was responsible for safety.

I told her that I didn't think that that statement in the DOE and DNFSB ISMS documents meant that line management had the entire authority for safety decisions such as this. Shirley told me that the new ORNL philosophy was (and she quoted) "**The manager selects the level of risk he wishes to accept and then chooses the controls to correspond**". I again expressed surprise, saying that that statement made risk decisions entirely the province of the line manager, whose bent was toward completion of operational milestones and who therefore might be tempted to cut safety corners to achieve operational goals. Shirley said that that was the way DOE apparently had decreed it should be.

I underlined and bolded the statement above because I regard it as a very bald and disturbing statement of O&R (line management) control of safety functions. I believe that any safety professional worth his salt should also be highly disturbed by any such expression. I was so alarmed by my conversation with Shirley, in fact, that on 20 January 2000, I spoke by telephone with Farid Bamdad of DNFSB-Washington, a DNFSB specialist in ISMS. I told him that I did not understand how the ORNL ISMS interpretation squared with what I read in the DNFSB and DOE ISMS documents. When I quoted the ORNL dictum that "The manager selects the level of risk he wishes to accept and then chooses the controls to correspond", Bamdad exclaimed that "that is not ISMS". He said that the hazard analysis should be done by safety professionals and that they should be involved in determining and implementing controls. He added that the residual risk, after controls were implemented, should be low. Bamdad explained that the DEAR (DOE Acquisition Regulations) clause in DOE contracts stated that a site should use ISMS, i.e., should perform hazard analysis, identify appropriate controls, and implement the controls. List A of the clause contained the requirements, including federal rules such as 10 CFR 835; certain other standards were included as a site-specific List B. He opined that some sites short-circuited the use of List B by having Work Smart Standards, which could be and were approved outside the contracts, and that it seemed to be harder for DNFSB to change the mentality of the national labs than of the sites doing defense work exclusively. But he noted the ISMS implementation problems at the Y-12 site: both Phase I and Phase II of ISMS implementation had gone badly and Y-12 had recently had to retract its Phase II report at a public meeting. He also mentioned that a DNFSB person had reviewed ORNL's Building 3019 fire protection plan and found it quite deficient.

On the same day, I spoke by telephone with Ted Wyka of DOE-Washington, the DOE point person for ISMS. I again stated that I did not understand how the ORNL ISMS interpretation squared with what I read in the DNFSB and DOE ISMS document; I again quoted the ORNL dictum "The manager selects the level of risk he wishes to accept..." to him. Like Bamdad, Wyka spontaneously exclaimed that "that is not what ISMS says". We then discussed hazards analysis and work planning in ISMS.

I felt sure from my discussions with these two ISMS specialists that I was on the right track. I told Mei and Mlekodaj about this, but they just nodded -- what was relevant was not the opinions of distant people in Washington, but the opinions of Chem Tech and its ilk.

2000 RORC Review of HFIR

On 24 January to 2 February 2000, I participated in the annual RORC review of HFIR. Rather than being done annually, RORC comprehensive reviews were now tending to be 18 months or more apart. In the

course of this review we saw that RRD had again postponed consideration of or action on various past RORC recommendations. As part of our review, there was an ISMS presentation by Don Abercrombie, formerly the task leader on the resin job and now an RRD manager. His ISMS presentation was quite superficial and it was clear that Abercrombie was not actually familiar with what ISMS required or with what the RRD ISMS procedure said. He could not answer any of my questions. This was excused by another RRD person as being due to his just having taken over the RRD ISMS responsibility. But all RRD management personnel were supposed to know this stuff already.

HFIR Beryllium Outage Work

At the AEG-RE meeting of 13 September 1999, I pointed out to Utrera, who was to write the HFIR beryllium outage ALARA plan that I was to review, that it should not be a series of disconnected ALARA plans. He replied that he would have a subplan breakdown "to help whoever's going out [to the job] that day" to review rad implications and check the dose breakdown. I told him that I had received no information from RRD's Merryman, whose sole communication to me was that "the (outage) procedures are on the Web". For months after this, I heard little from Utrera, so I would ask him periodically for information. He would say something morose and evasive about RRD's not having decided on this or that operation, etc. On 8 February 2000, I met with him on the RRD ALARA plan, of which he had finally given me a very rough draft. (I think that Mei pressed him to do so after I had not been able to get him to the table.) I pointed out to him that there were many deficiencies in the plan, including a lack of dose estimates and operation descriptions. He said he would work on it. I reported the deficiencies to Mei.

