UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

April 13, 2000

L 7 | 7C

SUBJECT: ALLEGATION NO. RIII-99-A-0029

Dear L 7 | 7C

This is in reference to our letter to you dated September 3, 1999, which indicated that we had completed our review of several of your initial concerns, and that several additional concerns remained under NRC review. In addition, during investigation of your concern 1 related to employment discrimination, NRC staff identified an additional 14 concerns (concerns 24-37). The enclosure to this letter provides a listing of each of your remaining concerns, our review of those concerns, and our conclusions.

Thank you for informing us of your concerns. We take our safety responsibilities to the public very seriously and appreciate your willingness to bring these issues to our attention. If you disagree with our conclusion or wish to provide additional information, please contact the Region III Office Allegation Coordinators by writing to the U.S. Nuclear Regulatory Commission, Region III, at 801 Warrenville Road, Suite 225, Lisle, Illinois 60532-4351, or calling the NRC Region III switchboard toll free at (800) 522-3025 or the NRC Safety Hotline at (800) 695-7403. Your cooperation is appreciated.

Sincerely,

Cynthia D. Pederson, Director
Division of Nuclear Materials Safety

Enclosure: As stated

cc w/enclosure: AMS File No. RIII-99-A-0029

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

MM-3

ENCLOSURE **AMS No. RIII-99-A-0029**

Concern 1:
You believe you were discriminated against (fired) after raising safety concerns to your management and to the NRC. Several examples of the safety concerns you raised were provided.

NRC Conclusion:
The NRC Office of Investigations conducted an investigation of this concern. Based on the evidence developed during the investigation and a review of this evidence, the NRC Office of Investigations, Region III, did not substantiate that you had been discriminated against as a result of raising safety concerns at ABB Combustion Engineering, Inc. A copy of the synopsis of the report of investigation is included as enclosure 2.

Concern 6:
The stack monitoring system was only being checked once a week and it should have been checked more frequently because ventilation motors were frequently found "burnt-out."

NRC Conclusion:
NRC staff followed up on this concern through an independent inspection.

The inspectors reviewed Health Physics (HP) Procedure 301.0, "Exhaust Stack Sampling," which defined the sampling practices used to evaluate the uranium concentration in the gaseous effluents from stack emissions. The inspectors reviewed several years of monthly sample results and noted no significant changes in monthly emissions except when the plant was in production versus not in production, as expected.

A licensee representative stated that when an air sampling pump was found inoperable, the plant staff would assign the average weekly emission quantity from the previous month to the week the pump was identified as defective. However, this method was not included in the current HP procedure. As a follow-up, the inspectors noted that the plant staff were finalizing a revision to the procedure which addressed the method used to assign weekly emission quantities when sample equipment was determined to be defective. The method described conformed with standard industry practice and met the requirements in 10 CFR 20 which are based on averaging releases on annual basis.

The inspectors reviewed the plant staff's maintenance practice for repairing defective stack emission equipment. The plant staff continuously sampled 19 stacks. The sampling equipment included an air pump to draw the discharging air from the stack. In discussions with the inspectors, the plant staff explained that the emission stack sampling component with the highest failure rate was the air pump. To expedite defective pump replacement, the plant staff had four spare pumps and had ordered four additional new pumps. The inspectors determined that defective pumps were replaced by health physics and the pumps were repaired by maintenance. The inspectors identified no adverse trend in the pump failure rate, and maintenance records indicated that pumps required replacement every 2 to 3 years.

Based on these findings, NRC staff concluded that the concern was partially substantiated in that samples were taken once a week. However, this frequency of sampling met the requirements, and plant staff adequately evaluated and responded to exhaust stack emission equipment failures. The NRC plans no further action and considers this matter closed.

Concern 8:
You discovered that the production operators were not following procedures. You also discovered that production supervisors would on occasion tell the operators to violate the procedure if it were necessary to get the production out. Most operators were guilty of this violation. Operators in the ERBIA and the Pellet Plant would fill out the batch records ahead of time, even before the batch had been run and cans of uranium were stacked on top of each other. Supervisors would tell their staff to not listen to the health physics (HP) staff. You complained about these issues to Kevin Funke, Enos Criddle, and Bill Sharkey.

NRC Conclusion:
NRC staff followed up on this concern through an independent inspection.

The inspector observed that the plant staff conducted operations in accordance with the required criticality and radiation protection procedures. Procedure manuals were observed at numerous locations throughout the plant and minor updates (Temporary Shop Instructions) were posted near the applicable work location. Check sheets and inventory logs used with specific procedures were completed and available in the immediate area of the operation. Specifically, the inspector reviewed ongoing production activities in the ERBIA and Pellet Plants and observed that the operators were accurately documenting the required information on their specific batch records.

At the time of the inspection the inspector did not observe any cans of uranium stacked on top of each other. The inspector discussed with several operators applicable special nuclear material (SNM) criticality controls for their assigned areas. The ERBIA and Pellet Plant operators were cognizant of spacing and stacking requirements for SNM powder cans, pellet boats, and pellet pans; what areas were approved for the storage of vacuum cleaners; the limitations on the type of contaminated waste that could be discarded in contaminated trash containers and moderation controls for SNM powder stored in secured hoppers. In the red room, operators were knowledgeable of SNM spacing requirements and mass limitations for contaminated high efficiency particulate air (HEPA) filters, SNM mass limits, criticality controls and chemical safety issues associated with equipment operations. The inspector noted that the selected operations observed were conducted in accordance with the licensee's procedures and in a safe manner.

