



CONVERSATION RECORD

DATE OF SIGNATURE

12/15/2014

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Carl Lippens, Radiation Safety Officer		DATE OF CONTACT 11/25/2014	TYPE OF CONVERSATION <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING
E-MAIL ADDRESS call@newpagecorp.com		TELEPHONE NUMBER ext. 2526 (906) 786-1660	

ORGANIZATION Escanaba Paper Company	DOCKET NUMBER(S) 030-13087
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LICENSE NUMBER(S) 21-17630-01	CONTROL NUMBER(S) 584394
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SUBJECT  
We have reviewed your license renewal application dated July 15, 2014 and find that we are unable to continue this action until we have received additional information outlined below. We expect to receive your written response on or before January 5, 2015.

**SUMMARY AND ACTION REQUIRED:**  
Please provide additional information as noted below. Refer to NUREG 1556, Vol. 4, "Program-Specific Guidance About Fixed Gauge Licenses," found at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v4/sr1556v4.pdf>, when responding.

**PLEASE NOTE THE FOLLOWING WHEN PREPARING YOUR RESPONSE:**  
Submit requested information within 21 days of this record, referencing Control No. 584394. Direct any questions you have to me at (630) 829-9892 or [sara.forster@nrc.gov](mailto:sara.forster@nrc.gov). Include a signed and dated cover letter with your response. Please FAX your response to my attention at (630) 515-1078 OR scan your response and send to me via email, as a pdf file.

**ADDITIONAL INFORMATION NEEDED:**

1. For Item 10, responses found on pages 24 to 27 of your application did not completely address radiation safety program details requested in the guidance volume, NUREG 1556, Vol. 4, Appendix B. Please refer to attached pages from Appendix B to the guidance volume, and provide additional information surrounding material receipt & accountability, occupational dosimetry, operating & emergency procedures, leak tests, and routine maintenance, as noted.
2. For non-routine maintenance operations (e.g., installation, initial radiation survey, gauge relocation, alignment, and removal of a gauge from service, etc.) to be performed by Carl Lippens and/or Jeff Thennes, please provide additional information as requested in NUREG 1556, Vol. 4, Appendix N (copy attached for your reference.) At a minimum, information submitted should include:
  - (i) a description of the types of work, maintenance, cleaning or repair activities to be performed that involve installation, initial radiation survey, gauge relocation, alignment, and/or removal of a gauge from service;
  - (ii) a description of Mr. Lippens' and or Mr. Thennes training and experience, consistent with non-routine operations to be performed and training requirements described on page N-2 (attached); and
  - (iii) procedures for non-routine operations as noted on pages N-2 to N-3 (attached).



NAME OF PERSON DOCUMENTING CONVERSATION  
Sara A. Forster, Materials Licensing Branch, Region III Office, 2443 Warrenville Road, Suite 210, Lisle, Illinois 60532

SIGNATURE  
*Sara A. Forster* 12/15/2014

Item No. and Title	Suggested Response	Yes	Alternative Procedures Attached
9. Facilities and Equipment	We will ensure that the location of each fixed gauge meets the Criteria in the section entitled "Facilities and Equipment" in NUREG-1556, Vol. 4, dated October 1998.	[]	[]
10. <del>Radiation Safety Program - Audit Program</del>	<del>The applicant is not required to, and should not, submit its audit program to the NRC for review during the licensing phase.</del>	<del>Need Not Be Submitted with Application</del>	
10. Radiation Safety Program - Survey Instruments	<p>Surveys pursuant to 10 CFR 20.1501 will be performed by a person specifically authorized by the NRC or an Agreement State to perform these surveys.</p> <p style="text-align: center;"><b>OR</b></p> <p>We will use instruments that meet the Criteria in the section entitled "Radiation Safety Program - Instruments," in NUREG-1556, Vol. 4, dated August 1998, and <i>one</i> of the following:</p> <p>Each survey meter will be calibrated by the manufacturer or other person authorized by the NRC or an Agreement State to perform survey meter calibrations.</p> <p style="text-align: center;"><b>OR</b></p> <p>We will implement the model survey instrument calibration program in Appendix I to NUREG-1556, Vol. 4, dated October 1998.</p>	[]	[]
10. Radiation Safety Program - Material Receipt and Accountability	Physical inventories will be conducted at intervals not to exceed 6 months or at other intervals approved by the NRC, to account for all sealed sources and devices received and possessed under the license.	[]	[]
10. Radiation Safety Program - Occupational Dosimetry	We will perform a prospective evaluation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20 or we will provide dosimetry that meets the Criteria in the section entitled "Radiation Safety Program - Occupational Dosimetry," in NUREG-1556, Vol. 4, dated October 1998.	[]	[]



