

Fire Protection and Fire Research Knowledge Management Digest

Office of Nuclear Regulatory Research

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Introduction

“Knowledge is power”

- Sir Francis Bacon (1561-1626)

The U.S. Nuclear Regulatory Commission (NRC) has an active knowledge management program that captures important historical events and critical information and preserves this knowledge for future generations.

One of the principal products of the Office of Nuclear Regulatory Research (RES) is knowledge; to this end, RES provides technical advice, tools, and information to support regulatory decisions. Accordingly, the Fire Research Branch (FRB) in the RES Division of Risk Analysis (DRA) initiated the knowledge management project by assembling a historic collection of NRC fire protection and research publications, with the objective of preserving and sharing almost 35 years of historic regulatory and scientific knowledge in a user-friendly format. This information is available for use by NRC inspectors, technical reviewers, licensees, and other interested stakeholders. The report is divided into two major sections: regulatory publications and technical publications.

The regulatory publications section provides vital information often needed during the fire protection inspection process, such as the pertinent parts of Title 10 of the *Code of Federal Regulations* Part 50 (10 CFR 50) “Domestic Licensing of Production and Utilization Facilities,” guidelines for fire protection in nuclear power plants, fire inspection manual, fire inspection procedure, generic letters, bulletins, information notices, circulars, administrative letters, regulatory issue summaries, and regulatory guides. This section will assist the inspectors during their preparation week, as all the relevant fire documents are available on one easy-to-use CD.

The technical publications section contains NRC technical reports (NUREGs) prepared by or for the NRC. This section includes fire test reports, fire protection studies, probabilistic risk assessments, and conference proceedings, all of which provide the background and technical support for the NRC’s fire protection requirements and guidelines.

The RES Fire Research Branch plans to maintain and update this CD annually to include new regulatory documents and technical reports.

Regulatory Publications

Regulatory publications are documents used by inspectors and licensees. All regulatory publications included in this CD are NRC official records and are available to the public. The regulatory publications part of the CD includes the following:

- *Title 10 of the Code of Federal Regulations Part 50*

This includes 10 CFR Section 50.48 "Fire Protection" and the appendices that form the licensees' fire protection requirements.

- *Guidelines for Fire Protection in Nuclear Power Plants*

This includes the Standard Review Plan for the Fire Protection Program and the NRC branch technical positions on the guidelines for fire protection.

- *Fire Inspection Manual*

This contains Significance Determination Process (SDP), power reactor inspection reports, and inspection documents and records. Also included is SDP guidance on identifying fire growth and damage sequences, mapping fire ignition sources, characterizing complex fire ignition sources, identifying targets and associated damage criteria, and analyzing nonsuppression probability.

- *Fire Inspection Procedure*

This part includes fire protection procedures used in fire protection inspection.

- *Generic Letter*

The generic letter (GL) addresses either an emergent or routine technical issue or a policy position with generic applicability. Some GLs may also request information or compensatory actions, or require a written response from licensees regarding matters of safety, security, safeguards, or environmental significance.

- *Bulletin*

A bulletin request licensee actions or information to address urgent, significant issues regarding matters of safety, security, safeguards, or environmental significance.

- *Administrative Letter*

The administrative letter informs addressees of specific regulatory or administrative information, or clarifies this information. The NRC discontinued the use of these letters in September 1999.

- *Information Notice*

The information notice communicates recently identified operational information to the nuclear industry and the results of recently completed research that may affect addressees. The NRC expects the nuclear industry to review the information for applicability to its facilities or operations, and to consider actions, as appropriate, to avoid similar problems.

- *Regulatory Issue Summary*

A regulatory issue summary is used to inform stakeholders about NRC endorsement of industry guidance on technical or regulatory matters, request the voluntary participation of the nuclear industry in staff-sponsored pilot programs, and inform the nuclear industry of opportunities for regulatory relief and other topics that do not require an action or information.

- *Circular*

A circular provides time-sensitive information related to public health and safety. The NRC discontinued the use of circulars in February 1985.

- *Regulatory Guide*

A regulatory guide (RG) describes acceptable methods for implementing agency regulations, evaluating postulated accidents, and analyzing data that the NRC staff needs in reviewing applications for permits and licenses. RGs are not substitutes for regulations, and compliance with them is not required.

- *SECY Papers*

The office of the Secretary (SECY) papers are reports and/or letters submitted by the Office of the Executive Director for Operations (EDO), Chief Financial Officer (CFO), Chief Information Officer (CIO), or other offices reporting directly to the Commission to inform or to request guidance from the Commission. The three kinds of SECY papers include policy issue papers (formulation of policy), rulemaking issue papers (promulgation of agency rules), and adjudicatory issue papers (granting, suspending, revoking or amending licenses).

- *Generic Issue*

A generic issue (GI) is a well-defined, discrete technical or security issues from which the risk or safety significance can be determined. A GI potentially affects the public health and safety, the common defense and security, and the environment. It must apply to two or more facilities, certificate holders, and/or licensees, and cannot be addressed through other regulatory programs or processes, existing regulations, policies, or guidance, or voluntary industry initiatives.

