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IN 86-98

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

December 2, 1986

IE INFORMATION NOTICE NO. 86-98: OFFSITE MEDICAL SERVICES

Addressees:

All nuclear power reactor facilities holding an operating license or a construction permit.


Purpose:

This information notice is provided to bring to the attention of licensees a new Commission policy on offsite medical services around nuclear power plants and a Federal Emergency Management Agency (FEMA) guidance memorandum addressing that policy. It is suggested that recipients review the information for applicability to their facilities. No written response is required.

Description of Circumstances:

Attached is FEMA Guidance Memorandum MS-1, "Medical Services," that addresses implementation of the Commission policy on offsite medical services published on September 17, 1986 in the Federal Register (51 FR 32904). This Guidance Memorandum was prepared in coordination with the NRC staff. As noted in the referenced policy statement, the Commission has determined that these modifications fall under the backfit rule's exception as necessary to bring facilities into compliance with a rule of the Commission.

No written response is required by this information notice. If you have any questions about this matter, please contact the Regional Administrator of the appropriate regional office or this office.

  
Edward L. Jordan, Director  
Division of Emergency Preparedness  
and Engineering Response  
Office of Inspection and Enforcement

Attachments:

1. FEMA Guidance Memorandum MS-1
2. List of Recently Issued IE Information Notices

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# Federal Emergency Management Agency

Washington, D.C. 20472

MEMORANDUM FOR: Regional Directors  
Acting Regional Directors

NOV 13 1986

FROM: *DM* Dave McLoughlin  
Deputy Associate Director  
State and Local Programs and Support

SUBJECT: Guidance Memorandum (GM) MS-1, Medical Services

The attached GM MS-1, Medical Services, is forwarded for your use in providing guidance to State and local officials in developing their radiological emergency response plans and in evaluating the medical services capabilities of State and local governments.

The origins of this GM and its development and approval have been somewhat different from other GM's. This GM was developed as a result of a series of legal decisions involving NRC which determined that the existing interpretation of the required pre-accident medical arrangements for contaminated injured individuals was not sufficient. Those decisions led NRC to issue a policy statement (Attachment B) on September 17, 1986, indicating that the NRC staff (in consultation with FEMA) would develop detailed guidance on the necessary pre-accident arrangements for medical services by November 17, 1986.

We have worked closely with NRC in recent weeks in the preparation of this guidance. Unfortunately, the short deadline did not permit our usual procedure of obtaining Regional and other comments before issuing this final guidance.

If you have any questions about MS-1, you may contact James Thomas at 646-2808. A list of all current operative GM's (Attachment C) is also provided for your information.

**ATTACHMENTS:**

- A. GM MS-1, Medical Services
- B. Emergency Planning - Medical Services,  
September 17, 1986, 51 FR 329 04
- C. List of Operative GM's



# Federal Emergency Management Agency

Washington, D.C. 20472

NOV 13 1986

GUIDANCE MEMORANDUM MS-1

MEDICAL SERVICES

## Purpose

This Guidance Memorandum (GM) provides interpretation and clarification of requirements contained in the Nuclear Regulatory Commission rule, 10 CFR 50.47 (b)(12) and the associated guidance in NUREG-0654/FEMA-REP-1, Revision 1, related to the provision of medical services for members of the general public.

## Background

The background is contained in a policy statement from the Nuclear Regulatory Commission (NRC) titled "Emergency Planning - Medical Services" (51 FR 32904). In this policy statement, NRC states its belief that 10 CFR 50.47(b)(12) ("arrangements are made for medical services for contaminated injured individuals") requires pre-accident arrangements for medical services (beyond the maintenance of a list of treatment facilities) for individuals who might be severely exposed to dangerous levels of offsite radiation following an accident at a nuclear power plant. As used in 10 CFR 50.47(b)(12) and planning Standard "L" of NUREG-0654/FEMA-REP-1, Revision 1, the term "contaminated injured" means 1) contaminated and otherwise physically injured; 2) contaminated and exposed to dangerous levels of radiation; or 3) exposed to dangerous levels of radiation.

