

November 27, 2006

MEMORANDUM TO: Chairman Klein
Commissioner McGaffigan
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons

FROM: Luis A. Reyes */RA/*
Executive Director for Operations

SUBJECT: BEST ESTIMATE OF THE TOTAL NUMBER OF INDIVIDUALS WHO
WOULD NEED TO BE FINGERPRINTED FOR COMPLIANCE WITH
SECTION 652 OF THE ENERGY POLICY ACT OF 2005

At a May 15, 2006, staff briefing of the Commission on the status of implementation of the Energy Policy Act (EPA) of 2005, the staff discussed the status of a rulemaking to implement Section 652 of the EPA. During this discussion, Commissioner McGaffigan asked for an estimate of the number of individuals that the staff envisioned would be subject to the Section 652 fingerprinting and background check requirements. There was some discussion, at the briefing, about the types of licensees who might be covered under a Section 652 rule, and some estimates given on the number of persons who might be affected, but the staff indicated it would get back to the Commission with an estimate.

In a Staff Requirements Memorandum (SRM) dated June 8, 2006, the Commission requested that the staff provide a best estimate of the total number of individuals who would need to be fingerprinted for compliance with Section 652 of the EPA.

Currently, the proposed rule implementing Section 652 of the EPA is in preparation, with issuance of a proposed rule scheduled for the Fall of 2007 and a final rule for the Fall of 2008. As part of the Section 652 rulemaking, the staff is developing a regulatory impact analysis (RIA) and an Office of Management and Budget (OMB) Paperwork Reduction Act analysis. In developing costs and paperwork burden related to a Section 652 proposed rule, the RIA and the OMB package will develop estimates of the numbers of licensees affected, the numbers of persons at each licensee who would require unescorted access and therefore be covered by the fingerprinting requirements of the rule, and the resultant total numbers of individuals affected.

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Although a final determination has not been made with regard to the scope or content of a Section 652 proposed rule, using the assumptions noted in the enclosure, it is estimated that less than approximately 2,000 U.S. Nuclear Regulatory Commission and Agreement State licensees could be subject to requirements of a Section 652 rule, and that approximately between 15,000 and 30,000 persons associated with these licensees would require fingerprinting, under tentative requirements of a planned Section 652 final rule. This estimate is comparable to that discussed in the May 15, 2006, briefing, at which it was noted that there were approximately 1,500 licensees and between 5 to 15 individuals per licensee who could be subject to these requirements.

Although we are in the preliminary stages of developing the RIA and OMB analysis to be responsive to the SRM, the staff has reviewed information currently available to arrive at a "best estimate," at this time, of the number of individuals who would be fingerprinted under the tentative requirements of a planned Section 652 rule.

The estimate of the number of individuals has three components: 1) the basis that will be used to determine what materials are considered "risk-significant," and therefore require fingerprinting of individuals as a prerequisite for unescorted access; 2) the number of licensees possessing risk-significant material; and 3) the number of persons at each licensee type requiring unescorted access to the material. Our method for considering these three components is discussed in the enclosure to this memorandum. We considered information from the May 15, 2006, Commission briefing; the Chairman's Task Force Report; the Security Orders and Increased Control Orders sent to licensees; and discussions with, and input from, the NRC regional offices.

We trust that the enclosed information and estimate are responsive to the request made in the Commission SRM. As discussed above, we intend to further refine this estimate during the development of the proposed rule and the associated RIA.

Enclosure:

Considerations in Providing a Best Estimate,
as of November 2006, of the Number of
Individuals Who Would Need to be
Fingerprinted for Compliance With a
Section 652 Rulemaking

cc: SECY
OGC
OCA
OPA
CFO

Although a final determination has not been made with regard to the scope or content of a Section 652 proposed rule, using the assumptions noted in the enclosure, it is estimated that less than approximately 2,000 U.S. Nuclear Regulatory Commission and Agreement State licensees could be subject to requirements of a Section 652 rule, and that approximately between 15,000 and 30,000 persons associated with these licensees would require fingerprinting, under tentative requirements of a planned Section 652 final rule. This estimate is comparable to that discussed in the May 15, 2006, briefing, at which it was noted that there were approximately 1,500 licensees and between 5 to 15 individuals per licensee who could be subject to these requirements.