NRC staff or members of the public may propose a GI when there is an issue that indicates weaknesses in NRC rules and regulations.

Technical Publications

The technical publications (NUREG technical reports) include such topics as experimental investigations of fire and the behavior of components exposed to fires, surveys of plant practices, assessments of the safety implications of these practices, the development of analytical methodologies to perform such assessments, and reviews of fire probabilistic risk assessments performed by other organizations. These publications are intended to support regulatory activities that ensure fire safety.

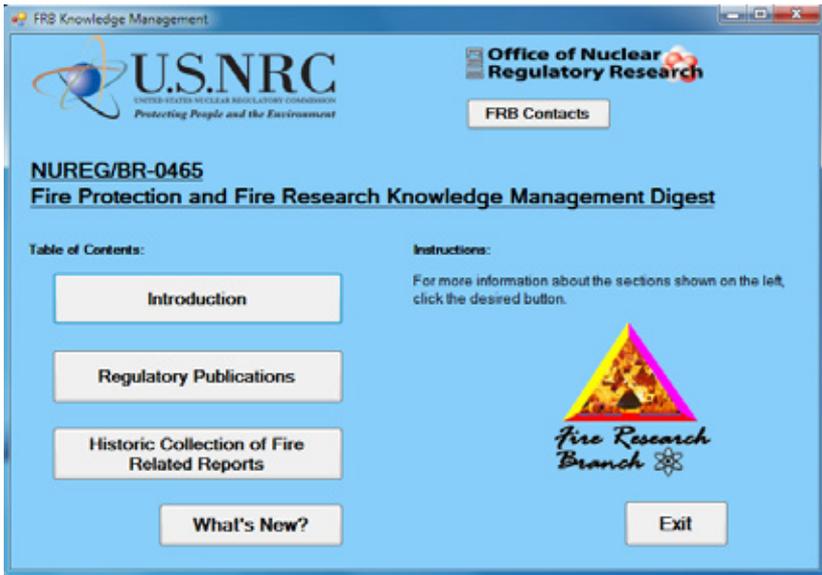
NUREGs are generally classified as the following:

- Reports prepared by NRC Staff (NUREG).
- Reports prepared by NRC contractors (NUREG/CR).
- Brochures prepared by or under the direction of NRC staff (NUREG/BR).
- Conference proceedings prepared by NRC staff or contractors (NUREG/CP).

CD Topics and Procedure

The enclosed CD, “Fire Protection and Fire Research Knowledge Management,” was programmed in Visual Basic.

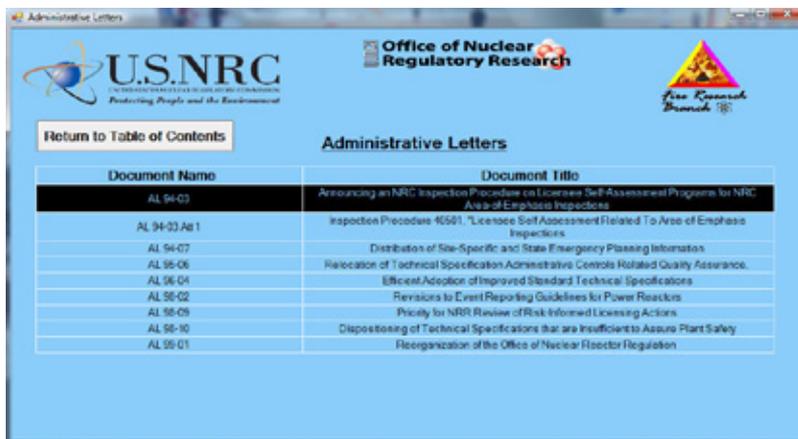
When you run the program, you will see an introductory screen, followed by the main window shown below:



Selecting the “Regulatory Publications” button will open a new window with a list of the regulatory publications available on the CD, as shown on the following page:

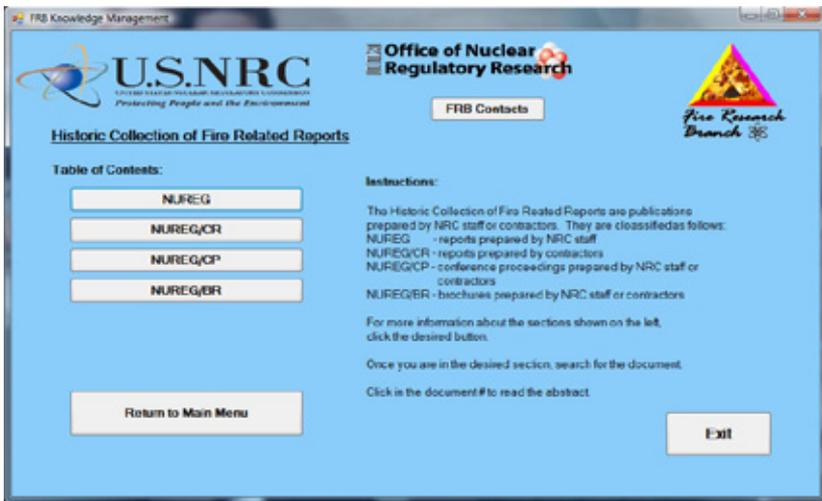


For example, selecting the “Administrative Letters” button opens the following window:



