



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30323

SEP 04 1990

Report No.: 50-400/90-16

Licensee: Carolina Power and Light Company
 P. O. Box 1551
 Raleigh, NC 27602

Docket No.: 50-400

License No.: NPF-63

Facility Name: Shearon Harris

Inspection Conducted: August 6-10, 1990

Inspectors:	<u>William B. Gloersen</u>	<u>8/29/90</u>
	W. B. Gloersen	Date Signed
	<u>William B. Gloersen</u>	<u>8/29/90</u>
	for M. P. Elliott	Date Signed
Approved by:	<u>Thomas R. Potter</u>	<u>8/29/90</u>
	J. P. Potter, Chief	Date Signed

Facilities and Radiation Protection Section
 Emergency Preparedness and Radiological
 Protection Branch
 Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the areas of occupational radiation safety, shipping of low-level radioactive wastes for disposal and transportation of licensed radioactive materials, Information Notices, and previously identified inspection findings. In addition, the inspectors provided balanced, minimum coverage for the resident inspectors during their absence.

Results:

In the areas inspected, one apparent violation was identified for failure to secure licensed radioactive materials stored in an unrestricted area (Warehouse No. 6) from unauthorized removal from the place of storage. The licensee made several purchases of new equipment to enhance the radiation protection program which included: bag monitor, tool monitor, portable respiratory fit testing facility, and a "portable" dedicated breathing air system.

~~9009130127~~



REPORT DETAILS

1. Persons Contacted

Licensee Employees

M. Boone, Radiological Control (RC) Foreman
W. Cerame, Senior RC Technician
*A. Cornett, RC Foreman
J. Floyd, RC Foreman
S. Frost, RC Technician
*J. Hammond, Manager, Onsite Nuclear Safety
*C. Hinnant, Plant General Manager
*A. Howe, Senior Specialist, Regulatory Compliance
*J. Kiser, RC Supervisor
*C. McKenzie, Manager, QA Engineering
*G. Olive, Specialist Security
*A. Poland, Project Specialist, RC
F. Reck, RC Foreman
J. Sipp, Manager, Environmental and Radiological Control (E&RC)
*D. Stih, ALARA Technician
*M. Wallace, Senior Specialist, Regulatory Compliance
E. Wills, Technical Support Specialist

Other licensee employees contacted during this inspection included engineers, operators, technicians, and administrative personnel.

*Attended exit interview

2. Audits and Appraisals (83750)

Technical Specification (TS) 6.5.4.1 requires audits of unit activities to be performed by the Quality Assurance (QA) Services Section of the Corporate QA Department, including: (1) conformance of unit operation to provisions contained within the TSs and applicable license conditions, at least once per 12 months; (2) the performance of activities required by the Operational QA program to meet the criteria of Appendix B, 10 CFR 50, at least once per 24 months; and (3) the Process Control Program and implementing procedures for processing and packaging of radioactive wastes, at least once per 24 months.

The inspectors discussed the audit and surveillance program with licensee representatives in the areas of radwaste shipping, contamination, control, radiation protection, and ALARA program implementation. The inspectors reviewed the following Quality Assurance Audit (QAA) and Surveillances:

- ° QAA/CO22 - 89-03: Audit of the Environmental and Radiation Control Program, July 10-21, 1989



- Surveillance 89-056: Independent Radiation Survey, April 1989
- Surveillance 89-058: Radwaste Shipping, April 1989
- Surveillance 89-069: Fuel Cask Activities, May 1989
- Surveillance 89-075: Radwaste Shipping, May 1989
- Surveillance 89-080: ALARA Program Implementation, June 1989
- Surveillance 89-096: Spent Fuel Receipt, August 1989
- Surveillance 89-139: Refueling Outage, December 1989
- Surveillance 90-016: Contamination Control, February 1990
- Surveillance 90-023: Health Physics, February 1990
- Surveillance 90-046: Fuel Cask Activities, May 1990

The reports of audit findings to management were also reviewed and found to contain responsive commitments by management to effect corrective actions for the deficiencies noted.