The inspector observed the HP staff perform routine contamination surveys and the actions taken to address elevated contaminated areas. The inspector accompanied two HP technicians during a special survey of the Pellet Plant, ERBIA Plant, and Red Room. Survey results identified several specific locations which required decontamination in accordance with the licensee's procedural requirements but were below specified action limits of the licensee. The inspector noted that the plant staff decontaminated the elevated areas or secured the areas until decontamination could be completed. Oxide and Pellet Plant supervisors explained that at times they believed some of the remote areas surveyed around equipment by HP did not represent a significant safety issue when they find isolated areas of contamination. However, they stated that HP would stop an operation when survey results justified the action.

The inspector interviewed three operators and discussed the practice for documenting batch records in the ERBIA and Pellet Plant. The operators explained that recording the quantity of product produced was recorded after the product run was finished. In addition, several operators explained that to the best of their knowledge this practice had always been followed. The operators indicated that customer representatives were continuously reviewing their processes for quality control issues and believed they would have identified documentation errors had an operator completed a batch run record before the batch was finished.

The inspector determined that operations were performed in accordance with applicable procedures and found no indication that the batch records were falsified or that production staff would not follow HP requirements when issues are brought to their attention. Therefore, this concern was not substantiated. The NRC plans no further action and considers this matter closed.

Concern 9:
Operators would not turn on their lapel monitors (air samplers) during their work hours which resulted in low lapel sample results and caused the plant's yearly dose record to be faulty. The yearly record for the last 5 ½ years should be a lot higher.

NRC Conclusion:
The NRC staff reviewed this concern through an independent inspection.

This concern was substantiated. The inspector reviewed previous NRC inspection reports that involved activities associated with the use of lapel air samplers. On October 21, 1998, the NRC issued the licensee a violation because management failed to ensure that plant staff had lapel air samplers turned on while uranium handling operations were in progress. This violation was documented in NRC Inspection Report 070-00036/98004(DNMS).

As a follow up to the lapel air sample violation, NRC Report 070-00036/99002(DNMS) documented that the inspector interviewed plant staff and observed that workers were properly wearing the lapel air samplers per HP Procedure No. 303, "Lapel Air Sampling." The inspector reviewed the lapel air sampling program, and observed and interviewed operations staff at various work stations to evaluate the effectiveness of the monitoring program. The inspector observed that workers were properly wearing the lapel air samplers per HP Procedure No. 303. The sample heads of the lapel air samplers were clipped to the workers' lapels on the outside of smocks or coveralls, were properly positioned in the breathing zone, and were turned on. The workers appeared to understand their responsibilities for operation of the samplers. Each worker was assigned a sampler. The lapel air sampler calibration period was 6 months and the samplers observed were within the calibration period.

The inspector reviewed the collective site dose between 1994 and 1999 with the Nuclear Regulatory Assurance (NRA) Manager. The inspectors noted that the collective dose decreased from 168 rem in 1994 to 114 rem in 1997 and then increased to 138 rem in 1998 and 142 rem in 1999. The NRA Manager stated that several factors may have contributed to the drop in site collective dose in 1997, which included operators not turning on their lapel air samplers, less man hours worked, and the processing of higher uranium 235 enriched

products. Plant staff ensuring that their lapel air monitors were operating when working in the plant could have contributed to the increase in collective doses in 1998 and 1999.

Since inspection subsequent to the 1998 violation identified that plant staff were operating the lapel air samplers in accordance with their procedural requirements, the NRC plans no actions in addition to the violation already issued, and considers this matter closed.

Concern 10
Operators were not being truthful in signing out the lapel monitors. This caused a lot of trouble because the HP technicians were not able to assign the dose to anyone. A lot of high samples were unassignable. This was a problem because the people were not being assigned their proper dose and the yearly dose records that the NRC gets were not accurate. Over a 2 year period, we accumulated a large box of unassignable samples. There were several hundred samples in question. You complained about this to management. Nothing was ever done until you reported it to an NRC auditor. The licensee started working on the situation the very next day. But what about all of those unassignable samples that we had to ultimately throw away?

NRC Conclusion:
The NRC staff followed up on this concern through an independent inspection.

The inspectors reviewed the lapel air sampling program, and observed and interviewed operations' staff at various work stations to evaluate the effectiveness of the monitoring program.

The inspectors observed that workers were properly wearing the lapel air monitors per HP Procedure No. 303, "Lapel Air Sampling." The sample heads of the lapel air samplers were clipped to the workers' lapels on the outside of the smocks or coveralls, were properly positioned in the breathing zone, and were turned on. The workers appeared to understand their responsibilities for operation of the samplers. Each worker was assigned a sampler. Sign-out sheets were reviewed and no discrepancies were noted. The lapel air sampler calibration period was 6 months and the samplers observed were within the calibration period.

Discussions with plant HP management indicated that operators were assigned an inhalation dose on a shift basis. If an operator's lapel sample was lost, misplaced, or otherwise unusable (do to dropping the lapel sampler when bending over, for example), the operator would be assigned a dose for that shift based on his or her average dose from the last week of operations. (This approach is similar to approved methodology for calculating doses for lost film badges or dosimeters.) The HP management indicated that currently, approximately one to two lapel-sample results had to be calculated for missing samples per week. Compared to the several hundred samples taken on a weekly basis, this loss or unassigned sample rate appeared reasonable. Thus, the inspectors concluded that although some operators may periodically not be assigned the exact dose for their shift, on average the appropriate dose would be assigned and gross differences with the annual total effective dose would not be expected.

The previous method for assigning dose to an individual who did not have an actual dose record for a given shift because of sampler malfunction or operator carelessness was similar to the current method. The average dose for that week was determined for that individual and that dose was assigned for the missing day (shift). Since a statistically derived dose was assigned to workers when there was no actual dose data available, there would be little effect on the annual total effective dose.

