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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
KNOXVILLE ENVIRONMENTAL FIELD OFFICE
2700 MIDDLEBROOK PIKE, SUITE 220
KNOXVILLE, TENNESSEE 37921-5602
(615) 594-6035 FAX (615) 594-6105

March 3, 2004

Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

ATTENTION: Duncan A. White, Regional States Agreement Officer

Dear Mr. White:

Please find enclosed for your information a copy of an inspection report from a State of Washington licensee, Tamfelt Inc., License Number WN-I0492-1, performing work in Tennessee under reciprocal recognition. The inspection identified some issues of concern that related to storing of radioactive materials in the State of Indiana (See Paragraph 20 of report) which we wanted to call to your attention for consideration as it relates to NRC jurisdiction. This communication is for your information only and no response is necessary. Please feel free to contact us for further information or discussion if you wish at 865-594-6035.

Sincerely,

Mark Andrews
Health Physicist Field Office Manager
Knoxville Field Office
Division of Radiological Health

MVA/mva

ENVIRONMENTAL ASSISTANCE CENTER
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2700 MIDDLEBROOK PIKE, SUITE 220
KNOXVILLE, TENNESSEE 37921-5602
PHONE (865) 594-6035 STATEWIDE 1-888-891-8332 FAX (865) 594-6105

February 25, 2004

Tamfelt, Inc.
520 24th Avenue
Longview, WA 98632

ATTENTION: David Powers, General Manager

Dear Mr. Powers:

Thank you for the cooperation given me during the inspection on February 4, 2004 of the activities conducted under Radioactive Materials License Number WN-I0492-1. After reviewing the data collected, we are pleased to inform you that we note no items of non-compliance with the "State Regulations for Protection Against Radiation" in your program.

Sincerely,

Kimberly M. Gilliam
Health Physicist
Division of Radiological Health

cc: Gary L. Robertson, Director
Washington Division of Radiation Protection
Department of Health
7171 Cleanwater Lane,Bldg. #5
P.O. Box 47827
Olympia, WA 98504-7827

Duncan A. White, Regional States Agreement Officer
Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

INSPECTION REPORT

1. Licensee: Tamfelt, Inc.

2. Address: 520 24th Avenue, Longview, Washington 98632

3. Location: Weyerauser Co., 100 Clinchfield St., Kingsport, Tennessee 37660

4. License No. WN-I0492-1 5. Priority Reciprocity (1 year)

6. Inspection Date: February 4, 2004 7. Previous Inspection Date: August 26, 2003

8. Inspection Overdue: Yes __ No X__

9. Inspection Type: Initial__ Routine X__ Special __

10. Announced ___ Unannounced X__

11. In Compliance yes X__ no ____ 12. No. of Violations 0__

13. Principal Inspector: Kimberly M. Gilliam

14. Accompanying Inspector(s): None

15. Other Accompanying Personnel: None

Licensee Participants (List individuals, including title)

16. Inspection: Sabastian Lohm, Tamfelt, Inc. Technical Service Advisor

17. Exit Interview: Sabastian Lohm, Tamfelt, Inc. Technical Service Advisor

18. Summary of Violations Noted:

Regulation	Brief Statement of Problem	Paragraph Where Discussed
None		

19. Inspection Summary: (including exit interview discussion, status of previously reported violations, etc.)

No previous violations were noted.

Informed Mr. Lohm that the gauge containing the Am-241 sealed source was not blocked and braced in his car during transport from Indiana. I recommended that he block and brace the gauge in his car during transport. He agreed and stated he would block and brace the gauge during transport.

We discussed security of the device.

20. Summary of Licensed Program: (Kind of program, number of people, rate of use or quantities on hand, places and frequency of use, type, quantity and use as authorized,
etc.)

This is a Washington licensee, operating in Tennessee under reciprocal agreement. They are authorized to use Am-241 sealed sources up to 150 mCi in NDC Systems Model 104P gauges. The gauges are used to measure moisture content in press fabrics such as paper. Readings are plotted on an in-line flow chart to provide a QC/QA check of the instruments permanently used by Weyerhauser Company.

This operation used one radioactive material gauge for sample analysis. The source is internal to the device, and exposure of the material was controlled through an electronically operated shutter. Various calibrations shutters are used to provide instrument calibration prior to use at the facility to ensure no damage occurred during transport. The operator was trained and authorized in the use of the device. See Attachment KMG-1 for Certificate of Training.

Equipment noted in use was within license parameters. Safety mechanisms on the device had not been by-passed or altered from the original design. Previously, Tamfelt, Inc. would ship the gauge via Fed-Ex to the temporary job site where it would be used and then shipped back to Washington. Mr. Lohm stated that he would be storing the gauge at his home in Indiana (2702 Paoli Pike #152, New Albany, IN 47150) and transporting it to the job sites.

21. Organization and Administration: (Management organization, RSO, authorized users, employee representatives, authorities and responsibilities, qualifications, supervision, etc.)