## Guidance

10 CFR 50.47 (b)(12) requires that "Arrangements are made for contaminated injured individuals." In its policy statement the NRC determined that this standard requires pre-accident arrangements for medical services for offsite individuals who might be exposed to dangerous levels of radiation following an accident at a nuclear power plant. The following guidance applies to the evaluation of the medical services aspects of State and local emergency plans under the criteria in NUREG-0654/FEMA-REP-1.

## Standards, Evaluations Criteria, Areas of Reviews and Acceptance Criteria

### A. Assignment of Responsibility (Organization Control)

#### Planning Standard

Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

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### A.3. Evaluation Criterion

Each plan shall include written agreements referring to the concept of operations developed between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. The agreements shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information. These agreements may be provided in an appendix to the plan or the plan itself may contain descriptions of these matters and a signature page in the plan may serve to verify the agreements. The signature page format is appropriate for organizations where response functions are covered by laws, regulations or executive orders where separate written agreements are not necessary.

### Areas for Review and Acceptance Criteria

State or local governments should obtain written agreements with the listed medical facilities (Planning Standard L. Evaluation Criteria 1 and 3) and transportation providers (Planning Standard L. Evaluation Criterion 4). The written agreements should contain simple assurances that the providers have adequate technical information (e.g. treatment protocols) and treatment capabilities for handling "contaminated injured" individuals. An indication of Joint Commission on Accreditation of Hospitals (JCAH) accreditation will suffice for such assurance. (Note: Veterans Administration (VA), military and other government hospitals are not usually accredited by JCAH but usually have the desired capabilities.) If state or local governments do not obtain written agreements, the licensee should obtain written agreements with the listed medical facilities and transportation providers. If good faith efforts are not successful in a particular case, the licensee shall provide or arrange for adequate compensatory measures, e.g., obtain written agreements with other providers or provide temporary field medical care.

### L. Medical and Public Health Support

#### Planning Standard

Arrangements are made for medical services for contaminated injured individuals.

#### L.1. Evaluation Criterion

Each organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals.

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### Areas for Review and Acceptance Criteria

There should be one primary local hospital and one backup hospital for each site for the evaluation and emergency treatment of "contamination injured" members of the general public. Hospitals are generally distributed proportional to the population. Thus, at sites with low population and few hospitals, the primary local and backup hospitals for members of the general public could be the same as those for the utility employees and emergency workers.

#### L.3. Evaluation Criterion

Each State shall develop lists indicating the location of public, private and military hospitals and other emergency medical services facilities within the State or contiguous States considered capable of providing medical support for any contaminated injured individual. The listing shall include the name, location, type of facility and capacity and any special radiological capabilities. These emergency medical services should be able to radiologically monitor contaminated personnel, and have facilities and trained personnel able to care for contaminated injured persons.

### Areas for Review and Acceptance Criteria

The lists should be annotated to indicate the ambulatory/non-ambulatory capacities for providing medical support for "contaminated injured" members of the general public and any special radiological capabilities. This will enable state and local officials to direct members of the general public to those institutions capable of handling "contaminated injured" patients. In the event that local and regional medical resources need to be supplemented, additional medical resources would be available through the Federal Radiological Emergency Response Plan. These resources would include the Radiation Emergency Assistance Center/ Training Site at Oak Ridge, Tennessee and the National Disaster Medical System with headquarters in Rockville, Maryland.

#### L.4. Evaluation Criterion

Each organization shall arrange for transporting victims of radiological accidents to medical support facilities.

### Areas for Review and Acceptance Criteria

Because the early symptoms of persons exposed to dangerous levels of radiation are usually limited to nausea and vomiting, ambulances may not be required to transport such persons to medical facilities. Rather, non-specialized public and private vehicles can be used, supported, if necessary, with agreements in accordance with A.3. above. For other types of contaminated injured individuals, specialized transportation resources (e.g., ambulances) would be necessary and should be assured by agreements, if necessary, in accordance with A.3. above. Provisions should be made for the use of contamination control in transporting contaminated persons to medical facilities.

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### Planning Standard

#### O. Radiological Emergency Response Training

Radiological emergency response training is provided to those who may be called on to assist in an emergency.

