



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

JAN 8 1991

Hickey
action

For Mr. [unclear]

MEMORANDUM FOR: Richard E. Cunningham, Director
Division of Industrial and Medical Nuclear Safety

FROM: A. Bill Beach, Director
Division of Radiation Safety and Safeguards

SUBJECT: PROPOSED RULE FOR NOTIFICATION OF INCIDENTS
FOR MATERIALS LICENSEES

This refers to the October 24, 1990, memorandum, directed to you, regarding proposed rulemaking to amend 10 CFR Parts 20, 30, 40, and 70 concerning the Notification of Incidents. My review of the proposed changes and public comments has brought me to the conclusion that perhaps further reporting requirements should be considered to include another category of reportable issues.

The proposed changes to 10 CFR Parts 20, 30, and 40 address contamination at a licensee's facility, but fail to capture certain circumstances which I believe should be considered reportable for the purpose of alerting NRC to situations which may necessitate further review, or those which may represent failures in the licensee's program for control of licensed materials. Specifically, the revised reporting requirements do not address soil or water contamination which may result from contributions incurred during normal plant operations.

Although 10 CFR 20.405 does refer to contamination which may exist in both the licensee's restricted and unrestricted areas in a broad interpretation, the circumstances subject to reporting are limited. 10 CFR 20.405(a)(1)(iii) refers to concentrations in excess of any limit identified in the license for the restricted area, and § 20.405(a)(1)(v) refers to concentrations in excess of 10 times the applicable limit identified in Part 20 (Appendix B, Table II) or any limit identified in the license for unrestricted areas. Neither of these captures all foreseeable circumstances in that: for the first, not every materials licensee has soil or water contamination limits established by license condition; and for the second, the limits set forth in Part 20 refer only to releasable MPC's for air and water and fail to acknowledge soil contamination. Again, not every licensee has specific restrictions with regard to contamination in unrestricted areas established by license condition.

The proposed requirements for Parts 30 and 40 address, for reporting purposes, only contamination resulting from an "accidental event." Although this would address on-site contamination for both restricted and unrestricted areas, such contamination would only be reportable in the event of an accidental release.

The remaining applicable regulations are addressed under the general requirements of 10 CFR 20.201, which may be determined applicable for site decommissioning and subsequent release of property for unrestricted, or general use. The issue of soil contamination is not specifically addressed in the regulations nor have permissible concentration limits been established.

While some of the public comments received in response to the notice of Proposed Rulemaking (55 FR 19890) referenced discrimination between "planned" activities, such as maintenance, which might result in site contamination under controlled conditions and accidental or "unplanned" events resulting in site contamination, the unintentional contamination of a licensee's facility as a result of routine operations, discovered during the useful period of licensed activities, is not addressed.

I believe that this oversight is significant in that when such circumstances occur, they may serve as an indication that either the licensee has failed to observe controls established to minimize contributions to the site, or that the controls in existence are inadequate. In either case, it may be necessary to reevaluate licensee operations or recharacterize the site to determine if the contamination or its source will result in contributions to the surrounding environment. Without such reporting requirements, we must rely upon the routine inspection program to identify such circumstances and may be left to face the fact that environmental contributions have already occurred. The ex post facto identification of ground water contamination would render the NRC subject to earnest questioning by members of the general public and other regulatory agencies.

This issue was recently brought to light with our experience at the Sequoyah Fuels facility, although the question of reportability under such circumstances has also been noted in the past with well-logging licensees providing tracer services or those who process tracer materials.

In the Sequoyah Fuels case, soil and water contamination was discovered during a planned excavation and was determined to be the result of routine operations of the past. The licensee concluded that the initial discovery did not meet NRC notification criteria since it involved only the restricted area, "was something which had been there for years," and was not the result of an "event." It was fortuitous that as a result of previous discussions regarding communication issues, NRC was notified of the licensee's discovery. Our intense investigation of the incident resulted in several findings, including our conclusion that the licensee's monitoring program was inadequate to fully assess contributions to the surrounding environment and, as a result, that licensed material was released off site.

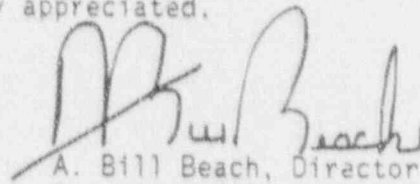
Licensees involved with the use of tracer material for the purpose of logging oil or gas wells are directed to report site contamination under the criteria prescribed in 10 CFR Part 20. Oversights similar to those noted above, soil contamination of the licensee's restricted and unrestricted areas as a result

of routine operations, exist for these programs as well as other unique situations not currently addressed in NRC regulations. These situations include potential contamination of soil or water at temporary jobsites during normal operations, including an unforeseen event such as a sand-out.

While I acknowledge that many of these events are discussed with NRC when they involve the removal of contaminated soils or fluids from the well site, this notification is usually with regard to disposal or storage of the material for decay and does not involve reporting of potential contamination remaining at the site. I also acknowledge the fact that a sand-out normally produces a large volume of material with a relatively low concentration of tracer material; however, our recent examination of more sophisticated frac techniques has resulted in our conclusion that, under certain circumstances, higher concentrations of tracer material could be returned to the surface. Imposing the requirement for licensees to report such events, similar to the reporting requirements for unretrievable sealed sources, would permit NRC to evaluate the licensee's assessment of the levels of contamination present and to review the licensee's proposed plan for removal of the material.

