

**ISSUES RELATED TO THE ESTABLISHMENT OF  
THE LICENSING SUPPORT NETWORK AND THE  
LICENSING SUPPORT NETWORK ADMINISTRATOR'S  
COMPLIANCE ASSESSMENT PROGRAM**

December 31, 1998

Submitted by:

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Under GSA Contract:  
GS-35-5-4813G  
T0698BN3496

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## **1.0 INTRODUCTION**

The purpose of this document is to present to the Licensing Support Network (LSN) participants a compilation of issues/questions for consideration in designing the LSN in accordance with the new Final Rule, 10 CFR Part 2, Subpart J. The issues presented center primarily on: (1) the activities of the LSN Administrator (LSNA) and the LSN participants under the new Final Rule; (2) areas where compliance assessment reviews by the LSNA are appropriate; and (3) the issues affecting the development of proposed alternative methodologies for performing such reviews.

The LSNA intends to develop and present alternative compliance assessment approaches for consideration by the LSN Advisory Review Panel (LSNARP). The LSNA, with the advice and consent of the LSNARP, will choose the most appropriate Compliance Assessment Program (CAP). Input from the LSNARP Technical Workgroup will be necessary to finalize the alternative approaches, and develop approximate costs for each alternative.

The issue areas discussed below should be reviewed by each participant in advance of the next LSNARP meeting to be scheduled in January, 1999. The following topics may serve to form an agenda for initial discussions of the LSN and the LSNA's proposed compliance assessment activities.

## **2.0 LSNARP ISSUE AREAS**

### **2.1 Participant Universe of Documentary Material**

Documentary material relevant to the licensing process (see definition of documentary material in the new Final Rule) is required to be identified, prepared in accordance with to-be-established [by the LSNARP Technology Workgroup] standards, and presented on a website by each participant. Compliance issues relate to whether the participant has properly identified all documentary material in its possession and control, and has maintained an audit trail that demonstrates this.

If it is deemed necessary to investigate whether each participant has, in fact, identified/revealed all of its documentary material, this would require on-site audits of participant document collections. This element cannot be policed by remote means. When last considered by the predecessor Licensing Support System Advisory Review Panel (LSSARP), there appeared to be agreement that this concern would be dealt with through "participant vigilance," i.e., it was believed that participants in the licensing

process would generally know if another participant was withholding relevant documents. As a disincentive to withholding documents from the LSN, any documents not made available to the LSN could not be used as exhibits or evidentiary offerings during the licensing hearing by the participant found to be withholding them.

Issues:

- Should the LSNA rely on "participant vigilance" to regulate the completeness of participant document submissions?
- Are on-site audits of participant document collections by the LSNA required/desired by the participants?
- What form of audit trail should participants maintain concerning their LSN activities?

## **2.2 Schedule of Implementation**

Section 2.1003, "Availability of Material," of the new Final Rule, establishes the time frame for DOE, NRC, and all other potential parties and interested governmental participants to make their documentary material available on the Internet. The compliance issues affecting this element relate to when the participant websites are to be made available, whether there will be an established prioritization of material presented on the website, and how to oversee amendments/changes to material previously published on the websites or additions to the website holdings.

Initial website availability can be determined remotely; as can the presentation of documents in accordance with a participant's stated schedule. Also, amendments and additions to documentary holdings on a participant's website must be provided to requesting participants within five days of request (see Section 2.1004, "Amendments and Additions," of the new Final Rule). This can be remotely checked by the LSNA in coordination with a "request procedure" to be established by LSNARP.

There are few technological alternatives affecting this issue area. It is relatively straightforward to determine when a website is available and when particular materials are published on it. Remote monitoring of content availability will require software that schedules a check at the end of the statutory availability period and provides notification of non-compliance in a report.

Issues:

- Should a schedule of website availability be established through coordination with the LSNARP?
- Which participants are going to establish their own website?
- Will the LSNA establish websites for those participants unable to establish and maintain their own websites?

- Will the LSNARP establish priority document categories to ensure that the most critical information is available on participant websites as early as possible?
- Will the LSNARP establish an "Amendments/Additions Notification and Document Request Procedure"?

### 2.3 Document Preparation

Standards must be established by the LSNARP Technical Workgroup and be accepted by the LSNARP as a body. Standards for headers, for example, may be adopted from the work previously done by the LSSARP Header Workgroup. Compliance issues for this element relate to the requirement that each participant prepare a header and an image for each item of documentary material presented on its website, in an agreed-upon format. Accuracy of header information, the appearance of each image, and links to attachments can be checked remotely, possibly using a sampling methodology. If some participants are submitting hardcopy/electronic documentary material directly to the LSNA for processing and maintenance on an LSNA website, quality assessment (QA) and compliance assessment procedures must be established by the LSNA to regulate these hardcopy submissions.