The inspectors also reviewed the licensee's program for self-identification of weaknesses related to the radiation protection program and the appropriateness of the corrective actions taken. This area had been previously reviewed and identified as an Inspector Followup Item (IFI) (50-400/89-23-01). In that report, it was noted that the licensee was documenting events and corrective actions taken in letters to plant files. The use of the letters to plant files did not implement the aspects of the Radiation Safety Violation (RSV) Reporting System that would assure effective root cause corrective action. Since that inspection, the licensee had revised procedure ERC-201, "E&RC Feedback Report," January 12, 1990, Revision 1, to include criteria for initiating investigations of radiological incidents. The Feedback Report System was designed to provide tracking for the initiation, conduct and results of these investigations. During this inspection, the inspectors reviewed RSVs for 1990 and noted that only five RSVs had been documented. Feedback Reports were not reviewed during this inspection. Due to the relatively few RSVs available for review, it was difficult to determine whether licensee identified deficiencies were properly addressed. The licensee was informed that the previously identified IFI (50-400/89-23-01), including the new Feedback Report System, would be reviewed during a subsequent inspection when more data are available.

No violations or deviations were identified.

3. Changes (83750)

The inspectors reviewed any major changes since the last inspection in organization, facilities, equipment, and programs that may affect occupational radiation protection. The Environmental and Radiation Control (E&RC) organization had been reorganized which mainly involved program area reassignments to the various RC foremen. The reorganization did not result in any significant reduction in force. The E&RC organization consisted of a Manager, RC Supervisor, ALARA Senior Specialist, and four RC Foremen. The licensee's RC technician staff levels were comparable to other facilities of the same size and design and were considered adequate to accomplish the radiation protection program objectives. In addition, the E&RC organization had a technical support group consisting of a project specialist and ten technical support specialists. The inspectors also noted that the licensee's Corporate Health Physics (HP) group had undergone an organizational analysis within the last year which resulted in a loss of some key technical support personnel, including a radwaste technical support specialist, and a minor reduction in force. It was noted that a corporate dose reduction steering committee was established in April 1990 to identify and implement dose reduction actions and programs. The adequacy of Corporate HP staff involvement in, and support of plant radiation protection program and dose reduction program should be evaluated during subsequent inspections after the corporate programs have been fully implemented.

The inspectors also observed that the licensee had made major equipment purchases to enhance the radiation protection and radioactive material control programs. The new equipment purchases included: bag monitor, tool monitor, portable respiratory fit testing facility, and a dedicated compressor and breathing air system.

No violations or deviations were identified.

4. External Exposure Control (83750)

10 CFR 20.202(a) requires a licensee to supply appropriate personnel monitoring equipment to, and require the use of such equipment by each individual who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 25 percent of the limits in 20.101.

10 CFR 20.202(c) requires all personnel dosimeters (except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to the hands and forearms, feet, and ankles) that require processing to determine the radiation dose and that are utilized by licensees to comply with paragraph (a) of this section, with other applicable provisions of 10 CFR Chapter I, or with conditions specified in a licensee's license to be processed and evaluated by a dosimetry processor holding current personnel dosimetry accreditation for the appropriate type of radiation or radiations being monitored from the



National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology.

10 CFR 20.408(b) and 20.409(a) requires a licensee to notify and report to the Commission and the individual, the radiation exposure of the individual involved upon termination of employment.

The inspectors determined by direct observation, discussion, and a review of procedures that the licensee's dosimetry program was being conducted in accordance with established procedures and 10 CFR 20 requirements. The inspectors also verified through discussions with cognizant licensee personnel that the dosimetry program was accredited by NVLAP for the radiations being monitored.

The inspectors reviewed employee termination data from January 1990 to August 1990. The inspectors compared employee termination data with actual letters that had been sent to individuals after termination and verified that the licensee was in compliance with 10 CFR 20.408 and 20.409 requirements.

During tours of the Radiologically Controlled Area (RCA) on August 7-9, 1990, the inspectors observed worker practices with regard to wearing and placement of personnel dosimetry. The inspectors did not identify any problems with workers' dosimetry practices.

No violations or deviations were identified.

