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NUCLEAR FUEL MANUFACTURING DEPARTMENT

GENERAL ELECTRIC COMPANY • P.O. BOX 780 • WILMINGTON, NORTH CAROLINA 28402

July 16, 1985

Mr. J. Philip Stohr, Director
Division of Radiation Safety & Safeguards
U.S. Nuclear Regulatory Commission
P.O. Box 2203
Atlanta, Georgia 30301

Dear Mr. Stohr:

References: (1) NRC License SNM-1097, Docket 70-1113
(2) NRC Inspection Report 70-1113/85-02 dated 5/16/85, received 5/16/85

Thank you for your letter reporting the results of the inspection conducted at our licensed fuel fabrication plant by Mr. C. M. Hosey of your office on January 7-11, 1985, and March 14, 1985.

We have given much thought to your suggestion that we reconsider the GE responses to the Notices of Violation dated 1/31/85 and 2/7/85. (Reference NRC inspections 70-1113/84-17 and 84-15). We feel that your staff has been laboring under several misconceptions about our contamination control program in the Chemet Lab and we welcome the opportunity to address the subject. Please see Attachment 1 of this letter for the GE response on this subject.

In addition, as requested, General Electric herewith provides certain supplementary information and re-addresses certain NRC concerns about our radiation protection program in light of the alleged violations listed in the inspection report referenced above. Please see Attachment 2 of this letter.

The General Electric reply to the items of alleged noncompliance with NRC requirements in the NRC report 70-1113/85-02 is given in Attachment 3 of this letter.

General Electric also welcomes further discussion with your staff relating to the items in your letter and in our reply to provide further needed clarification of these items.

Very truly yours,

GENERAL ELECTRIC COMPANY

Charles M. Vaughan

Charles M. Vaughan, Manager
Regulatory Compliance
M/C J26

Attachments

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ATTACHMENT 1

CONTAMINATION CONTROL IN THE CHEMET LAB

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1) The Chemet Lab has a very low potential for, and incidence of, significant contamination problems. Airborne uranium is minimal and the stationary air sampler (SAS) located in the busiest corner of the Lab has consistently averaged far less than the MPC for an unrestricted area for the past several years. The floor of the Lab is virtually contamination-free. Based on estimates, over 2,000 exit surveys are made from the controlled area of the Chemet Lab weekly and it is unusual for more than one individual to detect contamination during any given week. At a GE-NRC management meeting in Atlanta on March 13, 1985, we reviewed in detail the primary and confirmatory radiation protection program performance as well as the results of special studies we have conducted. GE asserts that such performance demonstrates the effectiveness of its efforts in contamination control, aimed at maintaining occupational radiation exposures as low are reasonably achievable (ALARA). This success reflects well on the structure of the program, the design of the facilities, and on the conscientiousness of the workers and supervision.

2) GE believes that one of the major reasons its contamination control program has been successful, throughout all uranium operations, is that the primary responsibility for limiting the spread of contamination has been placed on the worker who might generate contamination. Virtually every area in the plant is covered by written instructions to "clean up visible contamination promptly", "clean up spills immediately", or similar requirements. Line management, the Radiation Protection staff, and various internal audit functions hold workers (and their supervisors) accountable to work in such a manner.

The general nuclear safety release/requirement (NSR/R) for the Chemet Lab (NSR/R 6.1.0) states that "... spills of radioactive materials must be cleaned up immediately". This policy has worked well over the past several years in maintaining the Chemet Lab as a relatively contamination-free environment. During the recent intense regulatory scrutiny

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of Chemet Lab operations, some confusion has arisen over what is a "spill". The definition of "spill", as used in procedures, connotes a significant quantity of uranium inadvertently deposited in an undesirable location. Even if a spill would not be a significant radiological hazard, it is important that, if known about, it be cleaned up promptly. The spread of contamination subsequent to a spill not cleaned up will lead to a build-up of general contamination levels in an area. Therefore, failure of an individual to clean up known contamination in an appropriate time and manner works against maintaining occupational exposures ALARA.