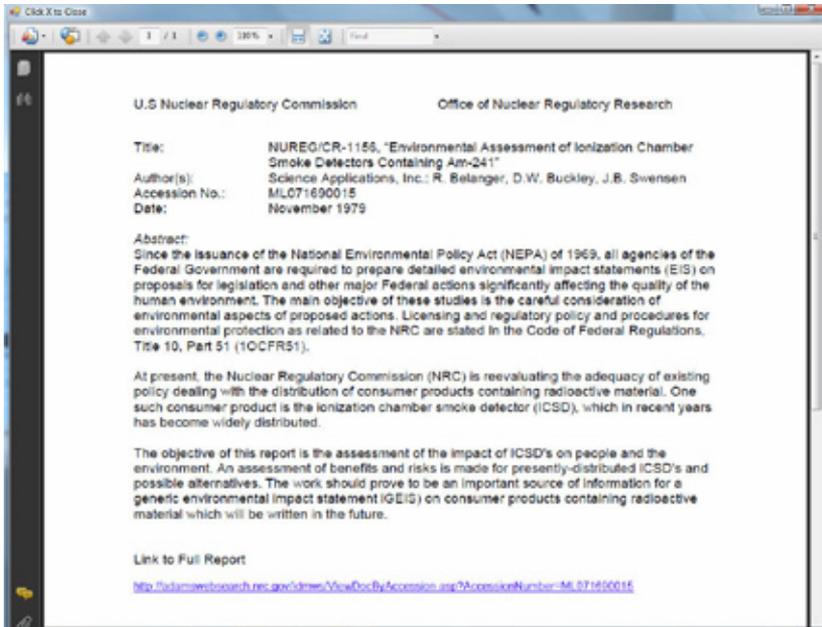
A portable document format (PDF) file containing the document will open when one of the documents in the list is selected.

When the “Historic Collection of Fire Related Reports” button is selected from the main window, the following window will be displayed:



Selecting one of the buttons for the respective documents types (NUREG, NUREG/CR, NUREG/CP, or NUREG/BR) will open a list of documents; selecting the desired document will open a PDF file. Please note that the document may not be displayed. Due to size limitations on the CD, we did not include many of the longer NUREG and NUREG/CR reports in their entirety. Instead, we have included a PDF file that includes the document’s abstract, its Agencywide Documents Access and Management (ADAMS) Accession No., and a link to the document on the NRC public Web site. An example of the file is shown on the next page.

Note that you will need an Internet connection for the link to work and to find the document on the NRC public Web site.



The screenshot shows a web browser window with the following content:

U.S. Nuclear Regulatory Commission Office of Nuclear Regulatory Research

Title: NUREG/CR-1155, "Environmental Assessment of Ionization Chamber Smoke Detectors Containing Am-241"

Author(s): Science Applications, Inc.; R. Belanger, D.W. Buckley, J.B. Swensen

Accession No.: ML07160015

Date: November 1979

Abstract:
Since the issuance of the National Environmental Policy Act (NEPA) of 1969, all agencies of the Federal Government are required to prepare detailed environmental impact statements (EIS) on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. The main objective of these studies is the careful consideration of environmental aspects of proposed actions. Licensing and regulatory policy and procedures for environmental protection as related to the NRC are stated in the Code of Federal Regulations, Title 10, Part 51 (10CFR51).

At present, the Nuclear Regulatory Commission (NRC) is reevaluating the adequacy of existing policy dealing with the distribution of consumer products containing radioactive material. One such consumer product is the ionization chamber smoke detector (ICSD), which in recent years has become widely distributed.

The objective of this report is the assessment of the impact of ICSD's on people and the environment. An assessment of benefits and risks is made for presently-distributed ICSD's and possible alternatives. The work should prove to be an important source of information for a generic environmental impact statement (GEIS) on consumer products containing radioactive material which will be written in the future.

Link to Full Report
<http://www.nrc.gov/docs/1979/nrc1155/nrc1155.pdf>

Questions and Answers

1. Question: Do I need to have Visual Basic or MicrosoftAccess installed on my computer before I use the CD?
Answer: No. The application is distributed as an executable file with a protected database.
2. Question: Do I need to have Internet access to see the publications?
Answer: While you do not need access to the Internet to read the regulatory publications, you will need internet access to open many of the NUREG reports.
3. Question: What if I cannot find an electronic copy of an old NUREG report that I have in hardcopy?
Answer: FRB has made every attempt to locate, recover, and preserve the reports. If you have a hardcopy of a report that you think this report should include, please contact Aixa Belen-Ojeda at (301) 251-7597, or at aixa.belen@nrc.gov.

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NUREG/BR-0465, Revision 1
February 2010