

Abbreviations
RP - Radiation Protection
SCA - Safety and Control Area
LC - Licence Condition

GN - General Nuclear Safety and Control
SSR-6 - IAEA Safety Standards 2012 Edition
PTNS, 2015 - Packaging and Transport of Nuclear
Substances, 2015
TDG - Transport of Dangerous Goods Regulations

NSCA - Nuclear Safety and Control Act
NSRD - Nuclear Substances and Radiation Devices
CII - Class II Nuclear Facility and Prescribed Equipment

Type II Inspection Worksheet

Use Type: 813 - laboratory studies

Licensee: _____ Report Number: _____
 Licence Number: _____ Inspection Date: _____
 Address: _____ Inspector Name: _____
 City: _____ Province: _____ Postal Code: _____ Use Type Number: 813
 Person Seen: _____ Phone Number: _____ Risk Group: 2.00

Description	Regulatory Requirements	Compliance Expectations	Risk
Work Doc: 1 TII - Records			
Change notified Rating:	GN 15 (c) Comments:	Changes of personnel responsible for management and control of licensed activity (RSO, Applicant Authority and Signing Authority) have been reported to the CNSC within 15 days.	M
Laboratory lists Rating:	LC 2569-1 Comments:	A list of rooms where more than 1 Exemption Quantity (EQ) of nuclear substance is used or stored is available.	L
Inventory Rating:	NSRD 36 (1) (a) Comments:	A complete nuclear substance and radiation device inventory is available.	M
Records retained Rating:	NSRD 36 (1) (c), (e), (3), (4) Comments:	(1)(c) Records of transfer, receipt, disposal and abandonment are available. (1)(e) Records of inspection, measurement, test and servicing are available. (3), (4) Records of inspection, measurement, test and servicing are kept on file for three years.	L
Licence details Rating:	NSCA 26 Comments:	Licence activities are conducted in accordance with the licence.	H
Annual Compliance Report Rating:	LC 2916 Comments:	The licensee submits the annual compliance report in the form specified in the appendix of the licence for each year the licence is valid.	M
Records retained Rating:	GN 28 Comments:	(2) The CNSC was notified 90 days prior to the disposal of any prescribed records.	L
Device certification and transfer Rating:	NSRD 11 Comments:	(1) The radiation device in use is a certified model (unless authorized in the licence). (2) The radiation device transferred to other licensees is a certified model.	H

Work Doc: 1 TII - Records

Transfer documents	NSRD 19	(1) A copy of the most recent leak test result is provided for all transfers of radiation devices as well as instructions to follow in the event of an accident. (2) A copy of the most recent leak test result is provided for all transfers of sealed source or nuclear substance used as shielding.	L
Rating:	Comments:		
Authorized transfer	GN 13	All transfers of nuclear substances or radiation devices have been done to authorized licensees.	H
Rating:	Comments:		
Device accidents	NSRD 21	Any radiation device involved in an accident or incident has been tested/inspected and confirmed to be functioning properly prior to return to use.	H
Rating:	Comments:		
Reportable events	GN 29	Incidents and unplanned events have been immediately reported to the CNSC and a detailed written report was submitted within 21 days (refer to NSRD 38).	H
Rating:	Comments:		
Reporting requirements	PTNS 37-38-40	The consignor, the carrier and the consignee must provide an immediate report to the CNSC (PTNS 37 (1)) and a 21 day report (PTNS 38) when becoming aware of any of the following situations: - failure to comply with the requirements of section 26; - a conveyance carrying radioactive material is involved in an accident; - package damage or tampering or leaking; - radioactive material lost, stolen or loss of control; - radioactive material has escaped from a containment system, a package or a conveyance during transport; - failure to comply with the Act and Regulations can lead to a situation in which the environment, the health and safety of persons or national security is adversely affected; - the level of non-fixed contamination as defined in the IAEA Regulations, during transport exceeds limits; - licensee has provided reports of damage or tampering discovered while opening packages as per PTNS 40(4), (5), (6).	H
Rating:	Comments:		
Training and sufficient workers	GN 12 (1) (a), (b)	There are (a) a sufficient number of trained and (b) qualified workers to carry on licensed activity.	H
Rating:	Comments:		
Worker records retained	NSRD 36 (1) (b), (d), (2)	(1)(b) The name of each worker who handles nuclear substances and/or radiation devices is recorded. (1)(d) Training records for all workers who handle nuclear substances and/or radiation devices are available. (2) Worker training records are kept on file for three years after termination.	M
Rating:	Comments:		
TDG training certificate on file	TDG 6.6, 6.7	A copy of the TDG training certificate is kept on file for two years and is available to the inspector.	M
Rating:	Comments:		
List of NEWs	RP 24	A record including names and job category of each NEW is available.	L
Rating:	Comments:		
Nuclear Energy Workers informed	RP 07	(1) Each NEW has been informed in writing of their NEW designation, of the risks associated with their work, of the regulatory dose limits and of their individual dose. (2) Female NEW has been informed in writing of their rights (RP 07) and obligations (RP 11). (3) A signed acknowledgment form is available for each NEW.	M
Rating:	Comments:		
Ascertainment and recording of doses	RP 05	(1) Personnel doses are ascertained and recorded. (2) Doses are determined by (a) direct measurement or (b) estimation.	H
Rating:	Comments:		