On the other hand, the mere presence of a detectable level of contamination is not necessarily evidence of a previous spill or evidence that one was cleaned up improperly. Small amounts of contamination are to be expected in weighing, transferring, opening, and processing samples. Also, lapses in good work practices (e.g. inadvertent touching of equipment or furniture with contaminated gloves) could lead to unknown areas of contamination.

3) Administrative action limits are another area in which there appears to be substantial misunderstanding. As NFMD uses them, action limits are levels of measurable quantities that trigger appropriate corrective action by supervision or management. Exceeding contamination survey action limits requires clean up. In order to effectively carry out the radiological policy of ALARA, contamination action limits are set aggressively low. For example, the action level for skin contamination is set at zero; there is no measurable level of skin contamination below which decontamination is not to be attempted. The action limits for removable surface contamination in the Chemet Lab are set equal to the levels specified in NRC License SNM-1097 for release of articles as contamination-free. Exceeding an action limit set at such a conservative level in a controlled area such as the Lab is to be expected occasionally, and does not signal poor laboratory practice, prevalence of spills, or creation of any threat to the health and safety of laboratory workers. Rather, the Chemet Lab has been an area maintained substantially free from significant contamination, and using such low contamination levels as action limits has been an effective way to accomplish this.

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It should be noted that "administrative action limits" as used at NFMD are fundamentally different from the "Plant Action Limits" or "PALs" used at nuclear power generating stations. Administrative action limits for contamination trigger timely decontamination efforts and, as such, may become goals for the routine "end-of-shift" clean-up typical throughout NFMD. "Plant Action Limits", as used elsewhere, are often used as surrogates for regulatory limits (e.g., personnel exposure), may trigger work restrictions, initiate investigation, and be used to evaluate the performance of first line supervisors. The inspector's use of the term "Plant Action Limit" and its acronym PAL in the 84-15 inspection report may be misleading.

4) Contamination survey strategy is another area of NFMD's radiation safety program which we believe has been subject to unwarranted criticism. It has been NFMD's policy to survey high traffic areas where the greatest potential exists for the spread of contamination, as well as work areas known to be busy. The Radiation Protection staff is well trained and familiar with Chemet Lab operations. Indeed, approximately one in five of the Radiation Protection staff has worked previously in the Chemet Lab. Personnel contamination (exit) surveys and bioassay results (urinalysis and lung counts) for Chemet Lab workers demonstrate that there are no unknown significant areas of contamination in the Lab. Given the long term demonstrated effectiveness of the radiation protection program, it would be a waste of the valuable time of trained Radiation protection technicians, if, indeed, it were even possible, to survey every 100 square centimeter area of every surface that could possibly become contaminated.

Having discussed the four general topics above, we would like to revisit the incident which initiated the Notice of Violation dated February 7, 1985.

As documented in NRC Inspection Report 70-1113/84-15, visible contamination, probably dried uranyl nitrate, was found on the floor in and around some of the equipment in the LEA measurement room. Surveys did exceed the then-existing administrative action limits, with only one of the results in excess of the limit on smearable contamination specified for release of a contamination-free article as specified in SNM-1097. This amount of contamination on the floor is not in and of itself a violation since it is within a controlled area, not in an uncontrolled area or on an item released to the public.

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NFMD nevertheless accepted the violation as it appeared that a spill had been made and had not been cleaned up. However, to place the incident in perspective, it was not radiologically significant that contamination had existed behind a piece of equipment where personnel access was limited, nor was it significant that contamination inside a controlled area had existed in excess of action limits but well below any level denoting a hazard. The only significant aspect was that it appeared that an employee had spilled or had knowledge of a spill of a liquid sample and had not taken the time to clean it up.

Pursuant to your invitation to reconsider our response of 3/7/85, we would like to re-address the inspector's findings starting on page 8 of Inspection Report 70-1113/84-15.

INSPECTOR'S FINDINGS

(1) Of the eighteen measurements performed, six measurements exceeded PAL for fixed contamination level and three measurements exceeded PAL for smearable contamination levels.

NFMD Response: Nothing in NRC regulations or SNM-1097 prohibits contamination in a controlled area. After it was discovered that contamination in excess of action limits existed, it was cleaned up. With the exception of one measurement, the floor tiles would have been acceptable for sale as scrap to the public according to Annex A, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material", as incorporated in Chapter 1 of Part I of SNM-1097. The contamination did not represent a hazard.