Sebastian Lohm was the authorized user for Tamfelt, Inc. Mr. Lohm indicated he made all reports and inquiries to David Powers, who is listed as the contact person on the Reciprocity Notice. The license lists Jack Faling as the RSO. See KMG-2 for a copy of the Notice of Intent to Work Under Reciprocity given to me by Mr. Lohm.

22. Facilities: (Use, storage, control of access, security, control devices and alarms, etc.)

The gauge is kept in a specially designed case, which is locked when not in use. The case is locked inside the vehicle during transit. I recommended that Mr. Lohm block and brace the gauge inside his vehicle during transport.

The source is in a small box attached to the end of a pole which extensions can be added. The box contains a line feed mechanism and there is a safety interlock to prevent the shutters from opening inadvertently. A shielded cover must be in

place over the nose of the gun before the device will activate the shutters. During use, the gauge is not left unattended at any time.

23. Equipment: (Devices utilizing licensed material, monitoring instrumentation, special equipment as glove boxes, hoods, handling tools, respirators, etc.)

The NDC Systems Model 104P radioactive material device was on-site and in use by Tamfelt, Inc. The s/n 11121 was embossed with the Am-241 isotope, 2.966 GBq dated 10/14/94.

A shielded cover plate was used to enclose the source underneath, until the exposure is needed. The device would not operate without the shield in place because electronically controlled shutters would not open to reveal the source to the sample. A check was made of this system during inspection to confirm this safety mechanism was operational.

Due to the low dose rates and personnel exposure history, there is no requirement for the licensee to have a survey instrument available for use. No other special equipment is utilized.

24. Radiological Safety Procedures: (Written operating and emergency procedures, availability of procedures, license and regs., Form RHS 8-3, etc.)

Operating and emergency procedures were available. All information was noted as current. The Washington and New Hampshire Notice to Employees, the license, amendments and the Tennessee state regulations (SRPAR) were also available. I gave Mr. Lohm a copy of the Tennessee Notice to Employees.

25. Personnel Monitoring and Exposure to External Radiation: (Type of monitoring, range of exposures, supplier, period worn, exposure history, etc.)

No personnel monitoring is required by this license.

26. Exposure of Employees to Airborne Radioactive Materials: (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.)

None

27. Radiation Levels or Effluents to Unrestricted Areas: (Types, source, measurements, flow rates, applicable MPC, analytical procedures, environmental samples, etc.)

Not applicable.

28. Receipts and Disposals: (Suppliers, recipients, quantities, methods, records)

No receipt records or disposal documents were available as this was a reciprocal inspection.

29. Miscellaneous Surveys, Evaluations, and Records: (External radiation levels, contamination levels, leak tests, calibration, internal/corporate audits, safety device checks, inventory, etc.)

- Leak test performed 9/3/03, <4.0 Bq/<0.0001 μCi
- Shutter test performed 9/3/03
- Initial training is performed and documented for the users.
- No survey requirements to review

30. Non-Standard Requirements (Special license conditions, ALARA program, exemptions, etc.)

None noted.

31. Posting and Labeling (SRPAR, DOT, etc.)

CRM was posted on the device with all the required information including isotope quantity and identity, dates and serial numbers. The device satisfies DOT reportable quantity (RQ) index, but as an instrument and article, it can be shipped as an "Excepted Package" due to the limited amount of radioactive material enclosed. All other labeling, marking and documents appeared correct.

32. Independent Measurements: (Type, results, comparison to licensee results, etc.)

Surveys taken at the time of inspection using a Bicorn micro-rem meter, s/n B469Y, cal. 1/2/03. Background = 5 micro-rem/hr

@ one meter from gauge = background
@ 30 cm from gauge = background
@ surface of gauge = 40 micro-rem/hr
@ window of gauge = 40 micro-rem/hr

33. General Observations (Operations observed, personnel interviews, etc.)

Upon arrival at Weyerhauser, I checked in at the security gate and was escorted to the area where the Tamfelt technician was preparing to work. He described use of the gauge and the placement of the device for measurements on the paper line. He appeared knowledgeable concerning the use of the gauge and safety precautions he should take while working with the gauge.

The technician produced all necessary operating and emergency proœdures and other paperwork requested from a binder kept in the overpack box. He pointed out other equipment kept in the box such as poles, straps, gloves, etc. and described their uses.

I observed as he performed and described the 2 point calibration of the gauge. He indicated that he must do the calibration before each use to assure that no damage had occurred to device during shipment. He used 2 calibration samples for the gauge, 2500 lbs/100 ft^2 and 389 lbs/100 ft^2. Since the battery needed to be charged for up to 2 hours, I did not observe actual work during the time of inspection.

I interviewed the technician concerning transportation of the gauge. He told me that he would be transporting it in his personal vehicle from his home in Indiana to the temporary job sites. I ask him to demonstrate how he would be carrying the gauge in his vehicle. We went to the parking lot to his car, which was a white Volvo V70 station wagon. He unlocked the back door and placed the gauge behind the driver's seat. I pointed out that the gauge was not blocked and braced in the vehicle and he said that he would block and brace the gauge from now on during transport.