5. Internal Exposure Control (83750)

10 CFR 20.103(a) requires the licensee to perform appropriate bioassays and assess intakes of radioactivity. The inspectors reviewed the whole body counting (WBC) equipment operation and discussed counting and calibration methods with equipment operators. The licensee's WBC equipment consisted of two Nuclear Data, Inc. chair units. The inspectors reviewed the annual calibration records, efficiency curves, and procedures. The calibrations of the two chairs were performed on January 18 and 22, 1990. Additionally, the inspectors reviewed the daily quality control (QC) checks from January 1990 to July 1990, and noted that check source activities (Cs-137/Co-60) and background counts were plotted and tracked daily. The licensee also uses an Eu-152 source to perform daily energy calibration checks. There were no obvious problems associated with these data. In general, the QC and calibration records were well organized and maintained.

The inspectors also reviewed the licensee's in-vitro bioassay program. The licensee's procedure required an individual to provide a urine and/or fecal sample if a confirmed whole body count measurement was greater than or equal to ten percent of the maximum permissible organ burden (MPOB). The licensee uses an offsite vendor to perform the analysis. The inspectors verified that during the last 12 months, no individual had a whole body



count measurement which exceeded the licensee's action level of two percent MPCB.

No violations or deviations were identified.

6. Control of Radioactive Materials and Contamination, Surveys, and Monitoring (83750)

a. Radioactive Material Control

10 CFR 20.207(a) requires a licensee to ensure that licensed materials stored in an unrestricted area are secured from unauthorized removal from the place of storage.

During routine tours of the facility, radioactive material storage areas were observed inside the restrictive RCA and were marked and labeled in accordance with procedures. Storage areas inside the protected area but outside the RCA were posted and locked secure. The licensee's RC personnel informed the inspectors of radioactive material storage locations outside the protected area in Warehouses No. 5 and No. 6. The licensee informed the inspectors that in order to tour the warehouses, a key would have to be obtained from security.

At approximately 1830 hours on Thursday, August 9, the inspectors coordinated with security to meet at Warehouse No. 5. The inspectors were unable to locate Warehouse No. 5. Licensee personnel working in the area indicated that Warehouse No. 5 had been torn down after plant construction. The inspectors discussed with RC personnel what materials were supposed to be in Warehouse No. 5 and had they been accounted for when the building was torn down. The licensee had no inventory of what was supposed to be in either warehouse, but assured the inspectors that radioactive material was only stored in Warehouse No. 6 at this time. The licensee RC personnel stated they had vague knowledge of the warehouse numbering system and at one time some radioactive material had been stored in a warehouse complex consisting of three buildings across from Warehouse No. 6 which they had referred to as Warehouse No. 5. This complex was correctly identified as Warehouses No. 1, No. 2, and No. 3.

Upon arrival at Warehouse No. 6, the inspectors noted that security personnel were not needed because Warehouse No. 6 was open. The inspectors toured the warehouse and observed three large open doors and miscellaneous equipment stored in the open unrestricted part of the warehouse. On one end of the warehouse, the inspectors observed a locked restricted storage area. The inspectors noted that the radioactive material was stored in the open unsecured part of the warehouse. The storage area was roped off and posted "Radioactive Materials Storage Area, Caution Radioactive Materials, Notify HP Prior to Entry." The inspectors also observed that Warehouse No. 6 was being used as a social picnic facility for contractor personnel



and that there were no apparent active personnel access restrictions in place.

The next day, the inspectors discussed the Warehouse No. 6 situation with cognizant licensee personnel. The licensee had neither recent surveys of the radioactive materials storage area nor an inventory of the material in storage. The inspectors discussed with the licensee concerns about the security of the radioactive material and whether the licensee had active controls over the area by which to prevent unauthorized removal of the radioactive material from the authorized storage location. The licensee ensured the inspectors that the warehouse personnel maintained strict control over all items entering and exiting Warehouse No. 6.

On Friday, August 10, at 1130 hours, the inspectors entered and toured all accessible areas to Warehouse No. 6 which included the radioactive materials storage area, and neither observed nor was confronted by anyone. The inspectors also noted that one item, a 55 gallon drum containing contaminated equipment, contained a label indicating radiation levels of 60 milliroentgens per hour (mR/hr) and was properly posted as a radiation area. The inspectors determined that Warehouse No. 6 was an unrestricted area and that the licensee did not have active controls in place to secure the stored radioactive material against unauthorized removal from the designated storage location.

