



DOCKET NUMBER

PETITION FILE PRIM 50-72

(66FR13267)

DOCKETED  
USMRC

# Union of Concerned Scientists

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November 30, 2000

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

Ms. Annette Vietti-Cook, Secretary  
United States Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: PETITION FOR RULEMAKING – MANDATORY SUBMITTAL OF  
INFORMATION FOR REACTOR OVERSIGHT PROGRAM**

Dear Ms. Vietti-Cook:

Pursuant to §2.802 of Title 10 of the *Code of Federal Regulations*, the Union of Concerned Scientists (UCS) submits the enclosed petition for rulemaking:

This petition for rulemaking seeks to require nuclear power plant owners to submit the information needed for the NRC's revised reactor oversight program. The information covered by this petition for rulemaking is the "report of selected reactor facility performance attributes (i.e., performance indicator (PI) data)" as discussed in NRC Regulatory Issue Summary 2000-08.<sup>1</sup> This information has been voluntarily submitted by all nuclear power plant owners since April 2000. This petition for rulemaking seeks to codify current practices.

UCS believes that if the NRC persists in protecting public health and safety via this program, then it is absolutely imperative that the agency require rather than encourage participation by all nuclear plant owners. We feel that this rulemaking satisfies all four of the NRC's goals as described in the enclosure.

UCS believes that the scope and objectives of this petition are clearly defined, but we would welcome the opportunity to meet with the NRC staff and other stakeholders in a public forum to discuss this important issue.

Sincerely,

David Lochbaum  
Nuclear Safety Engineer

<sup>1</sup> Nuclear Regulatory Commission, Regulatory Issue Summary 2000-08, "Voluntary Submission of Performance Indicator Data," March 29, 2000. (Available at <http://www.nrc.gov/NRC/GENACT/GC/RI/2000/ri00008.html> or in ADAMS using accession no. ML003685821).

Template = SECY-067

SECY-02

## Petition for Rulemaking — Mandatory Submittal of Information for Reactor Oversight Program

On March 28, 2000, the Nuclear Regulatory Commission approved the implementation of a revised reactor oversight program at all operating nuclear power plants, except D C Cook.<sup>2</sup> The revised reactor oversight program thus became a vital tool of the agency in carrying out its mission of protecting public health and safety as best described by the agency itself:

The NRC provides continuous oversight of plants through its reactor oversight process (ROP) to verify that they are being operated in accordance with NRC rules and regulations. The NRC has full authority to take whatever action is necessary to protect public health and safety and may demand immediate licensee actions, up to and including a plant shutdown.<sup>3</sup>

According to the NRC, the revised reactor oversight process calls for:

- Focusing inspections on activities where the potential risks are greater
- Applying greater regulatory attention to nuclear power plants with performance problems, while maintaining a normal level of regulatory attention on facilities that perform well
- Using objective measurements of the performance of nuclear power plants
- Giving both the public and the nuclear industry timely and understandable assessments of plant performance
- Reducing unnecessary regulatory burden on nuclear facilities
- Responding to violations of regulations in a predictable and consistent manner that reflects the potential safety impact of the violations<sup>4</sup>

These calls are to be answered "by a combination of objective performance indicators and by the NRC inspection program."<sup>5</sup> According to the NRC:

Performance indicators use objective data to monitor performance within each of the "cornerstone" areas. The data which make up the performance indicators will be generated by the utilities and submitted to the NRC on a quarterly basis. Each performance indicator is measured against established thresholds which are related to their effect on safety. While performance indicators can provide insights into plant performance for selected areas, the NRC's inspection program provides a greater depth and breadth of information for consideration by the NRC in assessing plant performance.<sup>6</sup>

The NRC supplements the insights from the performance indicators with what it calls the baseline inspection program:

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<sup>2</sup> Nuclear Regulatory Commission, Staff Requirements Memorandum SRM-00-0049, "Staff Requirements - SECY-00-0049 - Results of the Revised Reactor Oversight Process Pilot Program (Part I)," March 28, 2000. (Available on the internet at <http://www.nrc.gov/NRC/COMMISSION/SRM/2000-0049srm.html>).

<sup>3</sup> Nuclear Regulatory Commission, "Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>).

<sup>4</sup> Nuclear Regulatory Commission, "NRC Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/OPA/primer.htm>).

<sup>5</sup> Nuclear Regulatory Commission, "NRC Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/OPA/primer.htm>).

<sup>6</sup> Nuclear Regulatory Commission, "NRC Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/OPA/primer.htm>).

