



**INSPECTION REPORT
CENTER FOR ENERGY AND ENVIRONMENTAL RESEARCH
MAYAGUEZ, PUERTO RICO
SEPTEMBER 26, 1996**

On September 26, 1996, an inspection team comprised of representatives of the Department of Energy (DOE), Oak Ridge Operations (ORO), and Lockheed Martin Energy Systems, Inc. (LMES) visited the Center for Energy and Environmental Research to conduct an inspection of the site and the DOE-owned improvements thereon to: (1) determine the general physical condition of the site and DOE improvements; (2) reconcile any discrepancies between official DOE property listings and actual DOE-owned improvements existing on the site; and (3) identify any problems or concerns that need to be corrected and/or addressed prior to the transfer of the site and the DOE-owned improvements to the custody of the U. S. Department of Agriculture, Tropical Agriculture Research Service (USDA-ARS). Representatives comprising the inspection team were:

- Ms. Rachel Blumenfeld, Attorney, Office of Chief Counsel, DOE ORO
- Dr. Clayton S. Gist, Chief, Decommissioning and Decontamination Branch, DOE ORO
- Ms. Cindy B. Hunter, Realty Officer, Procurement and Contracts Division, DOE ORO
- Mr. Jack R. Newman, Realty Specialist, Lockheed Martin Energy Systems, Inc (LMES).

Background

The U. S. Atomic Energy Commission, a predecessor agency of the DOE, entered into an agreement with the USDA-ARS on May 20, 1958, acquiring the use of the ten (10) acre site for the construction of a Nuclear Research and Training Center (NRTC). The site is located at the intersection of State Road No. 108 and Lost Perros Trail on the grounds of the USDA-ARS's Federal Experiment Station, Mayaguez, Puerto Rico. Following construction of the NRTC, it was operated by the Center for Energy and Environmental Research of the University of Puerto Rico pursuant to Contract No. EY-76-C-05-1833 (formerly E(40-1)-1833) with ERDA, a predecessor agency of the DOE. Upon conclusion of DOE programmatic research activities at this facility, the University of Puerto Rico (UPR) was permitted continued use and occupancy of the facility for research purposes in connection with former DOE programs under the provisions of Use Agreement No. EY-77-A-05-5306. Although this Use Agreement expired on September 30, 1958, the UPR has continued to occupy and use the site and DOE-owned improvements for UPR related activities.

It is the mutual desire of the DOE and the USDA-ARS that the May 20, 1958, Agreement be terminated and that the DOE-owned improvements constructed on the site be transferred to the custody of the USDA-ARS. Preparatory to this Agreement termination and improvement transfer, the DOE has accomplished remedial decontamination and cleanup of the site and the DOE-owned improvements thereon.

A Phase I Environmental Assessment of the site and improvements was prepared in July 1996 to assess the status of recognized environmental conditions on the site, identify apparent adverse conditions or hazards, and evaluate the effectiveness and completeness of previous remediation efforts. The results of this environmental assessment are documented in Draft Phase I Environmental Site Assessment of the Center for Energy and Environmental Research, Mayaguez, Puerto Rico, dated August 1996.

Inspection of Site and Improvements

Upon arrival at the UPR administrative offices of the facility, it was found that although arrangements for the inspection had been made several weeks earlier, cognizant UPR officials who were to accompany the inspection team were not available. Also, the UPR staff in the central administrative office of the facility were not aware of the planned inspection. Upon being advised by Dr. Clayton Gist that the inspection team would proceed with the inspection as planned, Mr. Wilson Trabal, UPR, arranged for a UPR representative to accompany the team and unlock doors as necessary. The first building inspected by the team was the S-4 Building. It was noted that there was a radioactive warning sign on one room of the building indicating that radioactive materials were stored in the room. The room was locked with a padlock and the UPR representative accompanying the team advised that he did not have any keys to the padlock. Attempts to locate the keys by UPR representatives were unsuccessful. Following a request by Dr. Gist for the lock to be removed by a bolt cutter, Mr. Trabal appeared at the scene and advised that the lock could not be cut without proper authority. In response, Dr. Gist advised Mr. Trabal that he wanted the lock removed because: (1) all buildings on the site were owned by the DOE, (2) the site was permitted to DOE by USDA-ARS, (3) UPR's permit from DOE for use of the site had expired, and (4) UPR activities currently being conducted at the site, including the storage of radioactive materials, were unauthorized. At that point, Mr. Trabal agreed to permit the cutting of locks, as necessary, if Dr. Gist agreed to provide written authorization for same. This written authorization was provided.