C. Lippens Conversation Record (continued)

Item No. and Title	Suggested Response	Yes	Alternative Procedures Attached
10. Radiation Safety Program - Public Dose	<del>The applicant is not required to submit a response to the public dose section during the licensing phase. However, during NRC inspections, licensees must be able to provide documentation demonstrating, by measurement or calculation, that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed operation does not exceed the annual limit for individual members of the public.</del>		Need Not Be Submitted with Application
 10. Radiation Safety Program - Operating & Emergency Procedures	If the gauge meets one or more of the safety conditions specified in "Discussion," in the section entitled "Radiation Safety Program-Operating Emergency Procedures," in NUREG 1556, Vol. 4, dated August 1998 state the following:  Operating and emergency procedures will be developed, implemented, maintained, and distributed, and will meet the Criteria in the section entitled "Radiation Safety Program - Operating and Emergency Procedures," in NUREG-1556, Vol. 4, dated August 1998.  For each gauge requested that does not meet one or more of the safety conditions specified in "Discussion," in the section entitled "Radiation Safety Program-Operating Emergency Procedures," in NUREG 1556, Vol. 4, dated August 1998 provide your operating, emergency and lock-out (if applicable) procedures to NRC for review.	<input type="checkbox"/>           <input type="checkbox"/> Procedures Attached	<input type="checkbox"/>
 10. Radiation Safety Program - Leak Test	Leak tests will be performed at intervals approved by the NRC or an Agreement State and specified in the Sealed Source and Device Registration Certificate. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.  <p style="text-align: center;"><b>OR</b></p> We will implement the model leak test program published in Appendix M to NUREG-1556, Vol. 4, dated October 1998.	<input type="checkbox"/>              <input type="checkbox"/>	<input type="checkbox"/>

Item No. and Title	Suggested Response	Yes	Alternative Procedures Attached
<p>10. Radiation Safety Program - Maintenance</p>	<p><b>ROUTINE MAINTENANCE</b> We will implement and maintain procedures for routine maintenance of our fixed gauges according to each manufacturer's or distributor's written recommendations and instructions.</p> <p><b>NON-ROUTINE MAINTENANCE OPERATIONS</b> The gauge manufacturer, distributor or other person authorized by NRC or an Agreement State will perform non-routine operations such as installation, initial radiation survey, repair, and maintenance of components related to the radiological safety of the gauge, gauge relocation, replacement, and disposal of sealed sources, alignment, or removal of a gauge from service.</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/> The information listed in Appendix N supporting a request to perform non-routing operations in-house is attached</p>
<p>10. Radiation Safety Program - Transportation</p>	<p><del>The applicant is not required to submit its response to transportation during the licensing process; this issue will be reviewed during inspection. However, the licensee should develop, implement, and maintain transportation procedures according to NRC and DOT regulations.</del></p>	<p>Need Not Be Submitted with Application</p>	
<p>10. Radiation Safety Program - Fixed Gauges Used at Temporary Job Sites</p>	<p>This is not applicable to our program. We will not use fixed gauges at temporary job sites.</p> <p style="text-align: center;"><b>OR</b></p> <p><del>We will develop, implement, maintain and distribute procedures that meet the Criteria in the section entitled "Radiation Safety Program - Fixed Gauges Used at Temporary Job Sites" in NUREG-1556, Vol. 4, dated October 1998.</del></p>	<p><input type="checkbox"/> Not Applicable</p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>
<p>10. Radiation Safety Program - Minimization of Contamination</p>	<p><del>The applicant is not required to submit a response to minimization of contamination if the applicant's responses meet the criteria for the following sections: Radioactive Material - Sealed Sources and Devices; Facilities and Equipment, Radiation Safety Program - Operating and Emergency Procedures, Radiation Safety Program - Leak Testing, and Waste Management - Gauge Transfer and Disposal.</del></p>	<p>Need Not Be Submitted with Application</p>	



## Information Needed to Support Applicant's Request to Perform Non-Routine Operations

~~Applicants should review the section in this document on "Maintenance," which discusses, in general, licensee responsibilities before any maintenance or repair is performed.~~

~~Non-routine operations include installation of the gauge, initial radiation survey, repair or maintenance involving or potentially affecting components, including electronics, related to the radiological safety of the gauge (e.g., the source, source holder, source drive mechanism, shutter, shutter control, or shielding), gauge relocation, replacement, and disposal of sealed sources, alignment, removal of a gauge from service, and any other activities during which personnel could receive radiation doses exceeding NRC limits. See Figure 8.9.~~

~~Any non-manufacturer/non-distributor supplied replacement components or parts, or the use of materials (e.g., lubricants) other than those specified or recommended by the manufacturer or distributor need to be evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the device registration. Licensees also need to ensure that, after maintenance or repair is completed, the gauge is tested and functions as designed, before the unit is returned to routine use.~~

~~If non-routine operations are not performed properly with attention to good radiation safety principles, the gauge may not operate as designed and personnel performing these tasks could receive radiation doses exceeding NRC limits. Radionuclides and activities in fixed gauges vary widely. For illustrative purposes in less than one minute, an unshielded cesium-137 source with an activity of 100 millicuries can deliver 0.05 Sv (5 rems) to a worker's hands or fingers (i.e., extremities), assuming the extremities are 1 centimeter from the source. However, gauges can contain sources of even higher activities with correspondingly higher dose rates. The threshold for extremity monitoring is 0.05 Sv (5 rems) per year.~~

Thus, applicants wishing to perform non-routine operations must use personnel with special training and follow appropriate procedures consistent with the manufacturer's or distributor's instructions and recommendations that address radiation safety concerns (e.g., use of radiation survey meter, shielded container for the source, and personnel dosimetry (if required)).