Although we are in the preliminary stages of developing the RIA and OMB analysis to be responsive to the SRM, the staff has reviewed information currently available to arrive at a "best estimate," at this time, of the number of individuals who would be fingerprinted under the tentative requirements of a planned Section 652 rule.

The estimate of the number of individuals has three components: 1) the basis that will be used to determine what materials are considered "risk-significant," and therefore require fingerprinting of individuals as a prerequisite for unescorted access; 2) the number of licensees possessing risk-significant material; and 3) the number of persons at each licensee type requiring unescorted access to the material. Our method for considering these three components is discussed in the enclosure to this memorandum. We considered information from the May 15, 2006, Commission briefing; the Chairman's Task Force Report; the Security Orders and Increased Control Orders sent to licensees; and discussions with, and input from, the NRC regional offices.

We trust that the enclosed information and estimate are responsive to the request made in the Commission SRM. As discussed above, we intend to further refine this estimate during the development of the proposed rule and the associated RIA.

Enclosure:
Considerations in Providing a Best Estimate,
as of November 2006, of the Number of
Individuals Who Would Need to be
Fingerprinted for Compliance With a
Section 652 Rulemaking

cc: SECY
OGC
OCA
OPA
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CONSIDERATIONS IN PROVIDING A BEST ESTIMATE, AS OF NOVEMBER 2006,
OF THE NUMBER OF INDIVIDUALS WHO WOULD NEED TO BE FINGERPRINTED
FOR COMPLIANCE WITH A SECTION 652 RULEMAKING

At this time, neither the scope nor the content of a Section 652 proposed rule has been finalized. Nevertheless, using the assumptions noted in this enclosure, the staff has developed a reasonable "best estimate" of the total number of individuals who would require fingerprinting under the tentative requirements of a planned Section 652 final rule.

The estimate of the number of individuals has three components: 1) the basis that will be used to determine what materials are considered "risk-significant," and therefore require fingerprinting of individuals before they can have unescorted access; 2) the number of licensees possessing "risk-significant" material; and 3) the number of individuals at each licensee type requiring unescorted access to the material. Our method for considering these three components is as follows:

- 1) Basis for determining materials considered "risk-significant," and therefore requiring fingerprinting of individuals as a prerequisite for unescorted access. As noted by the staff at the May 15, 2006, Commission briefing, the staff is in the process of developing the details of the rulemaking to implement Section 652 of the EPAct and hasn't made a final decision regarding the bases for what materials are considered "risk-significant." However, the staff anticipates the tentative scope of Section 652 rulemaking is that it would affect everyone who possesses material in the International Atomic Energy Agency (IAEA) Code of Conduct Category 2 and above threshold amounts¹. Using that approach as the basis for this response, the staff used information from the Chairman's Task Force Report regarding types of licensees that possess Category 2 and above radioactive material as including certain industrial licensees (pool-type irradiators; manufacturers and distributors (M&Ds); licensees that transport radioactive material in quantities of concern (RAMQC); radiographers; and well loggers) and certain medical and research licensees (gamma- knives; self-shielded irradiators; and teletherapy units).