(2) The licensee procedures do not provide clear and concise guidelines for prevention of contamination within the LEA measurement room.

NFMD Response: Nothing in NRC regulations or SNM-1097 requires the "prevention of contamination within the LEA measurement room". To do so would be totally unrealistic. In fact, SNM-1097 and GE's radiation protection program recognize that contamination may occur in that area (e.g., it is a controlled area, personnel surveying is required for exit, protective clothing is required for work, and periodic contamination surveys are performed).

(3) The fact that contamination within the room was visible, indicated that the licensee had failed to follow approved procedures which require: (a) activities which produce contamination that exceeds PAL shall not be undertaken; (b) spills must be cleaned up immediately; and (c) equipment must be wiped clean of visible contamination.

NFMD Response: There is nothing in SNM-1097 or in GE procedures which specifies that "activities which produce contamination that exceeds PAL shall not be undertaken". There was apparently a spill, and the equipment and immediate surroundings evidently had not been immediately wiped clean. GE was and is concerned about this finding, as was discussed above in this Attachment (see General, paragraph 2). As discussed above, however, administrative action limits (not "PALs") will occasionally, unavoidably, be exceeded. This is not a cause for concern, and any suggestion that activities which might cause this in some limited area "shall not be undertaken" is simply unworkable.

(4) Weekly radiation monitoring measurements as employed by the facility rad safety program exhibited weakness in the system, in that:

(a) A minimum of five rad safety measurements in the Chemet Laboratory are required and the locations of these measurements are left to the discretion of the measuring technician.

(b) There is no rad safety program employed for measuring fixed levels of contamination in the Chemet Laboratory.

NFMD Response: NFMD denies that there is "weakness in the system". With respect to 4(a), survey records show that there were between 15 and 20 smears taken per week in the Chemet Lab, typically 10-12 from floors in traffic areas with the rest randomly chosen from work areas. As discussed in the general comments, the measurements taken were designed to assess contamination throughout the Lab and to look for contamination in the areas where it would be most subject to spreading. NFMD feels that it is a strength rather than a weakness that the locations for contamination measurements are left to the discretion of technicians who are both

well-trained and knowledgeable of Chemet lab operations. Prescribed survey points would inhibit technicians from checking for contamination wherever they suspect it might exist.

With respect to 4(b), we agree with the observation of the inspector that fixed contamination levels were not being routinely monitored.

Uranium contamination is visible at levels far below that which constitutes a safety hazard either from external exposure or ingestion. An effective contamination control program is implemented in the Chemet Lab by cleaning visible contamination and by using swipes or "smears" to monitor for removable contamination.

Fixed contamination within a controlled area that is not visible would likewise not represent a safety hazard since, by definition, it is non-smearable, i.e., not subject to spreading. Equipment and personnel leaving the Lab are monitored by direct survey methods for contamination prior to movement to a non-controlled area.

Using instruments to measure fixed contamination within the Lab was therefore deemed unnecessary and inappropriate and this requirement was removed from routine monitoring procedures.

(5) In order to reduce the levels of contamination to acceptable PALs, during the inspection the licensee removed and replaced several floor tiles, cleaned equipment and some room walls with caustic cleaner and repainted some wall surfaces and cleaned equipment cabinets.

NFMD Response: After contamination had been found which exceeded administrative action limits, several decontamination methods were utilized. Although it is unclear how this information is intended to support the alleged violation, we are pleased that NRC Inspection Report 70-1113/85-02 (Page 16), states that the activities were acceptable and provides a more balanced perspective that proper clean-up actions were taken.

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CONCLUSION

NFMD did not deny the violation, since the conditions indicated that radioactive material had been spilled and had not been cleaned up immediately. It was this apparent failure of some employee(s) to follow this fundamental aspect of contamination control, and not any radiological hazard or programmatic problem, which concerned us.

As is outlined in NFMD's letter of May 9, 1985, regarding NRC Inspection 70-1113/84-15, the following activities were undertaken. Memos were written and employee meetings were held re-emphasizing the importance of employees cleaning up their own spills. The applicable procedures were revised to incorporate guidance for prevention of contamination in the LEA measurement room. There was no evidence to indicate that the spill was indicative of a generic problem.