While there are established standards for web documents, [e.g., the Hyper-Text Markup Language (HTML) is a fully-described open standard], there are many aspects of website and document presentation that could be problematic for automated monitoring. If participants are free to select arbitrary tools for creating and publishing documents, the development of compliance assessment tools that do not require significant resources will be difficult. This is an important area.

#### Issues:

- What standards are to be established for
  - header content/format?
  - image format?
  - text format?
  - linkages between documents?
  - document packages?
  - document signaturing?
- Is statistical sampling an acceptable method for reviewing participant document preparation compliance?
- Are standards for newly developed documentary material necessary? For example, requiring all new documents to be authored in a particular word processing software like WordPerfect 6.1?
- When are the written procedures required by the new Final Rule to be prepared and delivered to the LSNA?

## 2.4 Website

Compliance assessment issues for this element involve the following:

- availability/accessibility of a website, e.g., downtime
- speed of searches and responses
- appearance of documentary material and headers
- integrity of material presented on website; i.e., have documents or headers been modified, removed, or augmented since initial placement on website?
- updates to website/addition of new documents/headers.

These areas can be checked remotely via proper technology. However, it may be best that the areas of website functionality compliance and website content compliance are separated. Specifically, the first area is relatively easy to monitor, while the second, as discussed in the comments in the previous section, is more difficult. Since document preparation activities are performed primarily to enable the publication of the documents on a website, it is appropriate to examine website content issues alongside document preparation issues, as has been done in Section 2.3, above.

Open Source Software (OSS) and Commercial Off-The-Shelf Software (COTS) are readily available to perform the website monitoring function. All these tools work much the same way, by performing queries and measuring the results. After standards for responsiveness are established, queries can be designed to measure compliance against these standards and can be run on a periodic basis. Remote monitoring can determine what documents are published and monitor whether the published part of the universe of documentary material has changed. Standard web monitoring tools are available that can reveal additions to or deletions from a website or a subset of that site. These tools consist of "web robots" that traverse a website by obtaining the root document, dissecting it, and recursively following each link found until the entire site is retrieved and (optionally) analyzed. For this to work, participants must be required to provide, at a minimum, the address of the root of their documentary tree and must agree not to publish relevant documents outside this designated location.

In any event, the periodicity of monitoring must be coordinated with the LSNA-established requirements for notification of changes by participants to reduce false positives.

### Issues:

- What standards should be established related to website availability/accessibility?
- What standards should be established related to search and response times for

- participant websites?
- How should Internet downtime (as opposed to individual participant website downtime) be dealt with in the LSN context?
  - Should digital signature technology be required to determine the integrity of documents presented on the website? If so, which signaturing technology should be used?
  - How will the participant provide notification (to the LSNA and to other participants) that new material has been added to its website?
  - Should reports of apparent violation be maintained by the LSNA or also distributed publicly, to assist the vigilance efforts of contending interested parties?
  - Will participants establish help lines and/or problem reporting lines related to their website operations?

## 2.5 Audits

On-site audits can be used to check that participants have procedures in place that are being followed in the identification, preparation, and presentation of documentary material on their websites, including QA procedures and website operation and maintenance activities. Participant written procedures can be reviewed by LSNA once submitted by participants, but without on-site audits, there is no way to tell whether procedures are actually being followed by participants. LSNA review of documents and headers presented on participant websites (process results) will give some indication whether procedures are being followed, and this may be satisfactory to the LSNARP.

While automated tools cannot replace on-site audits, they can, perhaps, aid in such audits by organizing the material to be audited, flagging items to be more closely investigated, and giving an idea of the scope of the audit for preparatory and scheduling purposes. Compliance assessment software should have this function as one of its development objectives.

### Issues:

- Are on-site audits of participant operations necessary to determine substantial compliance with the requirements of the LSN program?
- If on-site audits are considered necessary, what form of audit and periodicity is considered adequate?
- Should LSNARP members be observers at audits of other participants?
- Should resultant audit reports be made available to all participants for review?

## 2.6 Filings and Hearing Exhibits

Filings and hearing exhibits must be submitted in accordance with standards and procedures to be established by the Atomic Safety and Licensing Board Panel (ASLBP) and the LSNARP. All filings must be made electronically. Since the docket is

maintained on the NRC's computer system, compliance with established requirements can be assessed "in-house."