- 2) The number of licensees possessing IAEA Code of Conduct Category 1 and 2 material. The industrial, medical, and research licensees noted in No.1, above, have already received from NRC, and/or Agreement States, either Security Orders for background checks and for fingerprinting and criminal history checks and/or Increased Control Orders. These same licensees would potentially be affected by the Section 652 rule requirements. Therefore, the staff estimated the number of licensees potentially affected by a Section 652 rule by reviewing licensee information from the interim inventory database of radioactive sources. This review is an estimate because licensees generally identify themselves by business category, rather than by source possessed. Nevertheless, this database can be used to develop estimates of the total number of NRC and Agreement State licensees as including approximately 50 wet irradiator licensees; 50 M&D licensees; 50 separate RAMQC licensees; 550

¹ These threshold amounts take into account the IAEA's categorization of sources found in IAEA Safety Guide No. RS-G-1.9, "Categorization of Radioactive Sources" (2005).

radiographers; 150 well loggers; 40 gamma-knife licensees; 800 self-shielded irradiator licensees; 20 teletherapy unit licensees; and 2 radioisotope thermoelectric generator (RTG) licensees. We have focused this analysis on the byproduct material licensees that would be subject to a Section 652 rule, however other licensees (e.g., research and test reactors, independent spent fuel storage installations, and fuel cycle facilities handling Category I-III special nuclear material), totaling about 100 facilities, may also be subject to a Section 652 rule. Thus, the total number of NRC and Agreement State licensees potentially affected by a Section 652 rule would be less than approximately 2000. In addition to the above, a certain number of other licensees (e.g., fixed gauge licensees) totaling perhaps several hundred, may possibly be affected by a Section 652 rulemaking if they have radioactive material that in the aggregate totals more than a IAEA Category 2 quantity. However, experience with issuance of the Increased Control Orders, thus far, has indicated that many of these licensees have indicated that they do not in fact have material that can be aggregated in this manner. Thus, we have not included estimates of these licensees in this analysis.

- 3) The number of persons at each licensee type requiring unescorted access to the material. After estimating the types and numbers of licensees possessing radioactive material that equals or exceeds IAEA Category 1 and 2 quantities, the staff made preliminary estimates of the numbers of persons at the various licensee types who would require unescorted access to the material. The Chairman's Task Force Report was useful in this regard in providing descriptions of the types of licensees and the nature of the use of the materials at those facilities. The number of staff requiring unescorted access will vary among the different licensee types and within licensee type, depending on the type and size of the operation, as well as the number of sources possessed by a licensee. It will also vary depending on licensee preference because licensees may decide that it is preferable (and more economical) to have fewer staff with unescorted access and provide escorts to those who need it, or the licensee may determine that the cost of obtaining fingerprints and the other elements of a background check (personal references, employment history, education) are minimal and decide to have a larger number of persons with unescorted access. Thus, the exact final number of individuals will be a licensee decision.

Despite these uncertainties, NRC regional offices have provided estimates in this area, based on their experience with inspections and reviews of the various types of facilities. In making the estimates, the regional offices noted that there was a wide range in the estimates in some cases to account for a broad range of licensees, from small hospitals to large universities, and from small privately owned businesses to large corporations. For certain of the industrial licensees that handle sources, the range of persons requiring unescorted access was estimated to be from 3-15 persons, although it was noted that some small number of larger companies could have as many as 100 individuals. The estimates for the licensees using sources for medicine or research varied over a wider range depending on the extent of the operations with ranges of about 3 to over 100.

Although a final determination has not been made with regard to the scope or content of a Section 652 proposed rule, using the bases noted in No. 1 above, and the estimates noted in No. 2 and No. 3, above, it is estimated that approximately 2000 NRC and Agreement State

licensees could be subject to requirements of a Section 652 rule, and that there would be approximately between 15,000 to 30,000 persons associated with these licensees that would require fingerprinting under the tentative requirements of a planned Section 652 final rule. This estimate is comparable to that discussed in the May 15, 2006, Commission briefing, at which it was noted that there were approximately 1500 licensees and between 5 to 15 individuals per licensee who could be subject to these requirements. We anticipate further refining this estimate as part of preparation of the RIA, including, for example, giving consideration to seeking additional information as part of the 2007 Interim Inventory data base.