Based on these findings, NRC staff concluded that the plant staff appeared to be using the lapel air monitors properly. Based on current observations of the operation of the lapel air sampling program and discussions with a licensee representative concerning previous dose assignment practices, the inspectors could not substantiate this concern. The NRC plans no further actions and considers this matter closed.

Concern 11:
The CI was concerned that certain HP technicians did not follow the HP procedures. Nothing was ever done.

NRC Conclusion:
NRC staff reviewed this concern through an independent inspection.

The inspectors reviewed selected portions of the Radiation Protection Quality Assurance (QA) program. Operation of the alpha/beta proportional counters was reviewed. Instrument calibration, voltage plateau testing, and the efficiency calculations were performed as required and the instruments were within the calibration period. No problems were noted.

The inspectors reviewed and observed the performance of routine contamination smear surveys in the plant during the course of the inspection. During facility tours and accompaniments with HP technicians, the inspectors noted that the controlled area was properly posted, as were areas requiring postings for airborne radioactivity. Health physics technicians were observed performing routine duties, selected QA records related to instrumentation were reviewed, and a HP technician was interviewed. The inspectors did not identify procedural adherence problems and noted no concerns with the conduct of the radiation protection activities observed.

Therefore, the NRC staff concluded that the Implementation of the Radiation Protection Program was in accordance with the license and facility procedures. The inspectors could not substantiate this concern based on the observations made during the inspection. The NRC plans no further follow up and considers this matter closed.

Concern 12:
You were concerned about the lack of a portal monitor for personnel to go through before exiting the plant. Management said it was too costly. They had friskers in place in the locker rooms. However, very few of the operators used them.

NRC Conclusion:
NRC staff reviewed this concern during an independent inspection.

The licensee was not required to have a portal monitor. However, based on our conclusion regarding your concern 26 related to individuals leaving the plant with uranium on their hands, hair, clothing, and shoes, we did substantiate that workers failed to monitor themselves for contamination when leaving the controlled area. See our conclusion regarding concern 26 for our follow up actions related to this issue.

The NRC partially substantiated this concern, in that a portal monitor was not available at the plant exit, and workers were observed to not complete required personal surveys when exiting a controlled area. However, no violations related to the use of a portal monitor were identified, as a portal monitor is not required. Other than the actions initiated to address a violation identified for failure of workers to monitor their hands, as discussed in our conclusion to concern 26, the NRC plans no further action and considers this matter closed.

Concern 13:
You were concerned about employees carrying books, magazines, and newspapers to the contaminated side. When they were finished with the books, they took them back over on the clean side without frisking them. This was reported to management. Nothing was ever done about it.

NRC Conclusion:
NRC staff reviewed this concern through an independent inspection.

Activities in the change room were observed while workers were entering and leaving the restricted area. No extraneous material, such as newspapers, was observed being taken into or out of the restricted area. Radiological survey instrumentation that was used for frisking prior to exiting the plant restricted area was appropriately calibrated. Observations of employee practices for performing self-monitoring indicated that the employees were properly trained in the use of the radiation detection equipment. A licensee representative explained to the inspectors what could be taken into the contaminated area.

The inspectors discussed frisking requirements when exiting a contamination area with operators and management. In discussions with the inspectors, selected operators explained the appropriate method for surveying articles for contamination prior to exiting the contaminated area. In addition, these operators stated that health physics procedures had always required articles to be surveyed prior to removal and were unaware of any past repetitive deficiencies in this area. Management stated that there had been a few cases were operators were observed not thoroughly surveying an article prior to removal from a contamination area and the issue was addressed with the individuals when identified.

This concern was substantiated based upon the observations made and discussion with operators and management during the inspection. Since the licensee promptly addressed the instances when this occurred, the NRC plans no further action and considers this matter closed.

Concern 14:
You indicated that the laundry room operators were adding clean (uncontaminated) water to contaminated laundry water samples to lower the assay value and the contaminated laundry

water was subsequently flushed into the Joachim Creek that bordered ABB's property. Nothing was ever done about this.

NRC Conclusion:
NRC staff reviewed this concern through an independent inspection.

The inspector reviewed the laundry processing system, including water flow from the laundry through the sanitary treatment plant to the outfall, and reviewed selected data from the licensee's effluent monitoring reports.

The inspector's review concluded that waste water from the laundry process is mixed with a polymer and pumped through a filter press to a holding tank. The filter press cake is incinerated in the recycle recovery process. The holding tank is sampled daily by the HP group. From the holding tank, the laundry process water is sent to the sanitary treatment plant along with the site sewage. The treatment plant effluent, plus water from storm drains, ultimately flows into the Joachim Creek. Sludge from the sewage treatment plant is mixed with polymer and dewatered in a filter press. The solid (contarninated) residue is shipped to a vendor for offsite disposal.

Effluent release data was reviewed from sampling point Nos. 2 (Joachim Creek-upstream), 3 (Joachim Creek-confluence), and 4 (Joachim Creek-downstream). All records of sample activity met the release criteria required by 10 CFR 20, Appendix B, Table 2 for liquid effluents. Because the certificatee sampled the effluent upon release to the unrestricted area and used this data to demonstrate compliance with the effluent release limits, dilution of the laundry water samples would not result in a nonconservative estimate of effluent releases. Nonetheless, no problems were noted with the laundry facility operations, and the licensee representatives were knowledgeable about the process.

Based on these findings, the NRC staff concluded that the licensee's liquid effluents releases were within the NRC release limits. Therefore, this concern was not substantiated. The NRC plans no further action and considers this matter closed.