Because the inspection report alleged that an insufficient number of places were being monitored, NFMD instituted a period of intensive measurement including increasing the number of routine smears from 10 to over 40 locations and, also, increasing the survey frequency from once a week to three times a week in order to assess each shift's performance. The pattern of low levels of contamination shown by the over 1,000 "extra" surveys is not significantly different than the pattern determined by the earlier surveys. NFMD anticipates returning to the former contamination survey program once documentation of the increased surveys is completed.

The simple fact that the NRC perceived that there was a problem in the Chemet Lab itself required some action. Therefore, as outlined in our letter of May 9, 1985, NFMD instituted an independent self-monitoring program for surface contamination to help employees judge the effectiveness of their routine clean up activities.

Another situation perceived as a problem by the NRC was the frequency with which the administrative action limit was being exceeded. As a result of this perception, NFMD raised the administrative action limit for the Chemet Lab, formerly 220 disintegrations per minute of smearable contamination per 100 cm^2 of surface area, to its current value of 1000 dpm/100 cm^2, in recognition of the fact that the original action limit was set unrealistically low. The frequency with which the old action-initiating limit was exceeded resulted in misdirection of effort,

and in an erroneous perception that this frequency indicated a control problem; whereas what it really indicated was an unduly conservative, self-imposed limit.

Finally, the inspector had pointed out that fixed levels of contamination were not routinely being assessed. As is addressed above, NFMD re-examined the need for such a facet of the contamination control program, decided the measurement was superfluous inside a controlled area such as the Chemet Lab, and eliminated it from written procedures.

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ATTACHMENT 2

NEED FOR FURTHER ACTIONS
TO IMPROVE THE EFFECTIVENESS
OF THE GE-NFMD RADIATION SAFETY PROGRAM

Pursuant to your invitation to reconsider our responses dated March 1 and April 5, 1985, General Electric Company has evaluated the need for further actions to improve the effectiveness of the radiation protection program in the Chemet Lab.

GE is concerned that the wholly erroneous perception exists on the part of some that the radiation protection program in force in the Chemet Lab is seriously flawed. This perception has arisen from numerous allegations to that effect made by a former employee in the Lab, and from the extensive resources devoted to an investigation of those allegations undertaken by the NRC.

We realize that Region II Inspection & Enforcement must investigate all allegations relating to licensees fairly and thoroughly. However, judging from the recent inspection reports, the vast majority of the allegations which have been investigated by the NRC are unsubstantiated. As you continue to investigate, we hope that further unsubstantiated allegations will increase rather than diminish credibility in our radiation protection program. In any event, GE sees no need for actions above and beyond those outlined in our letter of April 5, 1985. Information supporting this conclusion is presented in the discussion below.

GE did not contest the Notice of Violation regarding contamination control which was given in NRC Inspection Report 70-1113/84-15 dated 2/7/85, but as explained in Attachment 1, GE feels that the incident was isolated and not a programmatic problem. The problem was corrected and recurrence has not been noted.

GE has denied all other alleged violations which relate to the Chemet Lab as listed in NRC inspection reports dated 1/31/85 (84-17), 2/7/85 (84-15) and 5/16/85 (85-02). With respect to the violation alleging failure to use suitable measurements of concentrations in air, we would like to provide the following additional information.

During the week beginning 3/11/85, two additional stationary air samplers (SASs) were installed in the Chemet Wet Lab. Thus,

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counting the two samplers installed during December 1984, four additional SASs are measuring air concentrations. The weekly average airborne concentration for the original sampler and for the four additional SASs are presented below. Sampler 400 is the original sampler, Samplers 405 and 405 were installed December 1984, and Samplers 406 and 407 were installed week of 3/11/85. The results are rounded to the nearest 1% of MPC and are based on over 1200 additional air sampler measurements.

With the exception of four data points in the weeks of 6/10/85 and 6/24/85, the results of every one of the additional SASs are less than or equal to those obtained by the original sampler. The four results which are very slightly higher are attributed to statistical fluctuations.