Work Doc: 1 TII - Records

Dose limits Rating:	RP 13 (1), 14 Comments:	Dose limits not exceeded.	H
Licensed dosimetry Rating:	RP 08 Comments:	A licensed dosimetry service is used where the effective dose of a NEW will likely exceed 5 mSv in a one-year period.	H
Thyroid Monitoring Rating:	LC 2046-11 Comments:	Thyroid screening has been performed within a period of more than 24 hours and less than five days after handling radioiodine in amounts set out in the licence condition.	H
Thyroid Screening Rating:	LC 2600-3 Comments:	The thyroid screening method is capable of detecting 1 kBq of radioiodine. If the screening is performed using bioassay, the assay e must be approved by the CNSC.	H
Thyroid Bioassay Rating:	LC 2601-6 Comments:	Thyroid uptake above 10 kBq of radioiodine has been reported to the CNSC.	H
Shipping doc kept 2 years Rating:	TDG 3.11 Comments:	Shipping documents used are kept on file for two years.	M
Meter calibrated Rating:	NSRD 20 Comments:	Survey meter that is used has been calibrated within the previous twelve months of its use.	H
Type A package certification Rating:	PTNS 42 Comments:	Type A package design, test results and packaging instructions kept on file for two years after last shipment.	H
Act/Regs available Rating:	GN 12 (1) (k) Comments:	A copy of the Act and Regulations (paper or electronic copy) are readily available to all workers.	L
Import Restrictions Rating:	LC 2402-4 Comments:	Imports are within the limits specified in the licence condition.	H
Export Restrictions Rating:	LC 2403-7 Comments:	Exports are within the limits specified in the licence condition.	H
Safeguards Rating:	LC 2410 Comments:	The licensee shall demonstrate that all necessary measures have been taken to facilitate Canada's compliance with any safeguards agreement, such as described in the licence condition. The licensee shall make available to an International Atomic Energy Agency inspector all the required documentation demonstrating that all necessary measures have been taken to comply with the Canada's agreements, and that all required help or assistance has been provided, when required.	H
Import Export Restrictions Rating:	LC 2480 Comments:	The licensee is not authorized to import or export all items described in the schedule, Parts A and B, of the Nuclear Non-proliferation Import and Export Control Regulations, and specifically listed in the licence condition.	H
Animal Housing Access Control Rating:	LC 2806-1 Comments:	For all animal housing areas with treated animals: (a) access is restricted to persons authorized by the licensee; (b) a 24 hr. contact name (or position) and number is posted at the entrance; and (c) each cage occupied by a treated animal is posted with the radiation warning symbol.	H

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Animal Housing Reuse	LC 2807-1	Prior to reusing the room for treated animals, non-fixed contamination was confirmed to be less than the limits for controlled areas as listed in the licence. Prior to using the room for another purpose, decommissioning of the room was completed.	H
Rating:	Comments:		
Diagnostic animal release criteria	LC 2808-0	Animals having diagnostic tests were only released when the dose rate from the animal was determined to be less than 5 $\mu\text{Sv/hr}$. on contact	H
Rating:	Comments:		