Concern 15:
You were concerned about the fact that HP technicians quit checking operators' hands while they were in the cafeteria. A large percentage of employees would not wash their hands before coming into the cafeteria to eat. When you conducted surveys, they were hot (contaminated) a lot of times. Your idea was to check the employees' hands at least once a shift. Nothing was ever done about this situation.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

According to the site Health Physicist, the HP technicians do perform random surveys of workers outside of the contaminated area on a monthly basis. This includes surveying workers hands when they are in the cafeteria. Because the cafeteria was located outside the contamination control area, the employees would be required to survey their hands before

eating. Occasionally contamination near or slightly above the licensee's release limits has been found on a worker's hands or other parts. When this happens, the worker is decontaminated and resurveyed. Additional training was provided to the involved employees to improve their contamination survey techniques.

Personnel were required to frisk themselves (including their hands) when exiting the contaminated area. They were not required to wash their hands when exiting the contaminated area. However, the inspectors randomly observed workers exiting the contaminated area and noted that most of the workers were washing their hands, after frisking and crossing the step off area.

The inspectors partially substantiated this concern in that HP staff indicated personnel in the cafeteria had been identified with contamination on their hands in the past. Although your idea for checking workers hands each shift might be a good HP practice, it is not required by the license, and HP personnel do perform random personnel surveys to detect and address problems with personnel contamination. Because the licensee is addressing any personnel contaminations identified during random surveys and no violations related to the frequency of HP surveys of personnel were identified, the NRC plans no further action and considers this matter closed.

Concern 16:
You were concerned about certain HP technicians not following the proper procedures while running daily efficiencies and source checks on the Tennelec counting systems and the Canberra counting system. You also complained that a former HP trained you to use water in the planchets to run the backgrounds for the Tennelec counting systems. Nothing was ever done about this.

NRC Conclusion:
NRC staff evaluated this concern through an independent inspection.

The inspectors reviewed selected portions of the Radiation Protection QA program. Operation of the alpha/beta proportional counters was also reviewed. Instrument calibration, voltage plateau testing, and efficiency calculations were performed as required and the instruments used were within the calibration period.

When performing a gross alpha/beta count on water samples, a background count (water) would be necessary. No problems were noted.

The inspectors could not substantiate this concern based on the observations made during the inspection. The NRC plans no further action and considers this matter closed.

Concern 17:
You were concerned about the floors always being dirty and over the contamination limits in the Pellet Plant, Erbia Plant, Red Room, Green Room, and decontamination area. Supervisors were throwing cleanup sheets in the trash instead of getting the floors cleaned. Nothing was ever done about this.

NRC Conclusion:
NRC staff evaluated this concern through an independent inspection.

During a facility tour, the inspectors noted that general housekeeping had improved since the last inspection. Specifically, the plant staff had removed spare equipment from the Oxide Conversion Plant, shipped a majority of the contaminated soil containers filled as a part of the remediation effort for the former evaporation ponds, and disposed of debris from behind Building 253.

The inspectors requested a health physics technician to randomly perform contamination smear surveys in the Erbia and Pellet Plants, and the Red and Green Rooms. The smear survey results were below the Section 3.2.6.2 license requirement action limit of 5,000 disintegrations per minute per 100 square centimeters (dpm/100cm^2), but one sample was contaminated above a 2,500 dpm/100cm^2 administrative action limit which required the plant staff to clean the area within 24 hours. The inspectors noted that the contaminated area was cleaned by the following morning. In addition to requested specific contamination smears, the inspectors noted that the controlled area was properly posted, as were areas requiring posting for airborne radioactivity.

The inspectors reviewed selected weekly contamination survey records and discussed clean-up practices with supervisors. The inspectors noted that records indicated that when health physics technician identified contaminated areas, the areas were decontaminated within the time periods specified in the license. The supervisors explained that areas where visible or known contamination was noted by health physics technicians were brought to their attention immediately and the area was secured. In addition, the inspectors noted that the licensee was procedurally required to survey any article leaving the contaminated area (including cleanup sheets). The inspectors also noted that contaminated trash was staged for disposal in the contaminated area.

The inspectors noted no contamination concerns for the areas observed and selected for survey. Contaminated trash was staged appropriately in the contaminated area and was surveyed prior to release. Survey sheets (cleanup sheets) generated by HP technicians were being addressed appropriately by the responsible supervisors. Therefore, the inspectors could not substantiate this concern. The NRC plans no further action and considers this matter closed.

Concern 18:
You were concerned about trash not being frisked before going in the trash container. Trash items were checked on day shift, but when someone wanted to throw something away on the back shifts, they didn't check with the HP Department. You found numerous items in the trash that were well over the limit. You proposed to keep a log of the trash items being thrown away in the clean trash. Nothing was ever done about this.

NRC Conclusion:
NRC staff evaluated this concern through an independent inspection.

The inspectors observed an impromptu survey of the general disposal receptacle for contamination. The debris monitored for contamination included wood, cardboard, spent office supplies, paper, and food packaging. No contaminated debris was identified during these surveys. In discussions with the inspector, three HP technicians explained that debris in the general disposal receptacle was randomly checked for contamination and they could not recall ever finding an item contaminated above their release limit. The inspector conducted a random review of radiation survey records and noted that the HP staff infrequently surveyed the general disposal receptacle but found no examples where contaminated debris had been identified.

At the time of this inspection, the inspectors found that the debris surveyed in the general trash receptacle was not contaminated, and the HP technicians did randomly check the general disposal receptacle for contamination. Therefore, the inspector could not substantiate this concern. The NRC plans no further action and considers this matter closed..