AEG-RE Meeting of 14 February 2000

Mei told us that complex leader Gonzalez was equipping a facility to do gamma characterization, with Plant & Equipment Division support since P&E had some B-25 boxes to characterize and dispose of. Gonzalez actually had a makeshift facility already (not reviewed by us). So we saw that RSS had essentially taken over the gamma spec work, with apparently only newly trained person(s) operating the gamma spec equipment and no trained person overseeing the operator. Mei also noted that the incoming managing contractor for ORNL, UT-B, wanted to lower the overhead; one way that this could be done was to eliminate those supported on overhead, so as Mei noted, "we [AEG] may be in trouble".

UT-Battelle Wins the Contract To Run ORNL

In 1998, DOE had announced that it was going to rebid the contract to run ORNL. This meant that when Lockheed Martin's contract was up, a different company or consortium than Lockheed Martin might be chosen. On 21 January 1999, Battelle Memorial Institute of Columbus, Ohio announced that it was going to bid on the contract. Since Battelle (as Battelle Pacific) had been running Pacific Northwest National Laboratory (PNNL) in Washington for decades and had won the contract to run Brookhaven National Laboratory a year or two earlier, it was obviously a strong contender to take over ORNL.

Battelle, a nonprofit entity, seemed to be a fair-haired boy among DOE contractors and it had a certain reputation as a hard-headed (and, some said, hard-hearted) manager of research work. Characteristic was the statement of Battelle's Dr. William Madia, head of PNNL from August 1994 to near the end of 1999, as he was quoted in the Hanford area newspaper the Tri-City Herald (21 January 1999) when he discussed Battelle's intent to bid: "Oak Ridge is an outstanding science laboratory and we [Battelle] would have access to new technologies and sources of talent. This would augment our reputation for scientific excellence". According to the Herald, he added that Battelle's commercial markets would benefit. I found this sort of statement troubling to hear, as it implied that the resources of ORNL might be used to fatten Battelle's coffers more than, e.g., to advance scientific knowledge or to serve the public interest. In a later chapter, I will discuss at greater length Battelle's statements before and after it won the contract to manage ORNL and their implications. Thus I will note here only that under Madia, 4600 PNNL jobs had been cut to 3500 (as reported on 19 January 1999 in the Herald); that Battelle, over the previous several years, had been trying to increase the fraction of work that PNNL did for governmental entities other than

DOE and, especially, for external business entities; that one promise that UT-B had made was to revitalize ORNL by having new buildings built (apparently at no cost to DOE) by third parties; and that a prime area of cost reduction would be internal procedures and policies.

Regarding the ORNL contract, DOE was insisting in its new bid specifications that the winning contractor assume more liability than in the past. This seems to have been a new trend in DOE contracting, to go along with 835 and other P-AAA-associated rules and regulations. Battelle was willing to assume the extra risk, but other companies were not. When it appeared that Battelle, together with its bid partner, the University of Tennessee (UT), and its bid associate, Oak Ridge Associated Universities (a long-time university consortium based in Oak Ridge), would be the only bidding group, DOE twisted Lockheed Martin's arm to put in a bid. Lockheed Martin management decided to try for it, even though most observers thought that Battelle was a shoo-in. Sims told me that when the ORNL division directors were asked what they thought of making a bid, he advised against it; as I recall, his grounds were that he thought that Battelle would undoubtedly win and that the extra liability was rather open-ended and thus hard to assess. He thought that the time and effort put into preparing the bid would thus just be wasted.