The licensee was informed that the question on the proper security of licensed material stored in an unrestricted area would be considered an unresolved item* until RII management had reviewed the circumstances.

On August 14, 1990, the inspectors contacted the licensee by telephone to discuss the situation. The licensee informed the inspectors that surveys performed on the 55 gallon drum indicated radiation levels of 60-80 mR/hr and that the fuel racks stored in Warehouse No. 6 had been moved inside the protected area and the decontamination equipment had been shipped offsite. The inspectors informed the licensee that the failure to properly secure radioactive materials stored in an unrestricted area was an apparent violation of 10 CFR 20.207(a) requirements (50-400/90-16-01).

One violation for failure to properly secure licensed material stored in an unrestricted area was identified.

*An unresolved item is an item about which more information is required to ascertain whether it is an acceptable item, a deviation, or violation.



b. Personnel Contamination Events and Surveys

10 CFR 20.201(b) and 20.401 require the licensee to perform surveys and to maintain records of such surveys to demonstrate compliance with regulatory limits, respectively.

The inspector reviewed records of personnel contamination events (PCEs) for the 1989 refueling outage and through June 1990. During the 1989 refueling outage, the licensee experienced 93 PCEs (21 skin and 72 clothing). The plant goal for the outage was 25 skin contaminations and 75 clothing contaminations. The number of PCEs had significantly decreased from the first refueling outage (191 PCEs: 86 skin and 105 clothing). During the 1989 outage, 45 PCEs involved contamination levels less than or equal to 500 net counts per minute (ncpm), which indicates generally low levels of contamination in the work areas. Nine PCEs involved contamination levels greater than 5,000 ncpm. The licensee identified 18 PCEs occurring in areas designated as clean. The licensee made similar observations during the first refueling outage and noted that there appears to be some continued spread of low level contamination outside posted areas. The number of PCEs through June 1990 was 32. The licensee had established a goal of 52 PCEs. Nineteen PCEs occurred in the Fuel Handling Building (FHB) due to the increased activities associated with spent fuel received from the Brunswick Project.

No violations or deviations were identified.

7. Maintaining Occupational Exposures ALARA (83750)

10 CFR 20.1(c) states that licensees should make every reasonable effort to maintain radiation exposures as far below the limits specified in Part 20 as is reasonably achievable. Regulatory Guides 8.8 and 8.10 provide information relevant to attaining goals and objectives for planning and operating light-water reactors and provide a general operating philosophy acceptable to the NRC as a necessary basis for a program of maintaining occupational exposures as low as reasonably achievable (ALARA).

a. Radiation Source and Field Control

The inspectors reviewed the licensee's plans to utilize proven industry-developed methods of controlling out-of-core radiation sources and fields. Since the licensee's facility was relatively new and there has been no significant fuel integrity problems, unusual efforts to reduce source term have not been necessary. The licensee's corporate office had recently established a dose reduction committee which was tasked with identifying and implementing dose reduction actions and programs for the three nuclear projects: Brunswick, Harris, and Robinson. For the Harris Project, the committee made the following recommendations:



- Resistance thermocouple detector (RTD) bypass manifold removal
- Valve maintenance program
- Cobalt reduction program
- Improved outage planning
- Contract incentives

During the second refueling outage, at shutdown, the licensee added hydrogen peroxide to the primary system to induce crud bursts for subsequent removal of radioactive cobalt (mainly Co-58) which had become soluble during the hydrogen peroxide addition. The solubilized "crud" was then removed by the purification system ion exchangers. The chemical volume control system (CVCS) letdown flow was maintained at 120 gpm through one mixed bed demineralizer and the cation demineralizer for crud removal. During the 85 hours after the initial hydrogen peroxide addition and until CVCS flow was terminated, approximately 1,370 curies of Co-58 (calculated) was removed from the reactor coolant system (RCS).

b. Licensee Awareness and Involvement

The inspectors discussed with licensee representatives, workers' awareness and involvement in the ALARA program. The inspectors observed that the licensee had an ALARA suggestion program established; however, participation in the program has been limited. Since 1985, 44 suggestions have been submitted. As of August 9, 1990, only two ALARA suggestions have been submitted. At the time of this inspection, the licensee still had 19 ALARA action items open. The licensee had identified this ALARA program weakness and had initiated a plan to develop an ALARA suggestion incentive program and a tracking program to resolve previously identified ALARA action items. In addition, the inspectors and licensee representatives discussed the need to improve the system for providing prompt feedback to ALARA suggestion participants.