Concern 19:
You were concerned about the Shipping and Receiving Supervisor releasing radioactive shipments which had not been surveyed by HP. On several occasions, shipments that were released by the supervisor had to be recalled after they had left company property. This happened more than once. It also displayed a blatant disregard for the role of the Health Physics Department.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspectors interviewed security force employees and two HP technicians and reviewed selected shipping records to determine the frequency that shipments were returned to the site. The inspectors did not identify any shipment returned because of a failure to perform radiation surveys. During the interviews, three security force employees stated that they were unaware of any case where a shipment was returned to the site because a radiation survey had not been performed.

The inspectors reviewed randomly selected shipping papers and discussed the requirement to survey outgoing shipments with operators. The inspectors noted that the licensee had performed the required transportation surveys and appropriately documented the results for several outgoing shipments. In discussions with the inspectors, operators explained that all articles leaving the contaminated area were required to be surveyed. If the operator found the article contaminated, Health Physics was contacted and the article was cleaned before it was released for shipment.

The inspectors noted no examples where shipments were returned to the site because of a failure to perform a radiation or contamination survey. The shipping records and discussions with responsible personnel indicated that shipments were being made in accordance with Department of Transportation and NRC requirements. Therefore, the inspectors could not substantiate the concern. The NRC plans no further action and consider this matter closed.

Concern 20:

You were concerned about the policy which allowed some contractors unescorted access into the plant. This action was made to help the production departments. It was also made to reduce the amount of money spent on hiring escorts. The problem with contractors being unescorted was that the contractors were caught smoking in contaminated areas, working in places where they should not be because of high contamination. They were also caught in contamination areas without the proper protective clothing. It was not a good idea to allow contractors to have a free run of the plant.

NRC Conclusion:
NRC staff evaluated this issue through and independent inspection.

The inspectors reviewed selected requirements of Operations Sheet (OS) 7002.00, "Security and Film Badging." Specifically, the inspectors reviewed the requirements for visitors to gain access to restricted areas. The inspectors reviewed the training records of five contractors who recently had access to restricted areas within the process plant. The inspectors identified that the five contractors had received the mandatory indoctrination training required by Section 2.5 "Training," of the license application. However, the inspectors identified that one of the five contractors was issued a red rather than a yellow badge, which required the licensee to escort this contractor per OS 7002. The Regulatory Affairs Manager explained that contractors received yellow badges (no escort required in restricted areas) only after they had demonstrated to the Regulatory Affairs Manager's satisfaction that the contractors were knowledgeable of the plant requirements in all respects.

The inspectors noted that the licensee procedurally restricted eating, drinking, and smoking in the contamination-control areas of the plant. The exception is that the procedure allowed the plant staff to chew gum, use cough drops, or candy provided the employee put the gum, candy, or cough drops in their mouths prior to entering the contamination area. In discussions with the inspectors, two contractors interviewed clearly understood the smoking and eating restriction in the contamination area.

The inspectors discussed with management the past performance of contractors. Management stated that contractors, as well as new employees, had been caught eating, drinking sodas, and smoking in restricted areas in the past and this activity was stopped when identified. Remedial training or other discipline was applied when the problems were identified. A violation of NRC requirements was identified and dispositioned related to eating and drinking in the contaminated area, as discussed in our letter to you dated September 3, 1999.

The inspectors partially substantiated this concern, in that contractors had been noted smoking, drinking, and eating in restricted areas. However, the licensee took appropriate corrective actions in response to these incidents and the licensee's program for issuing visitors access to restricted areas was in accordance with the license and Physical Security Plan. In addition, the inspectors noted that selected contractors interviewed during the inspection were cognizant of smoking and eating restrictions in the contamination area. Because a violation of NRC requirements was already identified and addressed with regard to your previous concern related to eating, drinking, and smoking in the contaminated area, and the licensee's program for

granted unescorted access meets requirements, the NRC plans no further action and considers this matter closed.

Concern 24:
A trial period of using a written log for recording operator infractions was discontinued by the Regulatory Affairs Director after production managers' complaints. The plant does not have a policy or procedure to document staff identified violations.

NRC Conclusion:
Based on our review of this concern we have determined that it does not fall under NRC jurisdiction. The licensee does not have a requirement for a formal problem reporting system. This is not a finding that this issue does not have merit, rather it is a recognition of the regulatory limits of the NRC. The NRC staff plans no further follow-up on this concern and considers it closed.

Concern 25:
Potential problem with people taking things home, bringing guns and knives into the plant, and alcohol and drugs being used while on duty.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector reviewed if plant staff were taking licensee equipment from the site. Plant staff and four security guards commented that they were unaware of employees removing company equipment or supplies from the site. The security guards stated that employees entered and exited one security gate which was monitored by a security guard at all times, and if an employee attempted to remove equipment from the site, they would be identified. The inspector reviewed the daily security logs between January 1998 and February 2000 and did not identify an issue with inappropriate removal of equipment from the site, The Nuclear Regulatory Assurance (NRA) manager stated that an employee would be terminated if willfully found stealing plant equipment or supplies. On one occasion, the NRC was notified that mercury had been removed from the site. The material was subsequently returned to the site.

The inspector discussed past and present infractions of the security plan with selected plant staff. The security force staff explained that guns, alcohol, and drugs are not allowed in the plant; and if identified, the issue would be immediately addressed and disciplinary action would be taken. The licensee also indicated that they do not even allow smoking cigarettes, cigars or pipes inside the process buildings. The security force staff also indicated that many plant staff carry legal size small pocket knives. The Nuclear Regulatory Assurance (NRA) Manager stated that they do not have a formal fitness for duty requirement for employment at the plant but anyone found using drugs or alcohol at the facility would be prosecuted and/or disciplinary action taken against the individual(s) involved. Two HP technicians explained that during their random tours of the facility they had never identified a worker using alcohol or drugs, or carrying a firearm.