Sure enough, on about 20 October 1999, DOE announced that the Battelle group -- known as UT-Battelle (UT-B) -- had won the bid and would be taking over the management of ORNL as of 1 April 2000. DOE stated that the reason that UT-B had beaten out Lockheed Martin was that UT-B agreed to take on extra liability and the Lockheed Martin team had not (i.e., Lockheed Martin had submitted a bid with some sort of exception to the liability specification, as The Oak Ridger reported on 21 October 1999). In the December 1999 issue of the ORNL newsletter, ORNL's chief finance officer said that the budget was flat or even declining, while there were new cost challenges that could cause ORNL's overhead rate to exceed the 39% projected for the fiscal year. These included an increase in Laboratory-directed R&D funding; the \$2.5 million that DOE had directed ORNL management to use to defray the costs of the Lockheed Martin-to-UT-B transition; the cost of splitting the systems that Y-12 and ORNL had shared to save costs (because of their no longer common manager, Lockheed Martin); the costs of leaving the facilities that ORNL had occupied at Y-12 (as UT-B wanted to do); a DOE-directed increase in fire protection staffing; and the additional funding for technology transfer (that is, the tech transfer program would no longer be funded by royalties from licensing technologies but by overhead and the royalties would go to "funding other projects"). This all amounted to about \$9 million. The officer noted that ORNL management, faced with losing some of its top researchers because pay scales had dropped below a competitive level, had raised the salaries somewhat, but some program managers were complaining that money for facilities and equipment were being used to fund the salary increases. One irony was that when in 1995 DOE Secretary O'Leary had directed all the national labs to reduce their costs a certain amount over five years, ORNL had reduced costs by its share, some \$90 million, in four years instead of five.

As reported by The Oak Ridger (22 December 1999) based on an interview with Madia, DOE allowed UT-B managers to take up residence at ORNL, so to speak, in mid-January 2000 in order to give them time to transition into their roles. Madia began to give interviews about UT-B's plans. His biggest point, from the perspective of future effects on personnel, was that an early UT-B goal was to cut the cost of doing business, which he told The Oak Ridger was the number one issue he heard from the research staff. He claimed that although DOE issued many requirements and restrictions on how research had to be carried out at the national labs, "half are self-inflicted" (i.e., the labs' own rules). He said that it was "way too early to tell" if there would need to be any layoffs, because UT-B had to study the cost structure.

There was an "all-hands" employee briefing meeting in late January and early February 2000 at which the following was stated. (I did not attend, but saw the slides for it on the ORNL Web.) "Simultaneous excellence [is] not only achievable, but essential for success". The three areas in which excellence was to be achieved were Laboratory Operations/ES&H, Science & Technology, and Community Service. The aim in the latter area would be ORNL's being "a trusted and valued community/regional asset". A key

goal of Laboratory Operations/ES&H was to "reduce overhead/indirect costs by 20% over three years" and another was to "build a new research campus for ORNL", with the associated bullets being "SNS [Spallation Neutron Source]", "State funding", "3rd party financing", and "facilities revitalization". I underlined part of the previous sentence to indicate two major points: that UT-B was targeting overhead to achieve cost reductions -- by a whopping 20% over three years, or an average of 7% per year -- and that UT-B also proposed to start a major building program that would inevitably cost a lot of money. (Actually, we were told orally after Battelle took over that the 20% cut was to be taken over two years, not three, and this was also reported in The Oak Ridger on 19 July 2000.)

Kelly Beierschmidt, the head-to-be of the ES&H organization under UT-B, said in the March 2000 issue of the ORNL newsletter that when he reviewed the ES&H programs at ORNL in preparation for his new role, he found the ORNL staff of these programs to be "more competent and more experienced" than any he had worked with at other facilities. However, he was surprised at how many Labwide "policies" there were and said that UT-B would look at making appropriate ones into procedures instead.