Work Doc: 2 TII - Operation/Storage

Worker's obligations	GN 17	Every worker: (a) uses equipment, devices, facilities and clothing in a responsible and reasonable manner in accordance with the Act, Regulations and Licence Conditions; (b) complies with procedures and measures established by the licensee; (c) informs the licensee or supervisor of any situation where there may be: (i) an increase in the risk to the environment or the health and safety of persons; (ii) a threat to security; (iii) a failure to comply with regulatory requirements; (iv) sabotage, theft, loss or illegal use or possession of prescribed equipment, or (v) a release into the environment not authorized by the licence; (d) observes and obeys all notices and warning signs; and (e) takes all reasonable precautions to ensure the safety and security of individuals, the environment and the nuclear substances or facilities.	H
Rating:	Comments:		
Prohibition of human use	LC 2696-0	There has been no use of nuclear substance in or on human.	H
Rating:	Comments:		
Posting of Signs	RP 21	A radiation warning symbol is posted: (a) at the boundary of and at every point of access where there is more than 100 times the Exemption Quantity (EQ) of nuclear substances; or (b) where the radiation dose rate could exceed 0.025 m $\mu\text{Sv/h}$.	H
Rating:	Comments:		
Contact details posted	NSRD 23	The name or job title and a 24 hr. telephone number are posted in a readily visible location where the nuclear substance is stored or used (refer to RP 21).	H
Rating:	Comments:		
Radiation Warning Sign	RP 22	When a radiation warning symbol is used, it is posted in accordance with regulations.	L
Rating:	Comments:		
Frivolous posting of signs	RP 23	Radiation warning symbols are not posted where there is no radiation, nuclear substance or prescribed equipment.	L
Rating:	Comments:		
Storage	LC 2575-2	(a) Access to storage areas containing nuclear substances or radiation devices is restricted to authorized personnel. (b) Dose rates at occupied areas outside storage areas do not exceed 2.5 $\mu\text{Sv/hr}$. (c) Dose limits are not exceeded as a result of nuclear substances or radiation devices in storage.	H
Rating:	Comments:		
Security indicators	GN 12 (1) (c), (g), (h), (i), (j)	Provisions are in place to ensure the security of nuclear substances and radiation devices and the health and safety of persons. This may be achieved through restricted access (for example use of locks, alarms, and security systems) and reporting of incidents including loss, theft and sabotage.	H
Rating:	Comments:		

Work Doc: 2 TII - Operation/Storage

Sealed Source Security Requirements	LC 2490-1	Licensees have in place security measures including: -Inventory accounting -Access control measures -Up-to-date security plan -Information security measures -Intrusion detection with monitoring and testing -Response protocol -Secure storage of substances and devices -Security awareness program -Vehicle security measures	H
Rating:	Comments:		
Post licence	GN 14	(1) A copy of the licence or an appropriate notice is posted in a conspicuous place at the site of the licensed activity. (2) The complete licence is available at field locations.	L
Rating:	Comments:		
Container/Device labelled	RP 20	Each container or device containing greater than one Exemption Quantity of nuclear substance(s) is labelled with the radiation warning symbol and the required wording.	H
Rating:	Comments:		
Field devices I.D.	NSRD 22	Device is labelled with contact information including a 24 hour telephone number.	M
Rating:	Comments:		
Use of equipment & procedures	GN 12 (1) (e)	Licensee ensures equipment, clothing and procedures are used appropriately at the site of the licensed activity.	H
Rating:	Comments:		
Area Classification	LC 2108-3	All areas of use are classified in accordance with the licence condition.	H
Rating:	Comments:		
Laboratory Procedures	LC 2570-3	An approved radioisotope safety poster is displayed where nuclear substances are handled.	L
Rating:	Comments:		
Contamination Criteria	LC 2642-5	The licensee can demonstrate that sampling and counting methods can meet licence criteria. No loose contamination is detected in amounts exceeding the limits specified in the licence.	H
Rating:	Comments:		
Decommissioning	LC 2571-5	Prior to decommission an area, room or enclosure the following items have been confirmed: (a) loose contamination levels meet the licence criteria; (b) release of any room that contains fixed contamination has been approved in writing by the CNSC; (c) all nuclear substances and radiation devices have been removed; and (d) all radiation warning signs have been removed.	H
Rating:	Comments:		
Disposal (General)	LC 2160-11	Records indicate that all disposals of unsealed nuclear substances are in accordance with the licence condition. Non-radioactive waste containers do not contain radioactive waste (refer to GN 12 (1) (f)).	H
Rating:	Comments:		
Contamination meter requirements	LC 2572-1	A functional portable contamination meter is available.	H
Rating:	Comments:		