General Summary of Inspection Findings

During the inspection of the site and DOE-owned improvements, it was found that there was unauthorized storage of radioactive waste materials on the site. There were also several locations where radioactive materials were improperly labeled and stored. Instances of improperly stored and labeled liquids, solvents, chemicals, and lubricants were also noted. Housekeeping on the site and within site buildings was found to be poor. Several outside locations and many areas within the buildings contained large quantities of trash, scrap materials, junk, and damaged and unusable personal property. Several junked vehicles were also located on the site. PCB-containing fluorescent light fixtures located on the site need to be marked. Also, as reflected in a letter from Dr. Clayton Gist, Chief, Decommissioning and Decontamination Branch, DOE ORO, dated August 29, 1996, the electrical system throughout the site facilities is in noncompliance with National Electrical Codes and needs to be brought into compliance prior to any transfer of the site and improvements. Based on the results of this inspection, once the electrical system is brought into code compliance, the general physical condition of the DOE-owned improvements on the site can be classified as good. In addition, it was found that there were several minor discrepancies between official DOE real property records and the actual DOE-owned improvements located on the site. These discrepancies are in the process of being resolved.

SPECIFIC FINDINGS

S-4 Storage Building

This storage building contained four rooms in which unauthorized radioactive materials were improperly labeled and stored. The room adjacent to the stored radioactive materials contained metal containers of paint, 5-gallon metal drums, and a 55-gallon metal drum that had a petroleum residue on top. This drum was unlabeled and locked with a padlock. There were also old ceiling tiles stored in the room that potentially contain asbestos materials. Another room in this building contained improperly

stored liquids (no double containers).

All of the UPR radioactive waste, liquids, drums, paint, drums, and ceiling tiles need to be removed from this building and relocated from the site.

Agriculture Shed

The outside perimeter and interior of this building contained debris, junk, scrap, tools, and numerous other items of personal property. Several junked vehicles were observed near this building.

All debris, junk (including the junked vehicles), scrap, tools, and other items of personal property within and around the perimeter of this building must be removed and relocated from the site. The concrete floor of the shed must be swept clean.

UPR-Owned Movable Building Located Adjacent to the Agriculture Shed

This movable building which is not DOE-owned is being utilized for computer and publication storage. This non-DOE building may remain or be removed. However, if it remains on site, all contents within the building must be removed. Also, the USDA-ARS must concur with any decision for this building to remain on site.

Nuclear Engineering Building and Annex

Various areas within this building were being utilized for the storage of soil in plastic bags. Also, there was considerable non-permanent personal property (e.g., equipment, metal shelving, storage cabinets, etc.). The storage cabinets also contained stored personal property and soil in plastic bags. Rooms CIE 10 and S1 of this building were being utilized as a storage area for personal property and also contained considerable trash and debris. Rooms CIE 1 and CIE 8 of this building were locked.

On the east side of this building in the vicinity of the Decon Pad there was a substantial amount of stored scrap metal and lumber and junk. Also, it was found that an asbestos panel that was to have been disposed of, had simply been moved to an area near the Generator Room (Elephant Room) of this building. It was also noted that there was a significant growth of weeds on the northeast side of this building.

All non-permanent property, including equipment; metal shelving; movable metal storage cabinets, including contents; and soil stored in plastic bags must be removed from within this building and relocated from the site. Any personal property, trash, and debris must also be removed from the locked rooms (CIE 1 and CIE 8). After removal of the personal property, trash, and debris, the building is to be swept clean.

The junk, scrap metal, and lumber located on the east side of the building must be removed and relocated from the site. The weeds must be cut, and the asbestos panel disposed of in accordance with applicable regulations.

Marine Biology Building

The upper floor of this building contained offices that were maintained in good condition. A lock to the basement area of this building was cut and removed. There were three rooms being utilized for the storage of records. This record storage area was well maintained. This building and the contents therein are considered satisfactory for transfer contingent upon concurrence of the USDA-ARS.

Agri-Science Laboratory/Plant House (Greenhouse)

This is actually one building consisting of two rooms. The east room or Agri-Science Laboratory is utilized for the maintenance of records. This room and its contents were well maintained. The front or west room of this building contained well maintained offices. This building and its contents are suitable for transfer contingent upon concurrence of the USDA-ARS.

Maintenance Shed (Gardeners Shop)

The interior of this building and its contents were well maintained. This building and its contents are suitable for transfer contingent upon concurrence of the USDA-ARS.

Small Storage Building (Behind Maintenance Shed)

This building was found to be suitable for transfer contingent upon concurrence of the USDA-ARS.