Then in an interview in the April 2000 issue of the ORNL newsletter, Madia said that UT-Battelle wanted ORNL to get out of its role as the nation's primary stockpile of U-233 ("some pretty hazardous stuff") because it was a "financial, operational, and risk liability"; he said that they had to "resolve if that's truly an asset for [DOE and ORNL]...Is it an asset for us? That's the question we're asking" because the U-233 made ORNL a Category I nuclear facility and "brings in the Defense Nuclear Facilities Safety Board....What is the value to the Laboratory in view of the risk?" -- as if it were ORNL's choice to keep the U-233 at ORNL, and not DOE's. He also noted that there were some "we vs they" conflicts between the researchers and the support groups.

I Write to Madia and Dossett

When it was announced that UT-B had won the ORNL contract, the then-president of the University of Tennessee, J. Wade Gilley, called it "the greatest day in the history of the University of Tennessee". He exulted about all the benefits to UT, but said not one word (at least not that was quoted in the news media) about what UT would be bringing to the partnership. Based on his past public statements, I had thought that he was probably a nitwit, but now I was convinced of it by his bombastic glee. Shortly after it was announced that UT-B had won the ORNL contract, Madia sent an E-mail message to all ORNL employees, greeting them, expressing the hope that ORNL's future would be "prosperous", and inviting them to send him a response. After some debate with myself, I did so on 21 October 1999. I first identified myself as a member of the ES&H organization. I thanked Madia for his greeting, but said that I wished he had used "productive" instead of "prosperous" because of what I termed the ORNL fixation on the bottom line and the emphasis on operations over ES&H. I said that he might also want to recalibrate the UT folks, quoting a little from Gilley; I pointed out that Gilley's statements suggested that UT viewed ORNL "as a cash cow to be milked for the benefit and glory of UT" and suggested that he might ask UT to make some additional statement about what UT was bringing to the partnership.

I also quoted the statement by Setaro (not giving his name) about a national lab being a national treasure and needing to be run that way -- not being managed so as to squeeze out maximum profit for the contractor, as had been done, in effect, when Lockheed Martin had tried to tie the three sites together too tightly for the contract to be split. I concluded by quoting Setaro as saying that when Alvin Weinberg ran ORNL, he was frequently seen walking between buildings, visiting facilities, etc., and I said that I hoped we got to see Madia as well. (I note here that the only time I ever saw Madia was at a Mexican restaurant in Oak Ridge after I got laid off; as I stated earlier, I saw his predecessor, Alvin Trivelpiece, once at a safety meeting and once getting into a car in an ORNL parking lot. So much for the Weinberg model.)

I wanted to get some information on UT-Battelle's approach to rad protection, but I couldn't think of anybody I knew at PNNL to ask. So I sent a message to three PNNL people whose names were on the list

of those attending the ALARA conference at Hanford that I had attended several months earlier. (In the rad protection field, you can do things like that and people are not offended, but are happy to help. This is one of the positive things about my field.) One of them called me and another, Sharon Dossett, a PNNL rad protection manager, wrote back. She said that having UT-B at ORNL would not lead to more lax controls, but just the opposite. In fact, she observed, the PNNL researchers complained that PNNL was not like a university in terms of oversight. PNNL line managers did not get to "answer-shop", but (she implied) had to use the ES&H people assigned to them. The procedures were clear as far as what was required, so that the assigned people did not have to come up with requirements, only with the "how to" information. It was "a rare occasion" that a line manager chose not to follow the recommendation of the safety expert in the field, especially since the line manager was held responsible if anything went wrong. No one was chastised for stopping work and work did not resume "until the job is reevaluated from a safety perspective". She added that Madia believed that safety was an integral part of work and he would "flow this (attitude) down to the layers of management beneath him".

Dossett said that she would be coming to ORNL within a few months. I found out later that in her visit she would be assessing the ORNL rad protection program and reporting to the incoming Battelle management. When she came, I was able to talk with her for only a few minutes. I wrote her a followup E-mail message saying that I had hoped to speak with her about the concerns that I and others had about the lack of independence of rad protection people at ORNL. I told her one particular example: Mlekodaj's going to Swanks with his concern about Sims' violation of RPP-110 and Swanks' never getting back to him about it. I also told her that I had gone to the Employee Concerns people about this and other issues and how Buttram had talked with Sims and Milan but not with Mlekodaj and Mei. I urged her to speak with Dr. Beierschmidt about this sort of thing. I did not hear back from her. Sims asked for a copy of her report and we all waited with bated breath, but as far as I knew, Sims was never shown a copy of it.