Work Doc: 2 TII - Operation/Storage

Extremity Dosimeters-Beta Emitters Rating:	LC 2578-1 Comments:	Ring dosimeters provided by a licensed dosimetry service are worn by all workers handling a container which contains more than 50 MBq of the specified nuclear substances (P-32, Sr-89, Y-90 and Sm-153) in the condition.	M
Operation Limitations - General Rating:	LC 2917 Comments:	Activities and procedures, as listed in the licence appendix, are followed.	L
Inaccuracies Notification Rating:	LC 2920-6 Comments:	Changes to documents listed in the licence appendix have been reported to the CNSC.	L
ALARA/RP program Rating:	RP 04 (a) Comments:	The licensee has implemented a radiation protection program that keeps doses ALARA and includes: (i) management control over work practices; (ii) personnel qualification and training; (iii) control of occupational and public exposure to radiation; and (iv) planning for unusual situations.	H
Radiation safety Rating:	NSRD 17 Comments:	Referenced emergency procedures are available to workers at the site of licensed activity.	M
Device provided & maintained Rating:	GN 12 (1) (d) Comments:	Required devices have been provided and have been maintained according to manufacturer's instruction.	H

Work Doc: 4 TII - Packaging and Transport

Type A package requirements Rating:	PTNS 28 (1) Comments:	A Type A package must be prepared and labelled in accordance of PTNS 28(1) and associated requirements from SSR-6. Package requirements are as follows: - contact dose rate below 2 mSv/h (non-exclusive use) - SSR-6 527; - name of consignor or consignee package - SSR-6 531; - shipping name - SSR-6 532 and TDG 4.11; - activity within limits - PTNS 26(2) and SSR-6 428; - UN number - SSR-6 532 and TDG 4.12; - "Type A" marking - SSR-6 534(b); - VRI code - SSR-6 534(c); - two (I-white, II-Yellow or III-Yellow) labels - SSR-6 538, 539, and TDG 4.6, 4.7; - identify the radionuclide on labels -SSR-6 540 (a); - maximum activity on labels - SSR-6 540 (b)(c) and TDG 4.14; - transport index on labels (II-Yellow and III-Yellow) - SSR-6 540(d) as determined by SSR-6 523-524; - package integrity must not be compromised - PTNS 24(a) and SSR-6 306(b).	H
Excepted packages content/activity Rating:	PTNS 26(1)(a) Comments:	Excepted packages meet the following criteria: - dose rate below 0.005 mSv/h – PTNS 25(4)(a) and SSR-6 516; - activity within limits of PTNS 26(2) and SSR-6 422; - consignor or consignee I.D. - PTNS 28(1)(i) and SSR-6 531; - UN number on package - PTNS 28(1)(i) and SSR-6 532; - package must be accompanied by a shipping document (a log kept by driver is acceptable for UN 2909, 2910, 2911) that identifies the shipping name and UN number - PTNS 29(2)(a) and TDG 1.43; - "RADIOACTIVE" visible inside package(UN2910) upon opening - PTNS 26(1)(a)(i) and SSR-6 424(b)(i). For UN 2908 (Empty Packages): - contamination inside an empty package does not exceed 100 times the levels specified in SSR-6 427(c) and PTNS 26(1)(a)(i); - Labels removed PTNS 26(1)(a)(i) and SSR-6 427(d); - package integrity must not be compromised – PTNS 26(1)(a) and SSR-6 306(b).	H