The baseline inspection program has three parts -- inspection of areas not covered by performance indicators or where a performance indicator does not fully cover the inspection area; inspections to verify the accuracy of a licensee's reports on performance indicators; and a thorough review of the utility's effectiveness in finding and resolving problems on its own.<sup>7</sup>

The NRC revised the procedures used by its inspectors under the new reactor oversight process. The revised procedures define how often areas must be inspected. For example, certain areas must be inspected four times a year while other areas need only be inspected once every three years.<sup>8</sup> The scope of the inspection program is directly affected by the availability of the performance indicators:

Under the baseline inspection program, all areas where there is a need to inspect a licensee's performance are defined as inspectable areas. Inspections within these areas were adjusted where licensee performance to meet a cornerstone objective is adequately gauged by performance indicators. All the important aspects of a cornerstone area are inspected where a PI has not been established (e.g., design). In cornerstone areas where the PIs provide only limited indication of performance, the inspectable areas provide indication of the aspects not measured (e.g., operator performance during an event). If performance of the cornerstone objective in a cornerstone area is sufficiently measured by a PI, the inspection effort in the baseline program only verifies that the performance indicator is providing the intended data.<sup>9</sup>

Thus, the NRC inspection program is not a fully redundant backup to the performance indicators. Both the inspection program results and the performance indicators must be available to get a full picture of nuclear plant safety levels. If the performance indicator information is not available, the NRC cannot get an accurate assessment of plant safety levels.

The performance indicators and the results from the baseline inspection program are used by the NRC to evaluate safety levels at each nuclear plant and identify areas for future inspections:

Each calendar quarter, the resident inspectors and the inspection staff in the regional office will review the performance of all nuclear power plants in that region, as measured by the performance indicators and by inspection findings. Every six months, this review will be expanded to include planning of inspections for the following 12-month period.

Each year, the final quarterly review will involve a more detailed assessment of plant performance over the previous 12 months and preparation of a performance report, as well as the inspection plan for the following year. This review will include NRC headquarters staff members, the regional staff, and the resident inspectors.

These annual performance reports will be available to the public on the agency's web site, and the NRC staff will hold public meetings with utilities to discuss the previous year's performance at each plant.<sup>10</sup>

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<sup>7</sup> Nuclear Regulatory Commission, "NRC Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/OPA/primer.htm>).

<sup>8</sup> Nuclear Regulatory Commission, Inspection Manual, Manual Chapter 2515, "Light-Water Reactor Inspection Program - Operations Phase," April 3, 2000. (Available on the internet at <http://www.nrc.gov/NRC/IM/2515.html>).

<sup>9</sup> Nuclear Regulatory Commission, Inspection Manual, Manual Chapter 2515A, "Appendix A: Risk-Informed Baseline Inspection Program," September 12, 2000. (Available on the internet at <http://www.nrc.gov/NRC/IM/2515a.html>).

<sup>10</sup> Nuclear Regulatory Commission, "NRC Reactor Oversight Process," viewed October 27, 2000. (Available on the

Despite the importance of the performance indicators in the reactor oversight program and the fact that the NRC's revised inspection program by itself cannot provide a complete evaluation of safety levels, nuclear plant owners are not required to submit the performance indicator information to the NRC. The submission of this data is voluntary even though the NRC concluded:

The use of PI [performance indicator] information is a basic element of the RROP [revised reactor oversight program] and is expected to contribute to an overall reduction in NRC regulatory burden on licensees.<sup>11</sup>

The Union of Concerned Scientists was actively involved in the development of the reactor oversight program. UCS served on the Pilot Program Evaluation Panel formally established by the NRC to independently assess the trial implementation of the reactor oversight program at eight nuclear plant sites in 1999. UCS presented its views on the reactor oversight process to the NRC Chairman and Commissioners during a public meeting. The first criticism presented by UCS was that the public perceives the NRC allowing the nuclear industry to regulate itself through the collection and voluntary submittal of performance indicator information. UCS recommended:

**The NRC must appear more authoritative to gain the confidence of the public. The NRC should obtain an irrevocable commitment from all plant owners to participate in the revised reactor oversight process before industry-wide implementation.** [emphasis in original].<sup>12</sup>

No such commitment has been obtained by the NRC. The submission of performance indicator information—which is vital to the reactor oversight program—remains voluntary. UCS requests that the NRC revise its regulations to require its reactor licensees to submit the performance indicator information. The NRC's stated objectives for its mission are:

- maintaining safety
- enhancing public confidence
- improving the effectiveness and efficiency of [NRC] processes
- reducing unnecessary regulatory burden<sup>13</sup>

The petitioners conclude that the proposed rulemaking satisfies all four objectives. The factors supporting this conclusion are summarized below.

Maintaining safety: As documented by the NRC:

The new assessment program [reactor oversight program] is substantially different from the previous process. It makes greater use of objective performance indicators. Together, the

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internet at <http://www.nrc.gov/OPA/primer.htm>).

<sup>11</sup> Nuclear Regulatory Commission, Regulatory Issue Summary 2000-08, "Voluntary Submission of Performance Indicator Data," March 29, 2000. (Available at <http://www.nrc.gov/NRC/GENACT/GC/RI/2000/ri00008.html> or in ADAMS using accession no. ML003685821).

<sup>12</sup> David Lochbaum, Union of Concerned Scientists, to Chairman and Commissioners, Nuclear Regulatory Commission, "Revised Reactor Oversight Process," March 1, 2000. (Available on the internet at <http://www.ucsusa.org> as a pdf file called REACTOR OVERSIGHT from the nuclear safety page).