#### O.4. Evaluation Criterion

Each organization shall establish a training program for instructing and qualifying personnel who will implement radiological emergency response plans. The specialized initial training and periodic retraining programs (including the scope, nature and frequency) shall be provided in the following categories:

- h. Medical support personnel

#### Areas for Review and Acceptance Criteria

Each hospital listed under Evaluation Criteria L.1 and L.3. shall have at least one physician and one nurse on call within about 2 hours who can supervise the evaluation and treatment of radiologically "contaminated injured" members of the general public. There are several sources for this training including NRC licensee sponsored training. Transportation providers should have basic training in contamination control. Examples include but are not limited to:

1. FEMA handbook, videotape, slides and instruction manual titled "Hospital Emergency Department Management of Radiation Accidents," SM 80/1984.
2. Courses from The Radiation Emergency Assistance Center/Training Site (REAC/TS) at Oak Ridge Associated Universities.
3. Audiocassette and text course, "Radiation Accident Preparedness: Medical and Managerial Aspects" by Science-Thru-Media Inc., 303 Fifth Avenue, Suite 803, New York, NY 10016.

#### N. Exercises and Drills

### Planning Standard

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

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## N.2. Evaluation Criterion

A drill is a supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. A drill is often a component of an exercise. A drill shall be supervised and evaluated by a qualified drill instructor. Each organization shall conduct drills, in addition to the biennial annual\* exercise at the frequencies indicated below:

### c. Medical emergency drills

A medical emergency drill involving a simulated contaminated individual which contains provisions for participation by the local support services agencies (i.e., ambulance and offsite medical treatment facility) shall be conducted annually. The offsite portions of the medical drill may be performed as part of the required biennial annual\* exercise.

### Areas for Review and Acceptance Criteria

State or local governments should provide for the conduct of appropriate drills and exercises which include "contaminated injured" individuals. These medical emergency drills involving the primary local (L.I.) hospital for state and local governments should be conducted annually. These drills should also test the capability of relocation centers to direct "contaminated injured" members of the general public to the appropriate hospital. If State or local governments cannot provide for the conduct of the drills, the licensee shall provide for the conduct of such drills. If good faith efforts are not successful in a particular case, the licensee shall provide or arrange for adequate compensatory measures.

### Implementation

State and local emergency response plans should reflect the provisions of this GM at the next annual update following 9 months from the effective date of this GM.

Plans for plants that do not have a full power operating license should reflect the provisions of this GM within 9 months of the effective date of this GM. The first medical drill reflecting the provisions of this GM should be conducted by the end of the next biennial exercise following 1 year from the effective date of this GM.

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\*Changes reflect language incorporated into GM PR-1.

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NRC Coordination

This Guidance Memorandum has been prepared in coordination with the NRC staff. As noted in the referenced NRC Policy Statement, the Commission has determined that these modifications fall under the backfit rule's exception as necessary to bring facilities into compliance with a rule of the Commission.



such additional arrangements, the Commission leaves to the informed judgment of the NRC staff, subject to general guidance from the Commission, the exact parameters of the minimally necessary arrangements for medical services. To fulfill this mandate the staff (and FEMA) will issue appropriate guidance to licensees, applicants, and state and local governments.

The United States Court of Appeals for the District of Columbia ("Court") vacated and remanded a previous Commission interpretation of planning standard (b)(12) which required only the development and maintenance of a list of treatment facilities on which post-event, *ad hoc* arrangements for medical treatment could be based. *GUARD v. NRC*, 753 F.2d 1144 (D.C. Cir. 1985). Pending final Commission action in response to the *GUARD* remand, the Commission issued a statement of interim guidance which permitted, pursuant to 10 CFR 50.47(c)(1), the issuance of full power licenses where the applicant satisfied the requirements of planning standard (b)(12) as interpreted by the Commission prior to *GUARD*, and where the applicant committed to full compliance with the Commission's final response to the *GUARD* remand. The Commission's prior interim guidance will continue to govern the issuance of full power licenses until issuance and implementation of the NRC staff's specific guidance on this matter, at which point the new policy will apply.

**EFFECTIVE DATE:** September 17, 1986.

**FOR FURTHER INFORMATION CONTACT:** C. Sebastian Alost, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone (202) 634-3224.