Particularly in view of these confirmatory data, GE maintains that the measurement of air concentrations at a SAS location directly above the corner of the laboratory with the highest workload (i.e., sample thoughput), is a suitable measurement for meeting the requirements of 10 CFR 20 in an area where the concentrations are low. Specifically, the concentration in the isotopic area as measured by SAS #400 has not exceeded the MPC for uranium in an unrestricted area (i.e., 3×10^{-12} µCi/cc) for nearly three years.

WEEKLY AIR SAMPLER AVERAGES
($\times 10^{-11}$ µCi/cc)

1985 Week Beginning	Air Sampler #400	#404	#405	#406	#407
3/11	0.1	0.0	0.1	0.0	0.0
3/18	0.1	0.0	0.0	0.0	0.0
3/25	0.1	0.0	0.0	0.0	0.0
4/01	0.1	0.0	0.0	0.0	0.0
4/08	0.1	0.0	0.0	0.0	0.0
4/15	0.1	0.0	0.0	0.0	0.0
4/22	0.1	0.0	0.0	0.0	0.1
4/29	0.1	0.0	0.0	0.1	0.1
5/06	0.2	0.1	0.1	0.0	0.1
5/13	0.1	0.0	0.0	0.0	0.1
5/20	0.1	0.0	0.0	0.0	0.1
5/27	0.1	0.1	0.1	0.0	0.1
6/03	0.1	0.1	0.0	0.0	0.1
6/10	0.0	0.1	0.1	0.0	0.1
6/17	0.1	0.1	0.1	0.0	0.1
6/24	0.0	0.0	0.0	0.0	0.1

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The GE response to the alleged violations in the NRC inspection report dated 5/16/85 (85-02), is given in Attachment 3.

Following review of the GE responses relative to the Chemet Lab and the additional information about air sampling presented in this attachment, GE feels that there is no basis for continuing NRC concern about our radiation protection program.

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ATTACHMENT 3
(REFERENCE NRC INSPECTION REPORT 70-1113/85-02)

The information provided below is in response to the four items of alleged non-compliance identified in Enclosure 1 of inspection report 70-1113/85-02 dated 5/16/85.

1. 10 CFR 71.5 requires each licensee who transports licensed material outside the confines of its plant or who delivers licensed material to a carrier for transport to comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation contained in 49 CFR Parts 170 through 189.

   49 CFR 172.403 requires that each package of radioactive material be labeled with RADIOACTIVE-YELLOW II labels, unless excepted from labeling by 40 CFR 173.421 through 173.425, if the radiation level at the package surface is greater than 0.5 mrem/hour and less than 50 mrem/hour.

   Contrary to the above, the labeling requirements were not met in that on January 3, 1985, twelve BU-7 packages containing uranium powder were surveyed by NRC inspectors at Oakland, California and found to have surface radiation levels between 0.8 and 1.2 mrem/hour. The drums were part of a shipment from the licensee's facility for export to a foreign company. The drums were improperly labeled with RADIOACTIVE-WHITE I labels. The exceptions of 49 CFR 173.421-425 did not apply.

   This is a Severity Level IV violation (Supplement V).

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General Electric denies this violation.

The twelve BU-7 drums in question were part of a 281 container shipment of low-enriched uranium powder sent to Japan Nuclear Fuel Company on 12/28/84. Based on contact radiation readings taken just prior to shipment, 266 drums were labeled with Yellow II labels and 15 with White I labels in accordance with DOT regulations. Per standard practice, the containers were placed four to a pallet and banded together, White I labelled drums intermixed with Yellow II labelled containers.

GE denies that 12 drums bearing White I labels were improperly labeled at the time of shipment. Radiation readings were obtained and documented using approved procedures, instrumentation and techniques by qualified, trained Radiation Protection Technicians. Neither the GE nor the NRC review has indicated any violation or weakness in the program.

A similar occurrence was investigated during NRC inspection 70-1113/84-04 concerning a shipment of fuel made on 2/8/84. Both the NRC and GE thoroughly reviewed the survey techniques and labeling procedures to resolve the apparent discrepancy between GE's readings and those of the receiving utility. As the NRC inspector pointed out, two different types of survey instruments (ion chamber versus GM tube) could be used and characteristics of the instrument such as detector size, wall thickness of detector, distance of detector from the source, ease of reading small changes on instrument's analog meter, as well as survey techniques and calibration methods for the instrument, could account for the small differences in the two survey results. The inspector found no evidence which would indicate that the surveys performed by the licensee were in error and acknowledged that normally expected differences in instrument response could create these measurement differences. GE's investigation likewise revealed no weakness in the program.