It should be noted that hyperlinks in a document or index can be specified relative to the document and/or server within which they reside, or absolutely. Both methods have their advantages. Which method to use becomes an issue when the document can change location or can be copied to another location (e.g., when it is moved or copied into the docket). Updating the hyperlink at the time of moving or copying to reflect the change would change the digital signature of the document. Not updating the hyperlink may result in loss of pointers to information essential to understanding the document. A related issue is that PDF file format, which has been discussed as the possible required format for docket items, allows hyperlinks only within a document, not from one document to another. This means that all links within a docket item would refer only to other portions of that item, rather than to any other docket item.

Issues:

- What format(s) / standard(s) must be established for the electronic docket, and should this effort be part of the LSNARP Technical Workgroup charter?
- How should hyperlinks and digital signatures be handled with reference to the electronic docket?
- Should PDF format be employed for docket items?

## 2.7 Reports

It is considered essential to the oversight function of the LSNA that the participants be required to furnish reports related to the operation of their websites on a periodic basis. These reports would contain information concerning usage or "hits", problems encountered, documentary material (including headers) added or modified, and requests for addition of documents pursuant to Section 2.1004, "Amendments and Additions," of the new Final Rule. Additional information and data considered necessary by the LSNA (with the advice of the LSNARP) for compliance assessment and system management purposes would also be required. These reports could be provided to the LSNA for review and further distribution, or they could be published on a participant's website.

Issues:

- What reports can/should be generated by the participants relative to their website document repositories? Should reported items include submission schedules, additions/corrections, unscheduled downtime, maintenance (scheduled) downtime, usage or "hits" on website?

- Should participant reports be published on the participant website?
- What periodic reporting interval is considered appropriate?

## **2.8 Compliance Assessment Program Documents to be Prepared by Participants**

Participants will be required to prepare several documents related to their participation in the LSN program. The document being currently considered necessary by the LSNA to the fulfillment of his responsibilities under Section 2.1011, "Management of Electronic Information," of the new Final Rule, are based on the concepts developed under the LSS compliance assessment program, and, as such, should be familiar to most members of the LSNARP. They are:

- LSN Participant Compliance Program Plan (a presentation of information and data concerning a participant's proposed LSN-related operations and supporting programs. This document will provide the LSNA with a reasonable level of assurance that the participant understands its responsibilities under the new Final Rule, establish a baseline for LSNA compliance audits of participant activities, and provide data needed by the LSNA in its oversight/management function).
- LSN Participant Certification Document (participant agreement/contract to abide by requirements of LSN Program as defined by the LSNA with input from the LSNARP). These agreements/contracts should be renewed annually.
- Documentary material submission/presentation schedule (including website availability date). This may be part of the LSN Participant Compliance Program Plan.

### Issues:

- What form are these documents to take? The advice of the LSNARP is necessary in determining this.
- When are these documents to be submitted to the LSNA? The essence of a "plan" is to be a predecessor to the activity planned for.
- Should these documents be made publicly available to other participants?

## **3.0 LSNA ISSUE AREAS**

### **3.1 LSNA Baseline Computer System**

The LSNA will develop and maintain a computer system to aid in the compliance monitoring effort. The estimate of costs must include this system and the resources required for its maintenance. The cost of the compliance monitoring effort will depend

on the type of system implemented by the LSNA. At a minimum, the system will have to be in place prior to the start-up of LSN participant activities and must have the ability and sufficient unused capacity to handle the compliance monitoring tasks being proposed.

The technology and size of the baseline system are difficult to determine now with the information that is currently available. A "seat-of-the-pants" estimate is that it will cost between \$200,000 and \$1,000,000 to develop and implement, an additional 15 to 20 percent of that amount for operation and maintenance each year, and will require a support staff of from two to five full time employees (FTEs), depending on the extent of system coverage (regular workday coverage versus 24 hour/ seven days a week coverage). At a minimum, the cost components of the LSNA baseline computer system are:

- hardware,
- operating system,
- database engine,
- database development tools and libraries,
- software development tools,
- web server software,
- web development software,
- encryption software, and
- system administration and management utilities.

Heavy use of encryption could add significantly to maintenance costs if ongoing licensing and key management fees are required. The Federal government has unrestricted use of many encryption technologies, so the bulk of the costs associated with this function may not be carried by the NRC. Ignoring this aspect from a costing standpoint may thus be possible.