**SUPPLEMENTARY INFORMATION:**

### I. Introduction

In the wake of the Three Mile Island accident in 1979, the Nuclear Regulatory Commission ("NRC" or "Commission") promulgated regulations requiring its licensees and applicants for licenses to operate commercial nuclear power reactors to develop plans for emergency responses to accidents at their facilities. Among those requirements was 10 CFR 50.47(b)(12) ("planning standard (b)(12)"), which provides:

(b) The onsite and offsite emergency response plan for nuclear power reactors must meet the following standards:  
(12) Arrangements are made for medical services for contaminated injured individuals.

In *Southern California Edison Company, et al.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLJ-83-10, 17 NRC 528 (1983) ("SONGS

decision"), the Commission itself faced for the first time the question whether planning standard (b)(12) applied to members of the public who were exposed to offsite radiation following an accident at a nuclear power facility but were not otherwise injured, and if so to what extent. In considering this question, the Commission sought the views of the parties in the SONGS proceeding, reviewed the principal purposes of the planning standard, analyzed the likelihood of serious exposures to the public requiring emergency medical treatment, and evaluated the type of emergency treatment likely to be required. Based on this review, the Commission concluded as a generic matter that: (1) Planning standard (b)(12) applied to individuals both onsite and offsite; (2) "contaminated injured individuals" was intended to include seriously irradiated members of the public as well as members of the public who are not seriously irradiated but also are traumatically injured from other causes and radiologically contaminated; and (3) Adequate, post-accident arrangements for necessary medical treatment of exposed members of the public could be made on an *ad hoc* basis if emergency plans contained a list of local treatment facilities.

On appeal, the United States Court of Appeals for the D.C. Circuit concluded that the Commission had not reasonably interpreted planning standard (b)(12) when it generically found that a pre-accident list of treatment facilities constituted "arrangements" for post-accident medical treatment. *GUARD v. NRC*, 753 F.2d 1144 (D.C. Cir. 1985). For this reason, the Court vacated and remanded that part of the Commission's SONGS decision that had interpreted planning standard (b)(12) to require only the preparation of a list of local treatment facilities. However, in doing so, the Court made clear that the Commission had on remand, in its sound discretion, flexibility in fashioning a reasonable interpretation of planning standard (b)(12).

### II. Arrangements Beyond A List Of Treatment Facilities Required

When originally faced with the question whether the phrase "contaminated injured individuals" was intended to encompass, *inter alia*, members of the public who, as a result of an accident, were exposed to dangerous levels of radiation, the Commission found no explicit and conclusive definition of the phrase in the regulation itself or its underlying documents. Nonetheless, the

## NUCLEAR REGULATORY COMMISSION

### 10 CFR Part 50

#### Emergency Planning—Medical Services

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Statement of Policy on Emergency Planning Standard 10 CFR 50.47(b)(12).

**SUMMARY:** The Nuclear Regulatory Commission ("NRC" or "Commission") believes that 10 CFR 50.47(b)(12) ("planning standard (b)(12)") requires pre-accident arrangements for medical services (beyond the maintenance of a list of treatment facilities) for individuals who might be severely exposed to dangerous levels of offsite radiation following an accident at a nuclear power plant. While concluding that planning standard (b)(12) requires

Commission concluded that the prudent risk reduction purpose of the Commission's regulations required interpreting planning standard (b)(12) to apply to such offsite exposed individuals, given the underlying assumption of the NRC's emergency planning regulations that a serious accident could occur and the Commission presumption that such an accident could result in offsite individuals being exposed to dangerous levels of radiation (a presumption concurred in by the Federal Emergency Management Agency). After reconsideration of this matter following the *GUARD* decision, the Commission has decided to re-affirm this prior interpretation of planning standard (b)(12).

However, the Commission has come to a different result with respect to the minimum arrangements necessary for individuals who might be seriously exposed, but not otherwise injured, in a radiologic emergency. In originally resolving the scope of arrangements issue, the Commission focused on the particular needs of offsite exposed individuals for emergency medical treatment of their radiation injury. In this fashion, the Commission made a distinction between the need for immediate or near-term medical care, which was in its view the goal of planning standard (b)(12), and the need for long-term medical care. As to exposed individuals, the Commission found that:

the special hazard is posed by the radiation exposure to the patient. The nature of radiation injury is that, while medical treatment may be eventually required in cases of extreme exposure, the patients are unlikely to need emergency medical care (footnote omitted). The non-immediacy of the treatment required for radiation-exposed individuals provides onsite and offsite authorities with an additional period of time to arrange for the required medical services. (17 NRC 535-36.)