The inspector concluded that the plant staff were currently complying with the security plan and there was insufficient details to corroborate any facts associated with bringing things into the plant. The NRC staff was not able to substantiate that portion of the concern. The NRC did identify one example where mercury had been removed from the site. However, since the amount of mercury involved was less than that which requires a license, no violations of NRC requirements occurred. Based on this information, we partially substantiated your concern, in that one instance where material was removed from the site was identified. However, no violations of NRC requirements were identified, the licensee was complying with the security plan, and no instances where individuals were bringing things into the plant were noted. The NRC plans no further action and considers this matter closed.

Concern 26:
Plant staff were exiting the plant with uranium on their hands, hair, clothing, and shoes after management discontinued the radiological monitoring of plant staff in the guard area.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The concern was substantiated. The inspector reviewed HP survey results, observed impromptu clean room and employee radiological surveys, and noted the plant staff's radiological monitoring techniques. The inspector noted an adverse trend in the number of clean side elevated radiological survey results for the change rooms. Specifically, survey records indicated elevated uranium contamination levels for the shoe holders on the clean side of the changing room. In addition, the inspector noted that the licensee had reduced the frequency of checking employees for uranium contamination after leaving the restricted area. After discussions with the HP manager, two impromptu radiological surveys were observed by the inspector. The first survey identified that 3 of 29 employees monitored had uranium contamination in shoe holders on the clean side of the change rooms. In addition, the inspector noted two operators who did not frisk after having completely showered and other operators that did not perform a thorough full body frisk before leaving the change rooms. Special Nuclear Material License No. SNM-33, Chapter 3.2.1, "Contamination Control", requires employees to monitor for contamination when leaving the controlled area. Contrary to these requirements, the inspectors noted three employees with contaminated hands outside of the controlled area and observed two employees that failed to monitor for contamination when leaving the controlled area. This violation was documented in NRC Inspection Report 070-00036/2000-01. While the inspectors concluded that contamination would not likely have exited the plant in any of these examples, the location of the frisker did not prevent contamination from reaching the clean side of the change rooms. The licensee is required to respond to this violation and provide the NRC with corrective actions to ensure that this noncompliance does not occur in the future.

The inspector observed clear area survey results. The inspector noted isolated routine contamination surveys identified a few low-level contamination issues in the lunch room, areas adjacent to change rooms, office area, and the main security portal. When identified, the contamination was appropriately addressed; however, repetitive routine contamination surveys identified low level contamination on the clean side of the changing rooms. The HP manager

stated that the change room contamination issue would be addressed as part of the corrective actions to the violation discussed above.

The inspector reviewed the licensee's initial response to the violation. The NRA manager explained that there would be several actions required to address the violation. These actions included additional training on radiological monitoring for employees, evaluating the configuration of the change rooms, and updating the posted survey guidance in the change rooms. The HP manager explained that when plant staff was found contaminated in any unrestricted area, the issue would be immediately addressed in accordance with their decontamination procedures. The inspector will evaluate the corrective actions for the cited violation to ensure that employees perform thorough radiological surveys before leaving the controlled area.

Other than ensuring that the violation identified is addressed, the NRC plans no additional actions and considers this matter closed.

Concern 27:
A production operator wore contaminated underclothing under his coveralls in the clean area of the lunch room in 1996.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector observed change room activities while plant staff entered and left the restricted area. As noted in our review of the previous concern, the inspector observed employees not performing required radiological surveys thoroughly when exiting a contaminated area and noted that three employees had contaminated hands in the lunch room during an impromptu survey. A violation was cited in IR 070/2000-001 for the failure of employees to monitor their hands when exiting a contaminated area.

The inspector noted several weaknesses in the change room activities which may have contributed to poor employee monitoring practices. The inspector noted that the contamination control training module addressed washing hands thoroughly with soap and warm water, using decontamination foam or radiac wash to assist in decontamination efforts when required, drying hands thoroughly before monitoring, frisking one hand clean before picking up the detector head, and surveying all exposed areas. However, none of these monitoring issues were included on the postings in the change rooms. The inspector observed that the survey instrument used to frisk for contamination was located at the change room exit doors which supported the observed practice of operators monitoring for uranium contamination after doffing plant coveralls and donning their personnel clothing. This practice does not ensure that underclothing was free from contamination. However, ten operators stated that they always take a shower prior to leaving the facility and most used company supplied underclothing in the contaminated area. During discussions with the inspector, ten operators, two HP technicians, and the HP manager stated that they did not recall a production operator that wore contaminated underclothing in the clean area of the lunch room in 1996. In response to the identified change room weaknesses, the HP manager stated that change room postings would

be enhanced to specify all required contamination monitoring and the configuration of the change room would be evaluated.

This concern could not be substantiated, because there was insufficient evidence to conclude that operators had worn contaminated underclothing in the clean area in the past. However, inspectors concluded that plant staff was not adequately monitoring for contamination before exiting the contaminated area, and the location of the radiation monitor and the posted guidance did not support the required actions to adequately monitor for contamination in the change rooms. Other than to ensure that the licensee addresses the weaknesses identified during the inspection, the NRC plans no further action and considers this matter closed.