Since the regulations do not specify a type of survey meter and there is no universally accepted model, slight variations are not unexpected in contact dose rate readings. These variations, coupled with differences in survey personnel, techniques, locations and time account for the observed differences.

However, because of the confusion these differences are creating, GE has initiated independent actions to minimize the chances of future discrepancies. We are now using the same type survey meter

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(GM tube) employed by NRC Region V personnel to obtain contact dose rate readings. Even though it is not obvious a problem existed, this change was predicated by prudent business practice. We also know that this change will not eliminate normally expected measurement differences, but it is expected to minimize them.

2. 10 CFR 19.12 requires all individuals working in or frequenting any portion of a restricted area be instructed in specific subjects including their responsibility to report promptly to the licensee any condition which may lead to or cause a violation of Commission regulations and licenses or unnecessary exposure to radiation or to radioactive material and be advised as to the radiation exposure reports which workers may request pursuant to 10 CFR 19.13.

   Contrary to the above, the requirement to instruct workers was not met in that on January 9, 1985, individuals attending an initial controlled area worker training class were not instructed in the specific subjects listed above.

   This is a Severity Level IV violation (Supplement V).

GE denies this violation. During the 6/9/85 session of nuclear safety training NS 203, the instructor provided each individual with a personal copy of 10 CFR 19. In addition, the following subjects were covered orally:

(1) The right of an individual to report conditions, which he feels are unsafe, to the NRC,

(2) The GE policy that states the company prefers that unsafe conditions be reported to an individual's supervisor, the Radiation Protection staff, or Nuclear Safety Engineering, and

(3) That workers interested in their radiation exposure histories should contact Nuclear Safety Engineering.

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On the written test, one question addressed records availability. Another question addressed reporting of unsafe conditions. All four of the class members answered both of these questions correctly. Thus, in both cases, instruction was provided by written material complemented by relevant oral supplementation.

The written handout material (including 10 CFR 19) specifically outlined the radiation exposure reports availability. The instructor provided orally the "how to" information by instructing workers to contact Nuclear Safety Engineering. The handout material (10 CFR 19) describes to workers "their responsibility to report promptly to the licensee any condition which may lead to or cause a violation of Commission regulations", etc. The instructor, in essence, interpreted and supplemented the written material by discussing the right of the individual to report "conditions that [they] feel are unsafe" to the NRC or preferably, that individuals should report unsafe conditions to their supervisors, the Radiation Protection staff, or the Nuclear Safety Engineering staff.

In addition, the reporting and exposure report availability information is included on NRC Form 3, clearly posted pursuant to 10 CFR 19.11 at various locations throughout the plant site.

Accordingly, the worker training program in nuclear safety at NFMD incorporates the required elements, including the two alleged to have been absent only from the oral presentation on a particular day.

3. License Condition 9 of Special Nuclear Material License No. SNM-1097 requires that licensed material be used in accordance with statements, representations, and conditions of Part I of the Licensee's Application dated May 14 and June 20, September 24, October 23, November 12, November 20, December 3, and December 19, 1984. Part I, Section 2.7 requires that fissile material processing be conducted in accordance with properly issued procedures or instructions. The general radiation protection requirements for the CHEMET Lab required by Part 1, Section 3, are implemented, in part, through the licensee's Nuclear Safety Release/Requirement System. Part 1, Section 3.2.6.4, specifies that the minimum clothing requirement for entry into the CHEMET Lab is a lab coat and safety glasses.