Shop Building

The interior and contents of the Electrical Maintenance Shop, Room H01 (office), the Machine Shop, and the Glass Blowing Shop located on the ground floor of this building were found to be well maintained. The room utilized for the storage of metal stock and pipe was found to be in need of a general cleanup. The storage area located near the Glass Blowing Shop must have all cylinders and stored metal removed.

All offices and contents located on the second floor of this building were found to be well maintained. Room 17 and the foyer of the second floor must have a general cleanup to remove trash and personal property. Also, the roof area needs a general cleanup and all stored personal property removed. In addition, all junk and personal property stored along the perimeter of the south and east sides of the building must be removed.

Following a general cleanup, including the removal of trash, stored personal property, and junk from the areas and rooms noted, this building is suitable for transfer contingent upon concurrence of the USDA-ARS.

Administrative Office Building

This building was found to be suitable for transfer contingent upon concurrence of the USDA-ARS.

Main Laboratory and Reactor Complex Building

The storage area adjacent to the Reactor Control Room must have all personal property removed and a general cleanup to remove trash, etc. Also, the offices in the immediate vicinity of the Reactor Control Room also must have a general cleanup.

Room 201 must have all abandoned laboratory equipment, including small hot plates and gas cylinders, removed and a general cleanup accomplished. The housekeeping in Room 205 was very poor and a general cleanup must be accomplished. Also, the room contained improperly stored chemicals and organic solvents which must be corrected. Room 217, which is utilized for sample polishing, also needs a general cleanup. All stored equipment in the Generator Room on the second floor must be removed. In Room 219, radioactive materials were found to be stored with non-radioactive materials in the refrigerator. The storage of radioactive materials must be brought to code standards. Also, this room must have a general cleanup as the housekeeping is very poor. Room 221 which was formerly utilized as a dark room was found to be in extremely poor condition from a housekeeping standpoint. All stored

personal property and trash must be removed and a general cleanup accomplished. Second floor Rooms 200, 202, 204, 206, 210, 212, 225, 218, 220, the Library and adjacent general offices, and Area RA 1 (combination laboratory and offices) were found to be well maintained from a housekeeping standpoint.

The third floor which contains the building exhaust fans must have a general cleanup and stored equipment removed.

Room 130 and the storage room across from Room 123 must have a general cleanup to remove trash and unused equipment. Room 112 which is an operational laboratory has improperly stored flammable liquids. This laboratory must be brought into code compliance. Also, the housekeeping in this room was poor and a general cleanup is needed. Room 117 needs a general cleanup and everything removed from the room except the permanent fixtures. In Room 125 storage boxes are stored on the top shelf of a metal shelving unit in an unsafe manner. Unused personal property and other materials are stored under the stairwell leading to the shipping and receiving area of the building. This property and materials must be removed. In the same vicinity, the room next to the metal gate is full of stored unused personal property, material, and trash. All of this property, material, and debris must be removed. The offices adjacent to the shipping and receiving area were well maintained. Personal property and materials stored along the walls in the shipping and receiving area (e.g., cylinders, drums, boxes, and unused office furnishings) must be removed. Room R-29 needs a general cleanup and all trash, debris, and unused personal property removed. Room 114 (Counting Room) needs a general cleanup with all unused personal property and materials removed and disposed of. While this room contained radioactive materials, there were no disposable gloves for hand protection. Also, the waste container for radioactive waste was not functional. This must be corrected.

Rooms 123, 121, 116, 108A, 108B, 103, 104, 102, 100, 101, 131, 132, and 133 were found to be well maintained and could be transferred as is contingent upon concurrence of USDA-ARS. Also, after the corrective actions for the remaining rooms are completed, they could also be transferred contingent upon concurrence of USDA-ARS. In addition to the concurrence of the USDA, the electrical distribution system for the building must be brought into code compliance.

Following the inspection, an exit meeting was held with UPR and USDA-ARS representatives. Those in attendance were Dr. Clayton S. Gist, DOE ORO; Ms. Cindy B. Hunter, DOE ORO; Ms. Rachael Blumenfeld, DOE ORO; Mr. Jack R. Newman, LMES; Mr. Wilson Trabal, UPR; Mr. James H. Badger, USDA-ARS; and Mr. J. H. Banuchi, UPR.