From this, the Commission reasoned that the long-term treatment needs of exposed individuals could be adequately met on *ad hoc* basis.

After reconsideration in light of the *GUARD* decision, the Commission has concluded that some additional planned arrangements beyond the development of a list of treatment facilities are necessary to provide additional assurance of effective management of emergency medical services in the hours or days following a severe accident. However, the Commission continues to believe that the long-term treatment needs of exposed individuals can be adequately met on *ad hoc* basis.

The minimally necessary arrangements for the person that may be exposed need not be elaborate. As previously stated by the Commission, "[i]t was never the intent of the regulations to require directly or indirectly that state and local governments adopt extraordinary measures, such as construction of additional hospitals or recruitment of substantial additional medical personnel, just to deal with nuclear plant accidents." 17 NRC at 533. Rather, the Commission believes that satisfactory arrangements should include (1) a list of local or regional medical treatment facilities and transportation providers appropriately annotated to show their capacities, special capabilities or other unique characteristics, (2) a good faith reasonable effort by licensees or local or state governments to facilitate or obtain written agreements with the listed medical facilities and transportation providers, (3) provision for making available necessary training for emergency response personnel to identify, transport, and provide emergency first aid to severely exposed individuals, and (4) a good faith reasonable effort by licensees or state or local governments to see that appropriate drills and exercises are conducted which include simulated severely-exposed individuals. If good faith efforts are not successful in a particular case, the licensee shall provide or arrange for adequate compensatory measures, consistent with the Commission's intent to limit the need for extraordinary measures noted above. The compensatory measures must be approved by NRC. This level of planning would help (1) provide additional assurance of the cooperation of medical facilities, (2) ensure proper training, (3) ensure the availability of transportation, and (4) demonstrate a capability to provide necessary services through drills and exercises.

The Commission has directed the staff to develop, consistent with this interpretation of the planning standard, detailed and specific guidance on the nature of the medical services to be available to exposed individuals and on the application of planning standard (b)(12) to NRC licensees and applicants for licenses to operate commercial nuclear power reactors. The Commission has also directed the staff to consider whether and under what criteria it is necessary or appropriate for the staff to verify the appropriateness of training, and drills or exercises associated with the handling of severely exposed persons.

The Commission has determined that the arrangements contemplated under this Statement of Policy are the minimum required by a reasonable reading of planning standard (b)(12). Accordingly, although implementation of this reading of the standard will entail some additions to, and some modifications of, the emergency procedures and organizations for which licensees are ultimately responsible, the requirements of the backfit rule, 10 CFR 50.109 (1986), for a cost-benefit analysis and a finding that the costs of the modifications are justified by a substantial increase in safety are not applicable, since these modifications fall under the backfit rule's exception for modifications necessary to bring facilities into compliance with a rule of the Commission. See 10 CFR 50.109 (a)(2) and (a)(4) (1986). The analysis which the backfit rule requires be done to justify the application of any of its exception provisions constitutes the core of this Statement of Policy. See *Id.*

### III. Interim Guidance

In its prior statement of policy, the Commission identified three factors which justified an interim policy of granting applicants for full-power license an equitable exception to the requirements of planning standard (b)(12) under 10 CFR 50.47(c)(1) where the applicant satisfied the requirements of planning standard (b)(12) as interpreted by the Commission prior to the *GUARD* decision and committed itself to full compliance with any additional requirements imposed by the Commission in response to the *GUARD* remand. Statement of Policy on Emergency Planning Standard 10 CFR 50.47(b)(12), 50 FR 20891 (May 21, 1985). The three factors were: (1) the possibility that the scope of planning standard (b)(12) would be limited; (2) the possibility that delay in compliance with the post-*GUARD* requirements could be found to be insignificant due to the low probability of accidents during the interim period; and (3) the possibility of "other compelling reasons" justifying a brief exception where applicants had relied in good faith upon prior Commission interpretation of planning standard (b)(12).