Concern 28:
Plant staff concerns documented in the shift turnover logbooks might be unavailable because the logbooks could be missing due to entries made by staff about possible problems identified during the shift, e.g., spills, contamination and radiation survey results.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector reviewed each logbook location and discussed their availability with plant staff. Logbooks were observed in the oxide plant control room, Pellet Plant supervisor's office, HP office, and maintenance shop supervisor's office. The logbook entries included production activities, process equipment availability, tasks completed, and regulatory issues. Regulatory issues addressed in the production and maintenance logbooks pertained to contaminated areas secured, equipment operational issues, and small uranium hexafluoride leaks identified. HP logs included contamination survey, lapel sample results, and environmental survey results and radiation worker permits. The inspector observed that the current HP monthly logs were located next to the HP desks and past monthly logs were filed in an HP file. Plant staff explained that logbooks were located in designated areas and did not recall any previous issue about them not being available.

The inspector was unable to substantiate the concern. On the day of the inspection the logbooks were available and were used to communicate issues important to safety between shifts. The NRC plans no further action and considers this matter closed.

Concern 29:
Used filter media are stored in boxes and barrels and the licensee does not have any record that would indicate what is in the box.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector observed activities associated with the disposal of spent filter media. The majority of filter media was comprised of spent HEPA filters. Red Room operators receive

spent HEPA filters in clear plastic bags. Subsequently, the operators measured the uranium quantity of each filter, tag the filter with the measured uranium quantity, and log each filter's uranium quantity on the staged pallet log sheet. The staged filters were disassembled, compacted, and placed in a 55 gallon steel drum with an unique identification number. The number of filters stored in the 55 gallon steel drum was limited to combined quantity of less than 700 grams uranium-235. The plant staff retained the total quantity of uranium-235 for each unique drum in the material awaiting disposition function of the Hematite Accountability Management Information System (HAMIS). In addition, operators affix the material accountability log sheets to the drum. During discussions with the inspector, an operator explained that on a couple occasions in the past the affixed drum log sheets had been inadvertently lost but that the HAMIS computer program was the official material control and accountability (MC&A) record. The inspector verified that the quantity of uranium-235 for selected drums were entered into HAMIS.

The inspector partially substantiated the concern. In the past log sheets used to track the uranium-235 quantity disposed of in waste drums and boxes may have been lost during handling. However, the inspector determined that the log sheets were not the official record but rather the HAMIS computer program was used to track all SNM material, which included the quantity of uranium-235 inside the barrel and a description of the items in the barrel.

Concern 30:
Supervisors failed to keep track of the inventory in their respective departments. Material previously shipped was still logged in the computer inventory.

NRC Conclusion:
NRC staff evaluated this concern through an independent inspection.

The NRC preforms routine inspections of the MC&A programs at the licensee's facility. The most recent MC&A inspection was conducted during the week of October 25, 1999. The inspection results identified that the program meets regulatory requirements for the control of SNM. Specifically, biannually inspectors randomly select 50 SNM items throughout the process and verified that the HAMIS program accurately specifies the material status. Previous problems identified with the MC&A program have been addressed and were considered closed. The October 25-28, 1999, MC&A inspection did not identify any adverse trend in the MC&A program. Therefore, the concern was not substantiated. The NRC plans no further action and considers this matter closed.

Concern 31:
The NRA Manager does not want the HP staff to enforce the NRC regulations.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector reviewed the NRA Manager's actions concerning compliance with NRC regulations. In discussions with the inspector, four HP technicians stated that the NRA Manager and HP Managers' expectations were to comply with all procedures and regulatory

requirements. However, HP technicians indicated that certain production supervisors appeared frustrated when production areas were quarantined because of elevated contamination surveys. Through record review, the inspector noted that the licensee took the appropriate compensatory actions to address elevated survey results and high lapel air samples.

The inspector concluded that there was insufficient evidence to substantiate the concern. The NRC plans no further action and considers this matter closed.

Concern 32:
Operators assigned radioactive items to bogus locations throughout the plant. Bogus locations were not registered through the inventory program and HP is not aware of these storage locations.

NRC Conclusion:
NRC staff evaluated this concern through an independent inspection.

The NRC performs routine inspections of the MC&A programs at the licensee's facility. The most recent MC&A inspection was conducted during the week of October 25, 1999. The inspection results identified that the program meets regulatory requirements for the control of SNM. Specifically, the inspectors observed the storage of SNM for compliance with nuclear criticality safety/evaluation (NCSA/E) controls. The inspection activities included ensuring that SNM waste, powder, pellets, fuel assembles, and processing equipment were stored, moved, and processed within the controls established in the NCSA/E.

The inspectors have identified minor issues with the storage of SNM in the past. The resolution of these SNM issues were evaluated to ensure that the licensee took the appropriate and timely actions to correct the issues. However, recent inspection activities have not identified SNM storage issues or an adverse trend in the MC&A program.

The concern was partially substantiated, in that, in the past, the NRC inspectors have identified minor SNM storage issues which were adequately corrected by the licensee. However, recent inspection activities have not identified storage issues or an adverse trend in the MC&A program. Since the licensee has addressed previous issues identified with the MC&A program, the NRC plans no further action and considers this matter closed.

Concern 33:
The maintenance department mechanics welded on contaminated equipment without respirators and without lapel air monitors turned on.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector reviewed the requirements for donning respirators while maintenance mechanics welded, cut, machined, and grind metal. The maintenance supervisor is responsible for evaluating which work task requires a radiation work permit (RWP). The HP technicians

develop the RWP which specifies the type of personnel protective equipment required to perform the task. In discussions with the inspector, three HP technicians and the Maintenance Supervisor indicated that respirators are required when welding, cutting, machining, or grinding contaminated metal. However, they stated that these activities do not require a respirator when working on clean (uncontaminated) metal. In addition, two maintenance mechanics explained they are allowed to don a respirator for any maintenance activity even if it is not required to be worn. The inspector observed a maintenance mechanic donning a respirator while welding a clean steel pipe. The maintenance mechanics that were interviewed could not recall a situation where a respirator was not donned when required.

