

NOV 20 1984

For: The Commissioners

From: William J. Dircks
Executive Director for Operations

Subject: PROPOSED RULE ON LICENSES AND RADIATION SAFETY REQUIREMENTS
FOR WELL-LOGGING OPERATIONS (NEW 10 CFR PART 39)

Purpose: To obtain Commission approval of a notice of proposed
rulemaking.

Background: Licensed materials are used in the oil and gas industry to obtain information on the properties of underground formations. This technique involves lowering a sealed radioactive source, with an associated radiation detector, into a well on a wire line. A log of the well is produced by recording the way in which radiation emitted from the source is reflected back from the underground formation to the detector. Americium-241 and Cesium-137 are most commonly used for this purpose. There are currently 173 NRC licensees and about 400 Agreement State licensees authorized to use radioactive materials in well-logging operations.

Except for irretrievable well-logging sources, current NRC regulations do not contain specific radiation safety requirements related to the use of licensed materials in well-logging operations. Moreover, except for the general

Contact:
Anthony N. Tse
443-7902

safety requirements specified in 10 CFR Parts 20, 30, 40 and 70, these operations are regulated only through conditions on each individual license imposed on a case-by-case basis. This duplicates effort and may lead to discrepancies in requirements among licenses issued by NRC Regional Offices and the Agreement States.

Recognizing the need for comprehensive and consistent radiation safety standards, the Conference of Radiation Control Program Directors established a task force in 1974 to develop necessary standards for well-logging operations. The task force was composed of representatives from States, industry, and Federal agencies, including NRC. By 1981, a set of model regulations was proposed to the Conference by the task force and the Conference adopted the well-logging requirements as Part W of the "Suggested State Regulations for Control of Radiation." Four Agreement States (Arkansas, Kentucky, Oregon, and Texas) have already adopted Part W requirements as State regulations without significant changes. Several other Agreement States are considering adopting Part W requirements.

Discussion:

The staff is proposing to amend the NRC regulations to add 10 CFR Part 39, a new part dedicated exclusively to well-logging operations. The proposed rule would: (1) provide comprehensive and consistent regulations applicable to well-logging operations; (2) incorporate safety requirements similar to Part W of the Suggested State Regulations; (3) include requirements designed to reduce the likelihood of incidents involving the rupture of radioactive contamination; and (4) incorporate existing regulations on irretrievable well-logging sources now found in Parts 30 and 70. A new part is proposed because well-logging operations use byproduct material, source material, and special nuclear material. Thus, if these well-logging requirements were not included in one part, they would have to be duplicated more or less in Parts 30 and 70 as well as in Part 40.

This action involves no new resources requirements.

Recommendations:

That the Commission:

1. Approve the notice of proposed rulemaking (Enclosure T) which would add 10 CFR Part 39 pertaining to

radiation safety requirements in well-logging operations.

2. Certify that this rule, if adopted, will not have a significant economic impact upon a substantial number of small entities as required by the Regulatory Flexibility Act of 1980.
3. Note.
 - a. The proposed rule will be published in the Federal Register and provide for a 90-day comment period;
 - b. The appropriate Congressional Committees will be informed (Enclosure 2);
 - c. A public announcement will be issued (Enclosure 3);
 - d. The staff has prepared a draft regulatory analysis (Enclosure 4). The analysis indicates that the economic impact to small entities would be small;
 - e. The staff has prepared a draft environmental impact assessment (Enclosure 5). The assessment concludes that the proposed action would not significantly affect the quality of the human environment;
 - f. This proposed rule contains information collection requirements subject to the Paperwork Reduction Act of 1980 (44 USC 3501 et seq.). This rule has been submitted to the Office of Management and Budget for review and approval of the paperwork requirements;
 - g. The Chief Counsel for Advocacy of the Small Business Administration will be informed of the Certification regarding economic impact on small entities and the reasons for it as required by the Regulatory Flexibility Act;

- i. Agreement States have been given a draft of the proposed rule for review and comment and will be informed when the proposed rule is published. The final rule would be made a matter of compatability for Agreement States.

(Signed) William J. Dircks
William J. Dircks
Executive Director for Operations

Enclosures:

1. Notice of Proposed Rulemaking
2. Draft Congressional Letter
3. Draft Public Announcement
4. Draft Regulatory Analysis
5. Draft Environmental Assessment

Distribution:

DCS	JDavis, NMSS
CHRON/CIRC	RDeYoung, IE
RAMRB Subject File	JFouchard, PA
RBMingue	CHeltemes, Jr., AEOD
DFRoss	TMurley, RI
FGillespie	JO'Reilly RII
MLErnst	JKeppler, RIII
JCMalero	JCollins, RIV
JCBelote	JMartin, RV
ANTse (w/all enclosures)	RCunningham, NMSS
PNorry, ADI	DNussbaumer, SP
GCunningham, ELD	LCobb, IE
WOlmstead, EDL	JFelton, DRR
GWKerr, OSP	LBarry, RM

OFFICIAL RECORD COPY

RAMRB/DRAO/RES ASTse:mlr * 11/ 18 /84	RAMRB/DRAO/RES JCBelote * 11/ 20 /84	RAMRB/DRAO/RES JCMalero* 11/ 20 /84	DD:DRAO/RES MLErnst* 11/20 /84	DIR:DRAO/RES FGillespie* 11/ 20/84	EDD <i>up</i> 11/ 20 /84
DD:RES DFRoss 11/ /84	DIR:RES RBMingue 11/ /84	(telephone) NMSS B. Singer 11/29/84	ELD * T. Dorian 11/24/84	SP * W. Kerr 11/26/84	(telephone) IE * L. Cobb 11/27/84
(telephone) AEOD K. Black 11/26/84	PA * S. Gagner 11/21/84	(telephone) RM J. Clark 11/21/84	(telephone) REGI J. Joyner 11/26/84	(telephone) REGII S. Potter 11/27/84	(telephone) REGIII W. Axelsson 11/26/84
				(telephone) REGIV C. Cain 11/26/84	(telephone) REGV J. Montgomery 11/27/84

Note * See previous concurrence.