Issues:

- What level of compliance monitoring is considered necessary by the LSNA (with the advice of the LSNARP) to ensure a reasonable level of participant compliance?
- What level of compliance monitoring software and hardware is necessary to achieve desired program results? Will OSS or COTS be sufficient, or will customized software applications be required?
- Will encrypted submissions be required to validate authorship?
- What interdependencies exist between the website functionality and content standards to be developed by the LSNARP Technical Workgroup and the type and level of compliance monitoring system needed by the LSNA? (For example, if there are multiple operational and data formats used across the various participants' websites, more sophisticated custom software will be required to allow the LSNA computer system to accomplish its compliance monitoring

activities).

### **3.2 Document Preparation**

The LSNA may establish a website (or websites) for the presentation and maintenance of the documentary material of participants unable to establish and maintain their own website. If this occurs, the LSNA (with the advice of the LSNARP) will have to establish standards that apply to the preparation and submission of any participant hardcopy/electronic documentary material that is to be processed and maintained for presentation on such an LSNA-maintained website. These standards, including standards for header preparation and image quality, may be based on or identical to the standards developed previously by the LSSA for LSS participation.

#### Issues:

- Will the LSNA establish and maintain a website for those participants unable to establish and maintain their own website?
- If the LSNA establishes such a website, what standards must be developed for the hardcopy/electronic documentary material submitted by participants for processing and maintenance?
- Should the standards previously developed under the former LSS program for documentary material submission be adapted for use under the LSN program?

### **3.3 Reports**

The LSNA will issue reports to the participants (and presumably the public) concerning the overall functioning of the LSN, as well as the compliance status of individual participants with the requirements of the new Final Rule. These reports will be based on data obtained from the LSNA's implemented automated compliance monitoring system, any manual compliance monitoring (including on-site audits) deemed necessary by the LSNA and the LSNARP, and from information and data received directly from participants. LSNARP input on the type and distribution of these reports is required.

#### Issues:

- What reports can/should be generated by the LSNA from its compliance monitoring system?
- Should the LSNA make participant reports concerning website operations publicly available?
- Should the LSNA make many or all of the exception reports generated by the compliance assessment software public on the LSN website?

### 3.4 Certifications by the LSNA

Under Section 2.1012, "Compliance," of the new Final Rule, a participant will not be granted party status unless it can demonstrate substantial and timely compliance with the requirements of Section 2.1003, "Availability of Material," at the time it requests participation in the HLW licensing proceeding. The LSNA intends to monitor participant compliance on an on-going basis. Establishing a master site that provides a portal to participants' sites is a practical way of informing participants of their (and the other participants') compliance status. This could be accomplished either through a simple statement of participant's status next to a link to their website or by redirecting those links to a "non-compliance page." This would permit the LSNA to affect access to a noncompliant participant's website.

Blocking access to a website or websites for a noncompliant participant would not be practical, because it is the nature of the Internet to provide alternative paths to a resource if one is blocked.

Issues:

- Should access to participant sites be made available through an LSNA gateway?
- What form should a noncompliance notification take?
- Are any punitive measures beyond the denial of participation in the licensing proceeding deemed necessary by the LSNA and the LSNARP?
- Will the LSNA be responsible for providing a Help Desk or other technical support for the LSN?

### 4.0 CONCLUSION

The issue areas described above must be fully examined and resolved by the LSNA and the LSNARP prior to the final design and implementation of the LSN and the LSNA CAP. Many of these areas require the input of an LSNARP Technical Workgroup for resolution. Therefore, it is essential that LSNARP members review these issues and participate in the formation of the workgroup as soon as possible. The LSNA will coordinate with the representatives of the participants to schedule an initial LSNARP meeting at which the Technical Workgroup will be established. The issues identified above could be discussed and appropriately assigned to the workgroup for further exploration.

Any questions or comments on the contents of this document may be addressed to:

????????????????????

Licensing Support Network Administrator

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**From:** "Anthony Neville" <Tony\_Neville@LABAT.COM>  
**To:** TWFN\_DO.twf3\_po(DJG2)  
**Date:** Mon, Jan 4, 1999 4:30 PM  
**Subject:** Issues for LSN work group

Memo

To: Dan Graser  
From: Tony Neville  
Subject: Summary of Issues related to the Establishment of the LSN

Please find attached a document for your review and comment. In keeping with the direction at our last meeting, it is intended for use during the upcoming LSN workgroup meeting. Please let me have any comments and confirm receipt.

Also, we should talk about task resources shortly. There will be about \$7K left after this period.

\*\*\*\*\*

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(703) 506-1400 x 506

CC: TWFN\_DO.twf3\_po(AEL1)