Your concern related to not turning on lapel air monitors was reviewed as concern no. 9.

The inspector concluded that maintenance mechanics presently donned respirators during contaminated metal fabrication and welding. The inspector could not substantiate that there had ever been a failure to don a respirator when required. The NRC plans no further action and considers this matter closed.

Concern 34:
Plant staff have the practice of sweeping dirt from the contaminated side to the clear side.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector reviewed floor contamination survey results obtained at the change area step-off-pads, lunch room, and lavatories. The HP technicians routinely survey these areas for contamination and when contamination is identified, the area would be decontaminated. Once decontaminated, the HP technicians resurvey the area to ensure that the area is clean. The inspector reviewed a random sample of contamination survey log sheets and noted that plant staff took timely actions to decontaminate clean areas. HP technicians explained that, if contaminated debris was swept into the clear side, contamination survey results would be consistently and extremely elevated. The inspector did not identify any adverse trend concerning "clean" area contamination.

The concern was not substantiated. The inspector concluded that the clean area remained clean and when identified as contaminated the plant staff took appropriate action to address the issue. The NRC plans no further action and considers this matter closed.

Concern 35:
An operator on Line No. 2 of the Pellet Plant alarmed the continuous air monitor system (CAM) on occasion by holding uranium powder up to the CAM intake sampling point in order to keep from working.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector discussed the causes for fixed air sample station activation in the Pellet Plant with several operators and three HP technicians. Plant staff were knowledgeable of the required actions in response to fixed air sample activations and the health risk associated with airborne SNM material. Pellet Plant operators explained that fixed CAMs have activated due to minor process leaks in the past but were unaware of anyone ever intentionally activating a CAM. In review of the 1995 through 1997 Plant Safety Committee meeting minutes the inspector noted several issues that addressed equipment integrity concerns with the Pellet Plant operation. In response to these concerns, the licensee had upgraded the slugger presses, granulaters, and seed hoppers in the Pellet Plant. Several operators commented that fewer CAM activations occurred after the Pellet Plant was upgraded. One operator recalled several CAM activations for Pellet Plant Line No. 2 during one shift in or around 1996. The cause for the CAM activations was that the slugger had a defective component which allowed a small quantity of SNM to leak from the system. The inspector noted no adverse trends in lapel air sampler survey results for Pellet Plant operators.

This concern was not substantiated, in that the inspector did not identify any example where an individual had intentionally activated a CAM to avoid work. However, the CAM associated with Line #2 activated several times during one shift in or around 1996 due to a defective process component that leaked SNM. The inspector concluded that the licensee had replaced some Pellet Plant equipment which resulted in fewer CAM activations. Based on the licensee's actions to address the defective process equipment which caused activation of the alarms, the NRC plans no further action and considers this matter closed.

Concern 36:
A certain plant employee exposed and pressed certain body parts against potentially contaminated surfaces to get another person's attention.

NRC Conclusion:
NRC staff evaluated this issue through an independent inspection.

The inspector randomly interviewed certain licensee employees and was unable to corroborate the details of this concern. The inspector also concluded that if this concern actually occurred as alleged, the employee should have performed a frisking survey prior to leaving the restricted area and should have identified any contamination on their body. Therefore, the inspector was unable to substantiate the concern. The NRC plans no further action and considers this matter closed.

Concern 37:
Plant Safety Committee meetings were no longer held.

NRC Conclusion:
NRC staff evaluated this concern through an independent inspection.

The inspector reviewed the licensee's implementation of the Plant Safety Committee. The license requires that the committee meet at least each calendar quarter and review plant operations and selected safety requirements, etc. The minimum committee requirements were

a representative from engineering, production, HP, and criticality safety. Committee meeting minutes (records) confirmed that the minimum staffing was present for quarterly meetings and topics were documented to address the functional areas outlined in the license. However, the inspector noted no operators or maintenance mechanics were presently on the committee. In discussion with the inspector, the NRA Manager explained that operators and maintenance mechanics were represented in the past but dropped-out of the committee in early 1998 because they believed their issues were not being addressed. The NRA Manager prioritizes actions recommended to the committee based on several factors which included the safety significance of the issue. In addition, the NRA Manager stated that the safety committee had spent a significant amount of time reviewing and approving engineering projects in the past 2 years. The inspector noted that the committee meeting minutes included issues involving the hydrogen fluoride wet scrubber, red room slab tank, and oxide plant reactor engineering projects. In discussions with the inspector, an operator, who had previously been on the committee, indicated that workers' issues were not addressed but could not give any specific examples. The NRA Manager stated that there would be an effort to attract operators and maintenance mechanics to the safety committee because they brought hands-on operational experience.

This concern was not substantiated, in that the inspector identified that the current Safety Committee membership and frequency of the meetings meet the requirements in the license. However, operators and maintenance mechanics discontinued their attendance at the meetings early in 1998. Based on the licensee' plans to include operators and maintenance mechanics to the safety committee meetings, the NRC plans no further action and considers this matter closed.

SYNOPSIS

This investigation was initiated by the U.S. Nuclear Regulatory Commission, Office of Investigations (OI), Region III, on March 30, 1999, to determine whether a Health Physicist at ABB Combustion Engineering, Inc., was discriminated against for raising safety concerns.

Based upon the evidence developed during the investigation and a review of evidence, OI did not substantiate that the Health Physicist had been discriminated against as a result of raising safety concerns at ABB Combustion Engineering, Inc.