UT-Battelle Takeover Actions

In about February 2000, UT-B announced its future ORNL management. An extremely surprising choice was the new head of the entire safety organization (the soon-to-be-former ORP, OSHP, and ONS organizations): the safety coordinator for the Robotics Division, Carol Scott. Scott had started at ORNL as a secretary without a degree years before and had earned both her bachelor's and master's degrees by going to school part-time. She had, as far as I was ever able to find out, supervised at most only a few people; she had never worked in an institutional safety organization but had always been in a line organization. Now she would head a safety organization of about 200 people, including people who had been professionals in the safety field far longer than she. Her boss would be Dr. Kelly Beierschmitt, the new vice-president and head of the ES&H and radwaste organization. Beierschmitt was a person under 40 years of age who also had earned his top degree by going to school part-time and who had come from the Battelle organization at Pacific Northwest National Laboratory (PNNL).

On 28 February 2000, Sims attended a meeting that Beierschmitt held in advance of UTB's 1 April 2000 takeover of ORNL. A draft organization chart was handed out. Sims made notes on his copy and gave copies to his minions; we saw it at our March 2000 AEG meeting. In Sims' notes, he stated that Beierschmitt said that the appointment of Scott to head the new Occupational Safety Services Division (OSSD) "sends a message to R&D staff that they have an "insider" here [i.e., Scott]" and that "They [the O&R divisions] will now work to downsize their "shadow" [internal] ES&H organizations and buy service from us [ORP, OSHP, and ONS]". He also quoted Beierschmitt as saying that "we [ORP, etc.] need to be a direct service provider, not to be policemen! Madia will hold [O&R] divisions responsible" and as suggesting that "we may want to do a lot of cross-training" in OSSD (underlining mine). Mei gave us what she warned was "a word to the wise": Sims said that he was told that if any OSSD people did not "comply with instructions not to be a policeman", then they did not belong at ORNL.

I had a sinking feeling as I read Sims' notes. Any hopes that I had for an enlightened safety attitude on the part of UT-B were dashed. It was somewhat encouraging to hear about the de-emphasis of the shadow organizations (which were in part the O&R divisions' way of getting as much safety oversight as possible into their own hands), but then it was demoralizing to hear that we in ORP were to be a "service provider" and not a compliance organization ("policemen"). This meant that line management would have not only the responsibility for safety but also the authority for it, just as it had come to be under Lockheed Martin - meaning, again, that the safety people would be told when and how much they were to be involved. There was also the threat of job loss for those who did not conform.

The "cross-training" reference is code for a cost-saving concept: the more broadly trained a person is, the greater variety of things he can do and the fewer people the organization will need to cover the work. If, for example, a rad tech can also be trained as an industrial hygiene tech, then he can work part of the time as one and part as the other. Thus instead of hiring two techs, the organization can hire only one. Or barely enough of each can be hired and then when one discipline runs short, they can borrow someone from the other. Flexibility and versatility are good things, in themselves, but it is not usually true that a "cross-trained" person who does his second job only occasionally performs it as well as someone who does it all the time. Further, during big jobs, more people may be needed than are provided, due to the cross-training savings; this could make for insufficient coverage at critical points during the job. All of this is even more true when one gets beyond the tech level, where the training content could be said to be more or less set, and goes to the professional level, where a lot more judgment is expected to be applied and where the cases that come up may be more complicated. Note that it was never stated what AEG and the other groups should be cross-trained in, but presumably it was in their fellow groups' work. The reason given for cross-training was always "flexibility", but it was clear from the explicit remarks that accompanied any such proposal that the true reason was financial.