Accordingly, provide the following information:

Provide additional information as noted:

Describe the types of work, maintenance, cleaning, repair that involve:

- Installation, relocation, or alignment of the gauge
- Components, including electronics, related to the radiological safety of the gauge (e.g., the source, source holder, source drive mechanism, shutter, shutter control, or shielding)
- Replacement and disposal of sealed sources
- Removal of a gauge from service

- A potential for any portion of the body to come into contact with the primary radiation beam; or
- Any other activity during which personnel could receive radiation doses exceeding NRC limits.

The principal reason for obtaining this information is to assist in the evaluation of the qualifications of individuals who will conduct the work and the radiation safety procedures they will follow.

~~A licensee may initially mount a gauge, without specific NRC or Agreement State authorization, if the gauge's SSD Certificate explicitly permits mounting of gauges by users and under the following conditions:~~

- ~~• The gauge must be mounted according to written instructions provided by the manufacturer or distributor;~~
- ~~• The gauge must be mounted in a location compatible with the "Conditions of Normal Use" and "Limitations and/or Other Considerations of Use" in the certificate of registration issued by NRC or an Agreement State;~~
- ~~• The on-off mechanism (shutter) must be locked in the off position, if applicable, or the source must be otherwise fully shielded;~~
- ~~• The gauge must be received in good condition (package was not damaged); and~~
- ~~• The gauge must not require any modification to fit in the proposed location.~~

~~Mounting does not include electrical connection, activation, or operation of the gauge. The source must remain fully shielded and the gauge may not be used until it is installed and made operational by a person specifically licensed by the Commission or an Agreement State to perform such operations.~~

- Identify who will perform non-routine operations and their training and experience. Acceptable training would include manufacturer's or distributor's courses for non-routine operations or equivalent.
- Submit procedures for non-routine operations. These procedures should ensure the following:
  - doses to personnel and members of the public are within regulatory limits and ALARA (e.g., use of shielded containers or shielding);
  - the source is secured against unauthorized removal or access or under constant surveillance;
  - appropriate labels and signs are used;
  - manufacturer's or distributor's instructions and recommendations are followed;
  - any non-manufacturer/non-distributor supplied replacement components or parts, or the use of materials (e.g., lubricants) other than those specified or recommended by the

- manufacturer or distributor are evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the device registration; and
- before being returned to routine use, the gauge is tested to verify that it functions as designed and source integrity is not compromised.
- Confirm that individuals performing non-routine operations on gauges will wear both whole body and extremity monitoring devices or perform a prospective evaluation demonstrating that unmonitored individuals performing non-routine operations are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits.
  - Verify possession of at least one survey instrument that meets the criteria in “Radiation Safety Program - Instruments in NUREG-1556, Vol. 4, ‘Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Fixed Gauges Licenses,’ dated October 1998.”
  - Describe steps to be taken to ensure that radiation levels in areas where non-routine operations will take place do not exceed 10 CFR 20.1301 limits. For example, applicants can do the following:
    - commit to performing surveys with a survey instrument (as described above);
    - specify where and when surveys will be conducted during non-routine operations; and
    - commit to maintaining, for 3 years from the date of the survey, records of the survey (e.g., who performed the survey, date of the survey, instrument used, measured radiation levels correlated to location of those measurements), as required by 10 CFR 20.2103.

## Forster, Sara

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**From:** Forster, Sara  
**Sent:** Monday, December 15, 2014 2:00 PM  
**To:** 'cal1@newpagecorp.com'  
**Subject:** Additional Information Request for Escanaba Paper Company, NRC Lic. 21-17630-01  
**Attachments:** 03120.584394.21-17630-01 telecon signed.pdf

Dear Mr. Lippens:

See the attached file for additional information needed to complete the review of the renewal application for the above referenced license. Note that additional information is requested on or before January 5, 2015.

Additional guidance may be found in NUREG 1556, Vol. 4, "Program Program-Specific Guidance About Fixed Gauge Licenses," which may be found at:

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v4/>.

Submission of your response as a pdf file attached to an email or via facsimile will allow for the quickest processing. Do not hesitate to call me with any questions you may have, or if you will need additional time to complete your response.

Sincerely,

**Sara A. Forster, Health Physicist Licensing Reviewer**

U.S. Nuclear Regulatory Commission - Region III

Division of Nuclear Materials Safety

2443 Warrenville Rd. - Ste. 210

Lisle, IL 60532-4352

[sara.forster@nrc.gov](mailto:sara.forster@nrc.gov)

Direct: (630) 829-9892