It is my view that requirements to provide notification of the circumstances described above should be included in the proposed changes to 10 CFR 20.403, with a specified telephonic notification period to the appropriate regional office within 24 hours. This would afford the staff the opportunity to respond in a timely fashion for those situations which may result in environmental contributions, but would not conflict with the 30-day reporting requirements for site contamination under 10 CFR 20.405.

Your review of this matter is greatly appreciated.


A. Bill Beach, Director
Division of Radiation Safety
and Safeguards

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REMARKS

Enclosed are authenticity
Citations for Parts
20, 31, 34 and 39

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PROJECTED AUTHORITY CITATION FOR REVISED PART 20

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

1. The authority citation for Part 20 is revised to read as follows:

AUTHORITY: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236); secs. 201, as amended, 202, 206, 68 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 20.408 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 20.101, 20.102, 20.103(a), (b), and (f), 20.104(a) and (b), 20.105(b), 20.106(a), 20.201, 20.202(a), 20.205, 20.207, 20.301, 20.303, 20.304, 20.305, 20.1102, 20.1201-20.1204, 20.1206, 20.1207, 20.1208, 20.1301, 20.1302, 20.1501, 20.1502, 20.1601(a) and (d), 20.1602, 20.1603, 20.1701, 20.1704, 20.1801, 20.1802, 20.1901(a), 20.1902, 20.1904, 20.1906, 20.2001, 20.2002, 20.2003, 20.2004, 20.2005(b) and (c), 20.2006, 20.2101-20.2110, 20.2201-20.2206, and 20.2301 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); § 20.2106(d) is issued under the Privacy Act of 1974, Pub. L. 93-579, 5 U.S.C. 552a; and §§ 20.102, 20.103(e), 20.401-20.407, 20.408(b), 20.409, 20.1102(a)(2) and (4), 20.1204(c), 20.1206(g) and (h), 20.1904(c)(4), 20.1905(c) and (d), 20.2005(c), 20.2006(b)-(d), 20.2101-20.2103, 20.2104(b)-(d), 20.2105-20.2108, and 20.2201-20.2207 are issued under sec. 161b, 68 Stat. 950, as amended (42 U.S.C. 2201(b)).

PART 31 - GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL

AUTHORITY: Secs. 81, 161, 183, 68 Stat. 935, 948, 954, as amended (42 U.S.C. 2111, 2201, 2233); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

Section 31.6 also issued under sec. 274, 73 Stat. 688 (42 U.S.C. 2021).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§31.5(c)(1)-(3) and (5)-(9), 31.8(c), 31.10(b), and 31.11(b), (c), and (d) are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b); and §§31.5(c)(4), (5), and (8), and 31.11(b) and (e) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

FEDERAL REGISTER CITATION: October 16, 1986; 36967.

DESIRED AUTHORITY CITATION: Yes.

EXPANDED CRIMINAL ENFORCEMENTS INSERTED: October 16, 1986; 36967.

SECTION LEVEL AUTHORITIES TO BE REMOVED: Yes - October 16, 1986; 36967.

**PART 34 - LICENSES FOR RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS
FOR RADIOGRAPHIC OPERATIONS**

AUTHORITY: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Section 34.32 also issued under sec. 206, 88 Stat. 1246, (42 U.S.C. 5846).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§34.20(a)-(e), 34.21(a) and (b), 34.22, 34.23, 34.24, 34.25(a), (b), and (d), 34.28, 34.29, 34.31(a) and (b), 34.32, 34.33(a), (c), (d) and (f), 34.41, 34.42, 34.43(a), (b), and (c), and 34.44 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201 (b)); and §§34.11(d), 34.25(c) and (d), 34.26, 34.27, 34.28(b), 34.29(c), 34.30, 34.31(c), 34.33(b) and (e), and 34.43(d) are issued under sec. 161c, 68 Stat. 950, as amended (42 U.S.C. 2201(c)).

FEDERAL REGISTER CITATION: January 10, 1990; 852.
DESIRED AUTHORITY CITATION: Yes.
EXPANDED CRIMINAL ENFORCEMENT PROVISIONS INCLUDED: Yes.
SECTION LEVEL AUTHORITIES TO BE REMOVED: None.

**PART 39 - LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL
LOGGING**

AUTHORITY: Secs. 53, 57, 62, 63, 65, 69, 81, 82, 161, 182, 183, 186, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§39.15, 39.31-39.51, 39.61-39.77 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); and §§39.15, 39.33-39.43, 39.61-39.67, 39.73-39.77 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

FEDERAL REGISTER CITATION: March 17, 1987; 52 FR 8235.

DESIRED AUTHORITY CITATION: Yes.

EXPANDED CRIMINAL ENFORCEMENT PROVISIONS INCLUDED: March 17, 1987;
52 FR 8235.

SECTION LEVEL AUTHORITIES TO BE REMOVED: None. . . .