The inspectors also reviewed the licensee's ALARA committee organization and meeting minutes for 1990. The ALARA subcommittee chairman was the ALARA specialist. The committee consisted of a designated or alternate representative from the following groups: Administration, Maintenance, Operations, Modifications, QA/QC, Training, Environmental and Chemistry, Technical Support, HP, Planning and Scheduling, and Plant Nuclear Safety Committee. The committee met at least once per month or as needed to discuss ALARA suggestions, collective dose goals, objectives, high-dose (greater than 25 man-rem) job reviews, and other ALARA concerns. During 1990, committee meeting attendance was generally good except during June 1990 when only 50 percent of the departmental representatives were present. During the second refueling outage, the ALARA Subcommittee reviewed only two high dose jobs which were greater than or equal to 25 man-rem as required by AP-502, ALARA Subcommittee, Revision 2, April 22, 1988. The inspectors discussed with the licensee the need to consider lowering the threshold for ALARA Subcommittee pre-job



reviews to ensure that some of the lower dose higher volume jobs were receiving proper management review.

c. ALARA Goals and Objectives

The inspectors discussed with licensee representatives the 1990 station collective dose goal and the second refueling outage dose goal, and how the licensee was tracking and meeting those goals. In addition, the inspectors reviewed the licensee's ALARA report for the second refueling outage October 10 through December 22, 1989. The procedure was generally well written and organized and included the following items: (1) corrective action recommendations for procedural, material, design, organizational, and good practices; (2) ALARA outage dose goals, contamination goals, and radioactive waste goals; (3) refueling outage performance summaries, including RCS hydrogen peroxide treatment, accumulator venting and effluent release assessment during the integrated leak rate test; and (4) ALARA job evaluation summaries.

The collective dose goal for the second refueling outage (1989) was 120 man-rem, including 20 man-rem for what the licensee described as "emergent" dose. Emergent dose was defined as dose which became necessary after the outage had begun (unplanned work); for example, additional snubber testing and plugging of steam generator tubes. The actual collective dose for the 1989 outage was 137 man-rem, including 11 man-rem for emergent work. The amount of collective dose due to rework was approximately two man-rem. While the goal for planned work was exceeded, the total collective dose was still a significant decrease from the 154 man-rem expended during the first refueling outage. The total station collective dose in 1989 was 155 person-rem which was significantly below the 1989 national average of 292 person-rem for PWRs. The inspectors also reviewed the licensee's 1990 collective dose goal and performance. The licensee's 1990 collective dose goal was set at 72 person-rem since there was no refueling outage scheduled for 1990. As of August 8, 1990, the station's actual collective dose was 43 person-rem. The collective dose due to movement and storage of spent fuel from the Brunswick and Robinson projects was approximately 10 man-rem. The licensee had established a goal of 12 man-rem for the spent fuel activities.

No violations or deviations were identified.

8. Radwaste and Transportation (83750)

10 CFR 20.311(d)(1) requires any generating licensee who transfers radioactive waste to a land disposal facility or a licensed waste collector to prepare all wastes so that the waste is classified according to 10 CFR 61.55 requirements and meets the waste characteristic requirements in 10 CFR 61.56.

10 CFR 71.5 requires each licensee who transports licensed material outside the confines of its plant or other place of use, to comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR parts 170-189.

49 CFR 172.200 requires each person who offers a hazardous material for transportation to describe the hazardous material on the shipping paper in the manner described by this subpart.

10 CFR 71.137 requires a licensee to carry out a comprehensive system of planned periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program.