<sup>13</sup> Nuclear Regulatory Commission, "Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>).

indicators and inspection findings provide the information needed to support reviews of plant performance, to be conducted on a quarterly basis, with the results posted on the NRC's internet site.<sup>14</sup>

The performance indicators are an essential element of the reactor oversight program. Their omission would degrade the ability of the reactor oversight program to assess nuclear plant performance levels. The NRC staff today might be able to compensate for missing performance indicators from one or two nuclear plants by conducting additional inspections. NRC inspectors could be expected to revert to broader inspection procedures they used as recently as this spring. However, as time passes and familiarity with the old ways fades, that capability also diminishes. In addition, it is uncertain that the NRC staff has, or will continue to have, sufficient inspection staff to compensate for the eventuality where an owner operating numerous reactors suddenly decides not to submit the performance indicator information for any plant.

Thus, the proposed rulemaking satisfies the NRC's objective of maintaining safety by ensuring that the agency continues to receive the information it vitally needs to assess nuclear plant performance levels.

Enhancing public confidence: Obviously, public confidence can only be enhanced by requiring plant owners to submit information that is vitally needed by the NRC to conduct its reactor oversight program. Just as the Internal Revenue Service does not rely on the voluntary submission of tax returns by American taxpayers, the NRC should not rely on voluntary submission of vital safety information by nuclear plant owners.

Improving the effectiveness and efficiency of [NRC] processes: The NRC made substantive changes within its reactor oversight program predicated upon the assumption that nuclear plant owners would submit the performance indicator information. For example, the NRC inspection program was scaled back to only confirmatory checks in areas covered by performance indicators. Any effectiveness and efficiency gains realized from the reactor oversight program would be sacrificed if one or more plant owners opted not to submit performance indicator information. The NRC's effectiveness and efficiency would be impaired by having to inspect what had been covered by the performance indicators.

Reducing unnecessary regulatory burden: Every nuclear plant owner in the United States today must consider the submission of the performance indicator information as a necessary regulatory burden. Otherwise, they would not have participated in the voluntary program that has been in place since April 2000. But if the performance indicator information were to show that safety levels declined, no plant owner must have the option of suddenly viewing the submission as an unnecessary regulatory burden simply to avoid NRC scrutiny of the problem areas. By merely codifying current industry practice, no unnecessary regulatory burden is introduced.

Section 2.802 of Title 10 of the Code of Federal Regulations permits "Any interested person" to petition the NRC to issue, amend, or rescind any regulation. Paragraph (c) requires that interested person to satisfy three requirements:

- (1) Set forth a general solution to the problem or the substance or text of any proposed regulation or amendment, or specify the regulation which is to be revoked or amended;
- (2) State clearly and concisely the petitioner's grounds for and interest in the action requested;

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<sup>14</sup> Nuclear Regulatory Commission, "NRC Reactor Oversight Process," viewed October 27, 2000. (Available on the internet at <http://www.nrc.gov/OPA/primer.htm>).

(3) Include a statement in support of the petition which shall set forth the specific issues involved, the petitioner's views or arguments with respect to those issues, relevant technical, scientific or other data involved which is reasonably available to the petitioner, and such other pertinent information as the petitioner deems necessary to support the action sought. In support of its petition, petitioner should note any specific cases of which petitioner is aware where the current rule is unduly burdensome, deficient, or needs to be strengthened.<sup>15</sup>

UCS believes that these three criteria have been amply satisfied by the material provided above. Nevertheless, we will conclude by specifically addressing each of the three criteria:

1. The general solution to the problem of vital information needed by the NRC to assess nuclear plant safety levels being subject to the whims of plant owners is to make submission of that information mandatory. Therefore, the NRC should revise its regulations to require nuclear plant owners to submit the performance indicator information needed for the reactor oversight program.
2. The Union of Concerned Scientists has been actively involved in safety issues at US nuclear power plants for more than 20 years. UCS has been specifically involved in the development of the reactor oversight program over the past two years. UCS has previously identified the vulnerability of the reactor oversight program to the cooperation of plant owners and considers the proposed rulemaking as the best, permanent fix to that safety problem.
3. The NRC must have performance indicator information from all nuclear power plants if the agency is to meet its stated objectives of maintaining safety, enhancing public confidence, improving the effectiveness and efficiency of its processes, and reducing unnecessary regulatory burden. This petition is replete with information supporting that statement. The recent example of the vehicle tire safety issue appears to emphasize the need for definitive requirements for submission of safety information to federal regulators. Congressional hearings into that matter revealed that the tire company had information on potential safety problems that it delayed transmitting to the federal regulator. In addition, the tire company was less than aggressive in responding to requests by the federal regulator for information. The NRC must revise its regulations to prevent similar abuses.

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<sup>15</sup> 10 CFR Part 2, §2.802, "Petition for rulemaking," as amended May 20, 1997. (Available on the internet at <http://www.nrc.gov/NRC/CFR/PART002/part002-0802.html>).