Work Doc: 4 TII - Packaging and Transport

Surface contamination	PTNS 28(1)(c)/SSR-6 508	The package has been tested to confirm surface contamination is below 4 Bq/cm ² for beta and gamma emitters and low toxicity alpha emitters, and 0.4 Bq/cm ² for all other alpha emitters - PTNS 28(1)(c) and SSR-6 508.	H
Rating:	Comments:		
Transport document requirement	PTNS 29(1)	The consignor of radioactive material provides a shipping document that includes the following (refer to TDG 3.5 and SSR-6 546): - consignor and consignee names and addresses; - 24 hour contact number; - number of packages; - UN number*; - shipping name*; - Class # 7*; - radionuclide identification*; - form*; - maximum activity*; - category of package*; - transport index*; - competent authority certificate number(s)*. For consignments of more than one package, the required information (*) must be given for each package. - Consignor's certification with printed name of the consignor - PTNS 25(1), TDG 3.6.1.	M
Rating:	Comments:		
Showing proof of TDG training	PTNS 25 (1)	A person handling dangerous goods must provide their training certificate or copy of it to an inspector immediately upon request (TDG 6.8). This requirement does not apply for excepted package (TDG 1.43 (b))	M
Rating:	Comments:		
TDG training certificate	TDG 6.1, 6.3, 6.5	The employer is responsible for: 6.1(2)(a) ensuring that only an adequately trained worker who holds a valid TDG certificate handle Class 7 dangerous goods ; or 6.1 (2)(b) performs those activities in the presence and under the direct supervision of a person who is adequately trained and who holds a training certificate in accordance with this Part. 6.3 issuing training certificate that includes: - the employer's business address; - the employee's name; - aspects of handling and transporting; - employee and employer signatures; and - the expiry date of the certificate (TDG 6.5).	M
Rating:	Comments:		
Transport document location	TDG 3.7	Shipping document is located within driver's reach or in a door pocket on the driver's side.	M
Rating:	Comments:		
Package secured in vehicle	PTNS 25 (4)	Consignments are segregated and securely stowed (refer to SSR-6 562, 564, 574 - PTNS 25(1) and TDG 5.4). Category II-Yellow and III-Yellow packages are not carried in compartments occupied by passengers - SSR-6 563.	H
Rating:	Comments:		

Disclaimer - CNSC licensees may use this worksheet voluntarily to ascertain the CNSC's general expectations regarding regulatory requirements. Such requirements would generally be assessed during a Type I and Type II Inspection of licences issued pursuant to the Nuclear Substances and Radiation Devices Regulations. The expectations listed for each regulatory requirement are only provided as a guide. Similar worksheets will be used by CNSC staff for on-site inspections. Inspections, will, however, be carried out on a case-by-case basis in the context of the licensed activities and the circumstances of individual situations. This worksheet is not intended to limit the scope of CNSC inspections or the powers of CNSC inspectors. Licensees should contact the CNSC to obtain information regarding their specific regulatory requirements.

APPENDIX A RATING SYSTEM (GRADES)

A - Exceeds requirements

Assessment topics or programs meet and consistently exceed applicable CNSC requirements and performance expectations. Performance is stable or improving. Any problems or issues that arise are promptly addressed, such that they do not pose an unreasonable risk to the maintenance of health, safety, security, environmental protection, or conformance with international obligations to which Canada has agreed.

B - Meets requirements

Assessment topics or programs meet the intent or objectives of CNSC requirements and performance expectations. There is only minor deviation from requirements or the expectations for the design and/or execution of the programs, but these deviations do not represent an unreasonable risk to the maintenance of health, safety, security, environmental protection, or conformance with international obligations to which Canada has agreed. That is, there is some slippage with respect to the requirements and expectations for program design and execution. However those issues are considered to pose a low risk to the achievement of regulatory performance requirements and expectations of the CNSC.

C - Below requirements

Performance deteriorates and falls below expectations, or assessment topics or programs deviate from the intent or objectives of CNSC requirements, to the extent that there is a moderate risk that the programs will ultimately fail to achieve expectations for the maintenance of health, safety, security, environmental protection, or conformance with international obligations to which Canada has agreed. Although the risk of failing to meet regulatory requirements in the short term remains low, improvements in performance or programs are required to address identified weaknesses. The licensee or applicant has taken, or is taking appropriate action.

D - Significantly below requirements

Assessment topics or programs are significantly below requirements, or there is evidence of continued poor performance, to the extent that whole programs are undermined. This area is compromised. Without corrective action, there is a high probability that the deficiencies will lead to an unreasonable risk to the maintenance of health, safety, security, environmental protection, or conformance with international obligations to which Canada has agreed. Issues are not being addressed effectively by the licensee or applicant. The licensee or applicant has neither taken appropriate compensating measures nor provided an alternative plan of action.

E - Unacceptable

Evidence of an absence, total inadequacy, breakdown, or loss of control of an assessment topic or a program. There is a very high probability of an unreasonable risk to the maintenance of health, safety, security, environmental protection, or conformance with international obligations to which Canada has agreed. An appropriate regulatory response, such as an order or restrictive licensing action has been or is being implemented to rectify the situation.

N/A – Not applicable

N/C – Not checked