In this Statement of Policy interpreting planning standard (b)(12) the Commission directs the NRC staff to develop (in consultation with FEMA) and issue by 11/17/86 appropriate detailed guidance on the exact contours of the necessary arrangements consistent with the Commission's determination that planning standard (b)(12) require arrangements for medical

services (beyond the maintenance of a list of pre-existing treatment facilities) for offsite exposed individuals. The Commission believes that the last two factors, discussed in detail in its May 21, 1985 Statement of Policy, continue to justify reliance on the interim guidance for the period necessary for the NRC staff to issue and licensees, applicants, and state and local governments to implement the detailed guidance. Therefore, until appropriate detailed guidance consistent with this policy statement is issued and implemented, the Licensing Boards may continue to reasonably find that any hearing regarding compliance with 10 CFR 50.47(b)(12) shall be limited to issues which could have been heard before the Court's decision in *GUARD v. NRC*.

Dated at Washington, DC, this 12th day of September, 1986.

For the Nuclear Regulatory Commission.

Samuel J. Chalk,

Secretary of the Commission.

[FR Doc. 86-21058 Filed 9-16-86; 8:45 am]

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# Federal Emergency Management Agency

Washington, D.C. 20472

Attachment 1  
IN 86-98  
December 2, 1986  
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Attachment C

November 13, 1986

## OPERATIVE GUIDANCE MEMORANDA

<u>Number</u>	<u>Date</u>	<u>Title</u>
4	4/1/80	Radio Transmission Frequencies and Coverage
5	4/1/80 (Revised- 10/19/83)	Agreements Among Governmental Agencies and Private Parties
8	4/2/80 (Revised- 10/19/83)	Regional Advisory Committee Coordination with Utilities
16	8/7/80	Standard Regional Reviewing and Reporting Procedures for State and Local Radiological Emergency Response Plans
17	1/8/81	Joint Exercise Procedures
18	5/21/81 (Revised- 10/19/83)	FEMA Action to Qualify Alert and Notification Systems Against NUREG-0654/FEMA-REP-1, Rev. 1
20	10/19/83	Foreign Language Translation of Public Education Brochures and Safety Messages
21	2/27/84	Acceptance Criteria for Evacuation Plans
22	10/19/83	Recordkeeping Requirements for Public Meetings
24	4/5/84	Radiological Emergency Preparedness for Handicapped Persons
EX-1	7/15/85	Remedial Exercises
EX-2	7/15/85	Staff Support in Evaluating REP Exercises
PR-1	10/1/85	Policy on NUREG-0654/FEMA-REP-1 and 44 CFR 350 Periodic Requirements

IT-1	10/1/85	A Guide to Documents Related to the REP Program
PI-1	10/2/85	FEMA Action to Pilot Test Guidance on Public Information Materials and Provide Technical Assistance on Its Use
FR-1	12/3/85	Federal Response Center
MS-1	11/13/86	Medical Services
EV-2*	11/13/86	Protective Actions for School Children

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\*GM-21 will be retitled as GM EV-1 when it is revised.

LIST OF RECENTLY ISSUED  
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
86-97	Emergency Communications System	11/28/86	All power reactor facilities holding an OL or CP and fuel facilities
86-96	Heat Exchanger Fouling Can Cause Inadequate Operability Of Service Water Systems	11/20/86	All power reactor facilities holding an OL or CP
86-95	Leak Testing Iodine-125 Sealed Sources In Lixi, Inc. Imaging Devices and Bone Mineral Analyzers	11/14/86	All NRC licensees authorized to use Lixi, Inc. imaging devices
86-94	Hilti Concrete Expansion Anchor Bolts	11/6/86	All power reactor facilities holding an OL or CP
86-93	IEB 85-03 Evaluation Of Motor-Operators Identifies Improper Torque Switch Settings	11/3/86	All power reactor facilities holding an OL or CP
86-82 Rev. 1	Failures Of Scram Discharge Volume Vent And Drain Valves	11/4/86	All power reactor facilities holding an OL or CP
86-92	Pressurizer Safety Valve Reliability	11/4/86	All PWR facilities holding an OL or CP
86-91	Limiting Access Authorizations	11/3/86	All power reactor facilities holding an OL or CP; fuel fabrication and processing facilities
86-90	Requests To Dispose Of Very Low-Level Radioactive Waste Pursuant to 10 CFR 20.302	11/3/86	All power reactor facilities holding an OL or CP

OL = Operating License  
CP = Construction Permit