The AEG-RE Meeting of 13 March 2000

Mei said (for the umpteenth time) that "We have to sell ourselves" and that we now had to "compete" for the RPP-310 review jobs. She refused to say who in management told her this. She said that there was a "temporary" "Radiation Control Officer" job on the Spallation Neutron Source project for which AEG would be in competition with Don Gregory (of our own section!) and unnamed outside people. I pointed out that "RCO", as the procedures described it, was an operating-facility position, not a during-design-facility position. Mei said that she herself "has to stay in this position" – i.e., in the SNS position she had then (whatever that was) – in order to keep AEG's foot in the door, since SNS was paying for some of her and Gregory's time. She noted yet again that there was more pressure on AEG to charge out.

I had proposed to ask Mlekodaj and Sims if I could organize a ventilation course to be taught by John Kremer of NFS (company) and, if permission was given, to ask via the East Tennessee Chapter of the Health Physics Society's E-mail list if there were people at other area contractor companies who might want to take it too. Mei approved my giving this request to Mlekodaj and Sims. Mei also said that perhaps AEG-RE should learn to run KENO (a computer code) in case AEG had to absorb the criticality function from the former ONS; she reminded us again that cross-training was looked on favorably by upper safety management as a way to do the same work with fewer people. I pointed out that if we absorbed criticality work, we would absorb about five ONS people who already did this. I asked why that would make sense, but I didn't get a straight answer. Mei pointed out that if I offered a proposed optimization course, AEG would be training others who could then compete with us for work in doing optimization (i.e., she discouraged sharing the knowledge). I replied that AEG was only supposed to review optimizations and give advice for producing them (like ALARA plans), that line management had the responsibility for producing the optimization analyses. So for them to do it right, it made sense for us to offer training.

Mei said that she proposed an RP-310 review for Building 2028, where complex leader Gonzalez was to do waste characterization for the Plant & Equipment Division. Utrera was now to help train rad techs to

do the gamma spec work so that P&E could have the quality assurance aspects covered. Geber remarked ironically that several rad techs were already doing gamma spec work, but only now was it perceived that they needed to be trained formally. Mei, looking on the bright side as usual, said that Gonzalez was receptive to having the training, that Utrera was "already helping", and that Gonzalez "would like to use this" to (back-)validate the rad techs' gamma spec work. She told us that since AEG had recently lost a Source Control tech, the new AEG gamma spec backup person would be the new Source Control tech who replaced her. But our new Source Control tech had not yet completed all the rad tech training and had been signed off for only those modules that were immediately needed to do part of the Source Control work. I think our lost Source Control tech saw the handwriting on the wall; she had gone back to RSS to be Gonzalez' main gamma spec person. She had been trained on AEG's dime at an EG&G Ortec course and now we would have to start over again with somebody who hadn't even completed tech training. We had not been allowed to get an experienced, qualified rad tech even though, I believe, some of the RSS techs would have been glad to take the job with us as a temporary or permanent assignment, as a change from their other work. Meanwhile, with Utrera busy with the HFIR outage work, Geber would be the primary AEG gamma spec person and the technical advisor to Gonzalez.

Mei said that she also wanted a AEG-RE person to be a backup for the electronic personnel dosimeters (EPDs), since Utrera was busy at HFIR. After a year and a half of Mei's asking Utrera train her, Geber, and me in setting and computer-managing the EPDs, Utrera was still begging off, saying that he had some documentation to finish, he was going to be out, etc. It was a frequent source of wonderment to Geber and me that she did not just order him to do the training.

Mei urged us to go to ALARA Working Committee meetings -- so as to be able to help write the minutes. She said that our doing so was not for her or Mlekodaj, "but for the good of the ALARA program". That is, although Mlekodaj's secretary was supposed to take notes and write the meeting minutes and although even Mlekodaj himself could have written them since the meetings were recorded, somehow it became Mei's and our duty to turn out the minutes. All three of us peons resisted having to take on this extra chore -- not so much because of the work but because the current secretary, like an earlier one, was not pulling her weight.

More Suggestions from the Suggestion Box

I am not sure when the seven suggestions below appeared -- some may date from as early as 1998, but the last few are clearly from after UT-B won the ORNL contract. I include them all for information.