34. Type of Record / Extent of Review (indicate time periods)

Type of Record	N/A	Spot Check	Partial Rev	Complete Rev
FB/Dosimeter		X		
Survey		X		
Internal Audit		X		
Training/Testing				X
Calibration			X	
Leak Test				X
Alarm/Interlock Test				X
Effluents		X		
Air Sampling		X		
Bioassay		X		
Receipt/Disposal		X		
Inventory		X		
Other (specify)				

35. Incidents, Overexposures, Theft or Loss, Equipment Malfunction: (Those not described elsewhere should be reported here.)

None

36. Other Information or Continuation from Previous Paragraphs (attach additional pages if necessary)

Attachment	Description	Pages
KMG-1	Certificate of Training	1
KMG-2	Notice of Intent of Work Under Reciprocity	1

List of Abbreviations/Acronyms Used:

ALI	Annual Limit on Intake
ALARA	As Low As Reasonably Achievable
CEDE	Committed Effective Dose Equivalent
CDE	Committed Dose Equivalent
CPM	Count Per Minute
CRM	Caution - Radioactive Materials
CRA	Caution -Radiation Area
CHRA	Caution - High Radiation Area
CARA	Caution - Airborne Radiation Area
DAC	Derived Air Concentration
DAC-hr	DAC–hour*
DDE	Deep Dose Equivalent
DPM	Disentigrations Per Minute
DPW	Declared Pregnant Woman
DRH	Division of Radiological Health
ECL	Effluent Concentration Limit
GDVHRA	Grave Danger -Very High Radiation Area
HRA	High Radiation Area
IMOP	Individual Member of the Public
LDE	Lens of the Eye Dose Equivalent
LLD	Lower Limit of Detection
MDA	Minimum Detectable Activity
RA	Radiation Area
RWP	Radiation Work Permit
RAM	Radioactive Materials
RSO	Radiation Safety Officer
SDE, WB	Shallow Dose Equivalent, Whole Body
SDE, ME	Shallow Dose Equivalent, Maximum Extremity
SRPAR	State Regulations for Protection Against Radiation
TEDE	Total Effective Dose Equivalent
TODE	Total Organ Dose Equivalent
TRML	Tennessee Radioactive Materials License
VHRA	Very High Radiation Area

* Product of DAC concentration times the number of hours present in that concentration

ATTACHMENT KMG-1

Tamfelt, Inc.

Certificate of Training

CERTIFICATE OF TRAINING

This is to certify that Sebastian Lohm of Tamfelt has successfully completed a course in the use, maintenance and repair of the NDC measurement sensors - Models 104, 104P and 104PD. This course was completed at Irwindale, California on November 25, 2003.

Frank Aguirre
Radiation Safety Officer
NDC Infrared Engineering

Dated: December 23, 2003

ATTACHMENT KMG-2

Tamfelt, Inc.

Notice of Intent to Work Under Reciprocity

TAMFELT

FAXED 1:58 pm

Notice of Intent to Work Under Reciprocity

Tamfelt, Inc.
P.O. Box 9115
Canton, MA 02021
Tel. 781-828-3350
Fax 781-575-9443

Licensee Name / Address:

Tamfelt, Inc.
520 24th Avenue
Longview, WA 98632

State of Tennessee
Division of Radiological Health
Fax: (615) 532-0385
Total faxed pages = 1

Please contact me if additional information is required.
781-828-3350 x326 or dpowers@tamfeltinc.com - Thank you.

Licensee Contact Person / Telephone #'s:

David S. Powers, (781) 828-3350, Fax (781) 575-9443

Licensee, State of Washington, License number:

WN-I0492-1

Description of Activity to be conducted:

On-line mass measurements of felt and paper products.

Device used to perform Activity:

NDC Systems Model 104P Moisture Profiler
(Sealed source, Americium 241, 25 mCi)

Person(s) who will conduct licensed Activity:

Sebastian Lohm, Tamfelt, Inc. Technical Service Advisor

Customer Name / Location where Activity will be conducted:

Weyerhaeuser Company
100 Clinchfield Street
Kingsport , TN 37660

(Contact/Phone #)

Mr. Loren Henke, K1 Technical Assistant , (423) 247-7111

Dates/Times Scheduled		*No. of*
From:	*To:*	*Days*
02/04/04 08:00 am	02/04/04 05:00 pm	1

I, the undersigned, hereby certify that all information in this Notice is true and complete, to the best of my knowledge.

Date:	*Licensee's Name (Print)*	*Signature of Certifying Person*	*Title*
01/28/04	Tamfelt, Inc.	David S. Powers	General Manager

DP \123R5\WRECIP.123

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TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
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Sincerely,

Kimberly M. Gilliam
Health Physicist
Division of Radiological Health