

246

RECORD #246

TITLE: Enforcement Policy For Hot Particle Exposure - Answers to
Three Questions

246



1/2/91

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 8 1990

MEMORANDUM FOR: James H. Joyner, Chief, FRSSB, DRSS, Region I
Douglas M. Collins, Chief, RPEPB, DRSS, Region II
L. Robert Greger, Chief, RPB, DRSS, Region III
Arthur B. Beach, Director, DRSS, Region IV
Gregory P. Yuhas, Chief, RRPB, DRSS, Region V

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

SUBJECT: ENFORCEMENT POLICY FOR HOT PARTICLE EXPOSURE -
ANSWERS TO THREE QUESTIONS

Information Notice No. 90-48, "Enforcement Policy for Hot Particle Exposures," dated August 2, 1990, was sent to all power reactor licensees. Since that time, nearly everyone who has telephoned the technical contacts with questions concerning the notice has asked if licensees are required to change any of their procedures as a result of this policy. Also, attendees at the recent Edison Electric Institute (EEI) Health Physics Group meeting in Long Beach asked Jim Wigginton if, as a result of this new policy, existing flexibility in determining compliance with the Part 20 dose limits has been eliminated.

The answer to the first question is no; the enforcement policy does not require any licensee to change any procedure. The enforcement policy states what the NRC will do, not what licensees are required to do. This question arose primarily because of the statement in the policy that "In determining whether a hot particle exposure has exceeded the limits of 10 CFR 20.101, ...hot particle exposures will not be added to skin doses from sources other than hot particles...." Licensees, who have been adding hot particle exposures to other skin doses, asked if they needed to change their procedures for recording skin doses and they were assured that they did not need to change, but that the NRC would follow this policy in determining whether or not an overexposure had occurred. However, because of this statement in the policy, any licensee who chooses to change record-keeping procedures so as not to add hot particle exposures to other exposures is free to do so.

Contact: John D. Buchanan
49-23184

The answer to the second question is also no; existing flexibility in determining compliance with the Part 20 dose limits has not been eliminated as a result of the policy. This question arose primarily as a result of the statement in the policy, taken from NCRP Report No. 106, that "...the hot particle will be assumed to have been in contact with the skin...even if found on the hair or clothing...unless it can be determined that the particle was never in contact with the skin." However, this statement applies to use of the policy after it has been determined that there has been an overexposure. It does not have to be applied in the determination of compliance or non-compliance with the dose limits in 10 CFR 20.101. However, once the NRC staff has been informed that there has been an overexposure, the staff is to use the assumptions required by the policy to determine whether a notice of violation will be issued and, if so, what the severity level should be.

The following example may help clarify the answer to the second question. Assume a hot particle has been found on the inside of an inner (modesty) garment of a worker. In determining the dose to the skin of the worker for comparison with the relevant Part 20 dose limit, the licensee and the NRC staff need not assume that the particle was on the skin during the period of the exposure. As in the past, the particle may be assumed to have been on the clothing where it was found and the dose to the skin may be determined using reasonable time and motion studies that take into account the movement of the garment and particle relative to the skin. If the dose determined using these assumptions is below the relevant Part 20 limit, the enforcement policy need not be considered. However, if the dose exceeds the limit, the enforcement policy, which is based on NCRP Report No. 106, must be applied by the NRC staff. In applying this policy to this example, it must be assumed that the particle was on the skin during the entire period of the exposure, because it cannot be shown that the particle was never on the skin.

The above example also raises the question of what dose should be recorded on Form NRC-5 (or equivalent). Since the requirements of Part 20 are not changed by the enforcement policy, the dose to be recorded is the dose calculated to determine compliance with the relevant Part 20 limit. However, licensees may, if they choose, add supplemental information concerning methods and values used by NRC staff in enforcement actions.

OE concurs with these positions.

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

Distribution:

Central Files
TEssig
PStohr
WBateman

PRPB R/F
JBuchanan
CNorelus
JLieberman

FCongel
RErickson
BMurray
JWNHickey

LJCunningham
WBeckner
RScarano
DACool

JWigginton
MKnapp
RAnderson
JMBell

PDR
MTaylor

PRPB:DREP
JDBuchanan:sg
10/29/90
Document Name: REGIONAL MEMO

SC:PRPB:DREP
for JWigginton
10/29/90

D:OE
JLieberman
10/27/90

C:PRPB:DREP
LJCunningham
10/30/90