The inspectors reviewed shipping papers from December 1989 to August 1990 and verified they contained the information required by 49 CFR 172.200. The inspector noted that shipping papers for shipment No. 0790-072 on or about July 5, 1990 designated the shipping package to be a USDOT 7A Type A (7A) container with a NRC Certificate of Compliance (COC) No. USA/9073/A. The inspector asked the licensee for documentation demonstrating the package used met 7A specifications as required by 49 CFR 173.415(a). The licensee did not have the required documentation; however, the licensee claimed to be exempt from the 49 CFR 173.415(a) requirement because the shipment contained greater than Type A quantities of Low Specific Activity (LSA) waste. The licensee stated that greater than Type A quantities are to be shipped in Type B packages; however, 10 CFR 71.52 exempts the Type B package requirement for LSA shipments. 10 CFR 71.52 also states package safety performance criteria that must be met by packages used under this exemption. The container used, a Radlock 500 High Integrity Container (HIC), did meet the 10 CFR 71.52 requirements as evidenced by the COC.

The inspectors advised the licensee; after consultation with the NRC Transportation Branch Chief, Division of Safeguards and Transportation, Office of Nuclear Materials Safety and Safeguards; that when the Radlock 500 HIC was used to ship anything other than Type A quantities, the COC number (USA/9073/A) serves as the proper package designation on the shipping paper. When the Radlock 500 HIC is used to ship Type A quantities it should be designated as a 7A package on the shipping paper. The inspector discussed with the licensee potential confusing circumstances concerning the quantities inside the package that may arise during an accident situation because the package had been designated as both a 7A and a COC specification package.

The licensee stated that the staff had been advised of this matter and will properly designate the container when used in the future. Also, since the licensee may be shipping Type A quantities in the future using the Rad Lock 500 HIC, the licensee requested copies of the 7A performance test records from the manufacturer. These records are required to be on file for at least one year after each shipment using a 7A package.



The inspectors reviewed QA reports for transportation audits conducted from March 1989 to July 1990. The inspector verified that the audits were in accordance with the licensee's established QA procedures. The audit reports reviewed indicated no discrepancies with site and DOT shipping requirements.

The inspectors discussed the waste classification process and procedures with cognizant licensee personnel responsible for the task. The licensee uses vendor services for analysis of the waste. The inspector verified that waste classifications complied with 10 CFR 61 requirements.

No violations or deviations were identified.

9. Previously Identified Inspection Findings (92701, 92702)

- a. (Closed) Violation 50-400/88-28-01: Failure to provide a radiation monitoring device to an individual entering a high radiation area. Inspection Report No. 50-400/89-29 documented a review of the above violation and it was determined that the corrective actions had not been documented in a procedure. The inspectors reviewed procedure revisions to AP-504, "Administrative Controls for Locked/Restricted High Radiation Areas," Revision 2, December 1, 1989, and noted that the corrective actions had been adequately addressed by AP-504. This item is considered closed.
- b. (Closed) IFI 50-400/88-28-03: Proper use of protective clothing (PC) by plant personnel. During routine tours of the plant, including the Auxiliary Building, the inspectors observed a team of individuals properly wearing their protective clothing and respirators while repairing a valve. The inspectors also reviewed several PCE reports and noted that most of the PCEs involved foot and leg contamination on the clothing. No chest or abdomen contaminations of the skin were noted indicating that the individuals were at least properly fastening their PCs. There were no RSVs for improper PC dressing identified in 1990. This item is considered closed.

10. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 10, 1990. The inspectors summarized the scope and findings of the inspection, including the unresolved item. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents or processes as proprietary. During a telephone conversation on August 14, 1990, the inspectors informed licensee representatives that the unresolved item pertaining to the apparent failure to secure licensed radioactive materials stored in an unrestricted area (Warehouse No. 6) from unauthorized removal from the place of storage was reviewed by regional management and was considered as

a violation of 10 CFR 20.207. Dissenting comments were not received from the licensee.

Item Number

50-400/90-16-01

Description and Reference

V10 - Failure to secure licensed radioactive materials stored in an unrestricted area (Warehouse No. 6) from unauthorized removal from the place of storage (Paragraph 6).