Suggestion: We have several people with lots of education that don't have a clue when it comes to getting the work done, and we have people with limited education who know exactly how to do their job. If we have people performing at a highly professional level, then we need to reward them whether they have a PhD or an A.S. [Insubstantive response from Hunt]

Suggestion: I agree with you [Hunt] on education and certification being objective, but with Health Physics this is a very limited criteria....In Health Physics all you have to do to be declared an expert is pass a test on theory without demonstrating any actual ability....

Suggestion [countering the first two above]: How much experience does it take to read a meter face?

Hunt: "Reading a meter face" is not considered "professional experience" by the American Board of Health Physics.

Suggestion [also countering the first two above]:Many of us earned our degree while others were out on the lake....All of the qualities that....having an advanced education entail are important considerations to anyone in a position to decide an individual's value....

Hunt: I agree that education is a factor that must be considered, but it always has to be considered in light of the individual's contribution to the overall mission.

Suggestion: A customer is the most important person in any business. A customer is not dependent on us. We are dependent on him. A customer is not an interruption of our work. He is the purpose of it. A customer does us a favor when he comes in. We aren't doing him a favor by waiting on him. A customer is part of our business – not an outsider. A customer is not just money in the cash register. He is a human being with feelings like our own. A customer is a person who comes to us with his needs and wants. It is our job to fill them. A customer deserves the most courteous attention we can give him. He is the lifeblood of this or every business. Without him we would have to close our doors. DON'T EVER FORGET IT!

Hunt: We may get an opportunity to re-emphasize this to everyone in the near future since it appears that our new ESH&Q director [Beierschmitt] is very "customer focused".

Suggestion: Can we be a little more professional on the RPP comments? It doesn't help anyone to trash procedures out for comment. I believe that people in our organization should be able to communicate their views in a professional manner.

Hunt: Good point and good suggestion. [But see Hunt's reply to the next entry]

Suggestion: Of course Jerry [Hunt] could have stopped the trash long ago but chose not to. //Some ideas recently proposed in a precedure [sic] are absurd. //Rad-protection policy should not be set by a procedure writer. He should get by-off [sic] of radical ideas before putting them out for review.

Hunt: Buy-off of new ideas have [sic] been done in many cases by the use of groups of people to write procedures and also by an internal review within ORP. There are 2 fairly entrenched camps within our organization who disagree on how the new RPs should look, and there has been some leniency in these disagreements as long as the comments back and forth were internal to ORP. What is "absurd" or "radical" pretty much depends on which camp you're in.

The first two suggestions in the series above appeared to be sniping at people with degrees and certifications, while the third (which immediately followed the other two) sniped at techs. All three were mean-spirited, but Hunt essentially let the first two pass while giving a non sequitur type of reply to the third. But the fourth was a serious and polite defense of having higher qualifications and especially of the work that goes into them, yet Hunt almost brushed this off. It was hard to know where he stood on the issue with his noncommittal statements. The fifth suggestion, an overwrought paean to The Customer, again brought only an oblique Hunt response, although a telling one in the context. While Hunt said that the sixth suggestion, on being more professional on the RPP comments, was a good one, he did not take this golden opportunity to provide any guidance as to what was professional and what was not. Then in his response to the seventh suggestion (which was a putdown of him), he did not defend himself. I believe this was because one could interpret the suggestion as criticizing him for being patient and forbearing (which he might have taken as a compliment) and because the rest clearly referred to the tech position, i.e., that AEG was out of touch with operational reality ("radical ideas"). In this response he again showed his fence-straddling and he again failed to educate his people. That is, although he noted the existence of two camps, he did not attempt to enlarge upon the nature of the disagreements, how management was resolving them, etc.; he basically said it was all in one's point of view, but did not say what his or rad protection management's view was.

I believe that it suited Hunt's purposes to allow his people to carry on the guerrilla war against AEG. While he surely did not tell them to submit hostile suggestions, etc., he did not discourage it and as shown by some of his suggestion responses, he even encouraged it. It seemed to us to be war by other means.