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Contrary to the above, the requirements of the license condition were not met in that:

a. On January 8, 9, and 10, 1985, three separate individuals were observed working in the Chemet Laboratory not wearing lab coats properly as required by Part 1, Section 3.2.4.4. The lab coats were open.

b. On January 7, 1985, Chemet Laboratory radioactive waste was not being disposed of properly in containers which were labeled "Radioactive Material" or "Contaminated Waste" as required by Nuclear Safety Release/Requirement 6.1.0.

c. On January 10, 1985, a worker in the rare earth preparations area of the spectrographic lab was observed not transferring loose uranium powder properly within a hood as required by Nuclear Safety Release/Requirement 6.1.7.14, 6.1.7.29, and 6.1.7.41.

This is a Severity Level IV violation (Supplement IV).

GE denies this violation in its three separate parts.

Part A - Lab Coats

GE does not deny the observations of the inspector relevant to this Notice of Violation. GE does take issue with the inspector's opinion that unbuttoned lab coats are an impropriety leading to a radiological hazard and/or a violation of license conditions, regulations, or procedures. Contamination of individual's clothing or skin for workers in the Chemet Lab has rarely been a problem. For example, a 1984 survey comprising 131 checks of Chemet Laboratory personnel at their work stations, i.e., before they had cleaned up prior to exiting the Lab, showed only 3 with measurable trace contamination (500-600 dpm). Therefore, despite the inspector's observations, protective clothing was being worn commensurate with the potential for contamination.

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Nevertheless, without admitting that the observation represented a violation of applicable regulations, GE has re-emphasized the need for and proper use of appropriate protective clothing to Laboratory personnel and initiated random checks within work areas for properly buttoned coats.

Part B - Waste Disposal

GE does not deny the observation of the inspector that radioactive waste was being accumulated within the Chemet Lab in containers that did not have the words "Contaminated Waste" or "Radioactive Materials" emblazoned on them. GE does deny that the waste was being disposed of improperly. The yellow polyethylene bags used to accumulate waste are used for waste throughout the controlled areas. No other type of waste accumulation containers are used in the Chemet Lab. All solid waste generated in the controlled parts of the Chemet Lab is disposed of as contaminated waste. GE has amended NSR/R 6.1.0 to remove the unnecessary statement that "containers lined with polyethylene bags be labeled with a 'Radioactive Materials' or 'Contaminated Waste' sign".

Part C - Sample Weighing

GE does not deny that the inspector observed employees weighing small quantities of uranium powder on an analytical balance outside of a vented hood. This practice has been standard operating procedure for years and is essential to Chemet Lab operations. Commercially available analytical balances (weighing to 0.0001 grams) will not give accurate results when subjected to the vibrations and air flows typical of a chemical exhaust hood with at least 80 LFPM minimum inward air flow per license requirements. Analytical balances in the Chemet Lab are installed on marble balance tables to minimize vibrations. Some balances are surrounded by windscreens to reduce drafts that will disturb delicate measurements.

When NSR/R 6.2.7.14 was written to designate where "processing" of powder samples should occur, it was meant to apply to crushing, grinding, dissolving, etc., or other actions which might lead to airborne uranium. Weighing small amounts of powder in the vibration-free, draft-free environment of an analytical balance is not "processing" within the meaning of that term in the NSR/R in that it is not an operation with a realistic possibility of causing any

appreciable generation of airborne uranium. Bioassay results confirm that workers are not being exposed to significant levels of airborne uranium.

GE therefore denies that the practices which the inspector observed were either a hazard or a violation of applicable procedures.

4. 10 CFR 19.11(d) requires that documents, notices, or forms posted pursuant to that section shall appear in a sufficient number of places to permit individuals engaged in licensed activities to observe them on the way to or from any particular licensed activity location to which the document applies.

   Contrary to the above, the posting requirements were not met in that on January 11, 1985, the south gate which provides access to the controlled area was not posted with the required documents, notices or forms.

   This is a Severity Level V violation (Supplement IV).

GE admits that the south gate providing access to the fenced controlled access area was not posted per 10 CFR 19.11.

As opposed to the main personnel access at the Emergency Control Center (ECC) where the required notices are posted, the south gate was used for vehicular access. Posting this entrance was not initially believed to be necessary. As the inspector pointed out, a recent GE internal audit had identified this subject as one needing corrective action. Elimination of the south gate was being considered at the time of the NRC inspection.

Subsequent to the inspection, the south access gate was eliminated, so that the need for posting no longer exists.

Full compliance has been achieved.