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RECORD #253

TITLE: Health Physics Position: Clarification of nuclear power plant staff  
working hours

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SEP 17 1992

MEMORANDUM FOR: James H. Joyner, Chief, EPRPB, DRSS, Region I  
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FROM: LeMoine J. Cunningham, Chief  
Radiation Protection Branch  
Division of Radiation Protection  
and Emergency Preparedness  
Office of the Nuclear Reactor Regulation

SUBJECT: HEALTH PHYSICS POSITION: CLARIFICATION OF NUCLEAR POWER  
PLANT STAFF WORKING HOURS

In reviewing a Regional inspection report and resulting Notice of Violation (50-461/92004) it has come to my attention that clarification is needed concerning Technical Specifications (TS) staff working hours. Standard Technical Specifications state that for personnel performing safety related functions "... in the event overtime is to be used, on a temporary basis, the following guidelines shall be followed:

1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time,
2. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time,
3. A break of at least 8 hours should be allowed between work periods, including shift turnover time.

Any deviation from the above guidelines shall be authorized in advance by the Plant Superintendent or his deputy or higher levels of management."

In the reported violation, the 7-day week period was treated by the licensee as a fixed, one-week period, Sunday through Saturday. This allowed the 7-day window to be reset at the end of the week. The 7-day week period specified in TS's should be treated as any rolling 7-day period.

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Another concern in the inspection report was what the licensee interpreted as "shift turnover." Shift turnover consists of non-working activities such as casual conversation with fellow employees concerning watch relief, review of shift logs and the changing of clothing (modesty garments into street clothes and vice versa). The Radiation Protection-Operations supervisors misinterpreted this TS and permitted off-going technicians to complete radiological survey maps after shift relief. This time was incorrectly left off the time applied toward the 72-hour TS requirement, which added to the violation.

In addition, other activities, such as individual decontamination, whole-body counting, and decay (e.g., to permit the decay of radon gas daughter products), should not normally be considered part of shift turnover time. The time associated with these activities (as well as other related activities to be considered on a case by case basis) should be considered working time towards TS limits. This added time should not cause the individual to have less than 8 hours off between shifts (see example, attachment 1). Further, the licensee should not be cited for a violation of the TS limits for permitting the individual to work more than 16 hours straight (as this is not safety related work) as long as a 8 hour break is allowed between work periods.

Earlier drafts of this position were reviewed by your organizations and changes based on your comments were made. The TS Branch has reviewed this position for generic applicability and they agree with the position.

Original signed by James E. Wigginton *JEW*

LeMoine J. Cunningham, Chief  
 Radiation Protection Branch  
 Division of Radiation Protection  
 and Emergency Preparedness  
 Office of Nuclear Reactor Regulations

Enclosure:

As stated

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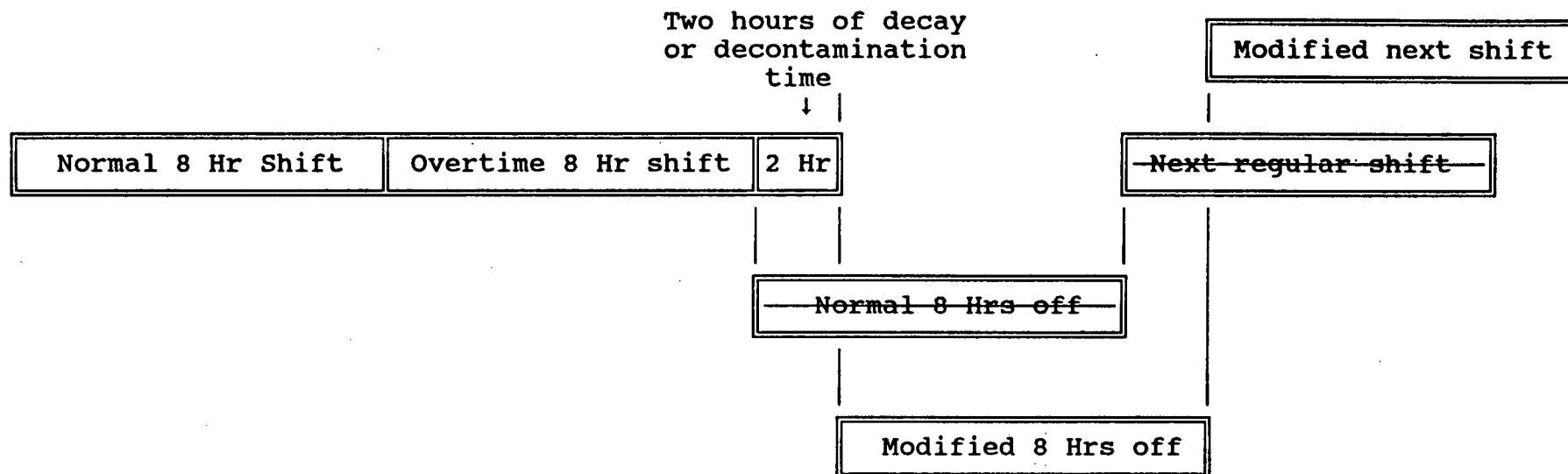
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## EXAMPLE SCENARIO



The above example shows a technician who worked a double shift and, after being relieved of his/her shift duties, was found to be contaminated. After an initial survey, decontamination, re-survey and whole body count, two hours of additional time elapsed which are not part of normal shift turnover. The technician was not performing technical specification (TS) work during this time so the TS that restricts work to 16 hours straight was not violated; however if the technician had reported for his next regular shift he/she would have been in violation for not having an 8 hour break between work periods. The technicians next shift would have to be modified (pushed back two hours) as shown.

ENCLOSURE 1