Dr. Gist began the meeting by providing a brief summary of the current conditions of the site and facilities and emphasizing that the DOE is committed to transferring the site and improvements thereon to the USDA-ARS in an acceptable condition. Continuing, he said that DOE is closely coordinating all actions with USDA-ARS preparatory to the transfer to determine and meet mutual expectations. He added that many activities being carried out by UPR on the site are unauthorized. Also, the storage of radioactive waste material on the site has not been authorized by DOE and is in violation of UPR's NRC License. This RAD waste material which is located in the S-4 Building must be removed from the site. He added that general housekeeping on the site is extremely poor. In summarizing the inspection findings, he said (1) the unauthorized storage of RAD waste materials is in violation of UPR's NRC License; and (2) unauthorized activities within the Agriculture Shed, unauthorized modifications of the electrical system that were not in compliance to electrical code standards, other code violations in the laboratory and other areas of the facility, and the extremely poor housekeeping

could cause potential fire, safety, and health hazards. In addition, these conditions raise major legal issues and creates potential liabilities for the DOE.

Dr. Gist said these potential liabilities to the DOE must be eliminated or UPR could be required to vacate the site. Continuing, he said that DOE will provide UPR with a schedule for the necessary cleanup and corrective actions to be accomplished. He emphasized that UPR funding limitations is not a consideration. If the cleanup is not accomplished and the corrective actions made by UPR, the DOE will accomplish same and bill UPR. It was then noted that it would be less costly for UPR if it handled the cleanup and corrective actions. Dr. Gist then said that once the schedule and milestones for the cleanup and corrective actions are established, DOE will conduct periodic inspections to determine if the milestones are being met. Dr. Gist added that the fact that keys were not available to unlock various doors on the site was a violation of OSHA standards. In response, Mr. Trabal said that they were in the process of mastering all locks on the site so that one key will fit all locks. Also, he said that UPR is currently working on the electrical system to bring it into code compliance.

Dr. Gist then advised that he wanted USDA-ARS officials to have full access to the site and the facilities thereon. In response, Mr. Trabal said that UPR had been working closely with USDA-ARS representatives and that UPR would assure that they had full access throughout the facility.

At this point, a copy of the Draft Phase I Environmental Site Assessment, dated August 1996, was provided to Mr. Trabal. Dr. Gist asked that Wilson have cognizant UPR officials review the draft for accuracy and provide any comments they might have. Also, Mr. Trabal was advised that the Memorandum of Understanding (MOU) between the DOE and UPR that establishes provisions for UPR's continued occupancy of the site and facilities will be amended as necessary to address required corrective actions identified by the Phase I Environmental Assessment and the physical inspection.

Dr. Gist reiterated that there was a limited amount of time to accomplish the cleanup and corrective actions as current plans call for the site and improvements to be transferred to USDA-ARS by Spring 1997. He said that a letter would be sent to UPR identifying DOE's expectations the week of September 30, 1996, with a copy of the Inspection Report and revised MOU enclosed. Mr. Trabal, UPR, and Mr. Badger, USDA-ARS, requested that they be copied on the letter and enclosures.

Mr. J. H. Banuchi, Attorney, UPR, met separately with Ms. Blumenfeld following the meeting as he arrived near the end of the discussions. Ms. Blumenfeld said that she advised him of the results of the inspection and that the MOU would be revised to address issues identified in the Phase I Environmental Assessment and the Inspection Report. Ms. Blumenfeld said that Mr. Banuchi advised that the UPR Chancellor had not yet seen the MOU but as soon as the revised MOU and Inspection Report was received he would provide the Chancellor a copy for review and comment. He said he would also brief the Chancellor on the exit meeting discussions.

In closing, Mr. Banuchi said that when Dr. Gist is at Mayaguez in mid-October, the Chancellor would like to meet with him. Dr. Gist advised that he would be glad to meet with the Chancellor.

At this point the exit meeting was adjourned.

**MINUTES
MEETING WITH
U. S. DEPARTMENT OF AGRICULTURE (USDA)
AGRICULTURE RESEARCH SERVICE (ARS)
SEPTEMBER 26, 1996**

On September 26, 1996, representatives of the Department of Energy Oak Ridge Operations (DOE-ORO) and Lockheed Martin Energy Systems, Inc. (LMES) met with Mr. James Badger, Location Administrative Officer, USDA-ARS, prior to an inspection of the site and facilities comprising the Center for Environmental and Energy Research at Mayaguez, Puerto Rico. The main purpose of the inspection was to determine the physical condition of the site and facilities and to identify any problems or conditions that would require corrective action prior to the transfer of the site and the DOE-owned improvements thereon to the custody of the USDA-ARS. Attendees at the meeting were:

Ms. Rachel Blumenfeld, Attorney, Office of Chief Counsel, DOE-ORO
Dr. Clayton S. Gist, Chief, Decontamination and Decommission Branch, DOE-ORO
Ms. Cindy B. Hunter, Realty Officer, Procurement and Contracts Division, DOE-ORO
Mr. Jack R. Newman, Realty Specialist, LMES
Mr. James Badger, Location Administrative Officer, USDA-ARS

Dr. Gist opened the discussions by providing Mr. Badger a brief summary on the status of remedial decontamination and cleanup actions accomplished preparatory to the transfer of the site and facilities to USDA-ARS. In addressing some of the remedial cleanup actions recently completed, Dr. Gist said that necessary actions involving the removal and disposal of asbestos materials had been accomplished. Dr. Gist also said that PCB problems on the site had been resolved. With respect to the PCB problems, Mr. Badger said that the fluorescent lights on the site that have ballasts containing PCBs need to be marked. In response, Dr. Gist said that the marking of the fixtures was the responsibility of the University of Puerto Rico (UPR). He added that UPR would be notified to complete the marking of the fixtures as necessary. Mr. Badger continued by saying that USDA-ARS was very concerned about the use and storage of radioactive materials on the site by UPR. In response, Dr. Gist said that UPR would be requested to remove all NRC-licensed RAD materials from the site. He added that DOE is in the process of having the RAD sources that it has responsibility for removed from the site.

Dr. Gist also said that, as a result of unauthorized modifications to building electrical systems on the site, some of the electrical systems within various buildings currently are in noncompliance with the National Electrical Code. He said that it is DOE's position that correction of this problem is the responsibility of UPR. He added that UPR has been notified in writing to bring the electrical systems into compliance with code standards.

Mr. Badger advised that USDA-ARS recently conducted an inspection of the site and facilities and found many problems. Some of the problems USDA-ARS found during the inspection were (1) UPR is using and storing RAD materials on the site, (2) building electrical systems are in noncompliance with the National Electrical Code, (3) various lights and motors on the site are not explosion proof, (4) UPR is storing and using hazardous chemicals on the site, some of which are volatile, and (5) UPR is allowing unauthorized activities on the site. One other code violation mentioned by Mr. Badger was a chemical vent hood in one of the laboratories did not

meet OSHA code standards. He also advised that during the inspection three doors were found to be locked. UPR representatives said that they were unable to locate any keys to these rooms. One of the locked doors had a RAD warning sign on it. He said that this could potentially create a very dangerous situation in the event of an emergency and/or fire. He also added that there was an unexplained power outage that prevented a thorough inspection of various building areas.

In discussing specific problems experienced with UPR, Dr. Gist said that although all the hazardous chemicals had been removed from the site three times in the past, UPR keeps reintroducing them on the site. He continued by saying that UPR keeps stalling on completing required corrective actions, claiming a lack of sufficient funds. He said that he plans to advise UPR that a lack of funds is not a consideration and that if UPR doesn't correct problems for which it is responsible, DOE will correct the problems and bill UPR for same.

In response to a question by Mr. Badger concerning what actually had been done to correct the asbestos problem on the site, Dr. Gist responded by providing a brief summary of actions taken. During this summary, he mentioned that the asbestos tiles can be managed by the application of floor wax. Also, he said that the transite panels remaining on site are in good shape and can remain. One panel that presented problems was removed and disposed of.

After informing Mr. Badger that the environmental assessment of the site had been completed, he provided him with a copy of the Draft Phase I Environmental Assessment, dated August 1996, for review and comment. He said that while none of the documents referenced by the Assessment were attached, he would be glad to federal express any of the documents that USDA-ARS wanted to review.

In discussing the planned transfer of the site and facilities, Mr. Badger said that once USDA-ARS accepts custody of the site and facilities, they will be conveyed to the Commonwealth of Puerto Rico. The Commonwealth will then transfer them to UPR. However, he emphasized that USDA-ARS does not want to accept custody of the site until all problems with the buildings are corrected. In response, Dr. Gist said that DOE is actively working to get the site and buildings in an acceptable condition. Mr. Badger then said that Mr. Earl Griffen, Environmental Representative, USDA-ARS Regional Office in Athens, Georgia, will be at the site during the middle of October. He said that since Dr. Gist would be at Mayaguez at approximately the same time, maybe a meeting could be arranged. In response, Dr. Gist said he would be glad to meet with Mr. Griffen. Mr. Badger agreed to coordinate any arrangements for the meeting with Dr. Gist.

At the conclusion of the meeting, Mr. Badger said that while he would be unable to participate in the inspection of the site due to other commitments, he would be available to attend the exit meeting with UPR.