

Risk and Reward – Successfully navigating radiation safety regulatory requirements in Australia

Overview

- Current and future uses
- Risks and Rewards
- Controls
- Non-Compliances
 - Regulatory penalties
- QLD regulatory pathway case study

Why are we here?

- Change in export requirements worldwide
- Reduced public risk tolerance towards food safety and security
- Major retailer requirement
- Increase in radiation use in the food industry in general
- Increase in issues, confusion and non-compliances

Uses of Radiation Equipment

- **Current**

- QA / QC X-Ray
 - Bulk
 - Processed / Packed
- TRIM analysis
- DEXA in stream sorting

- **Future**

- X-Ray guided boning
- Bulk shipping export X-Ray
- Laser barcoding
- X-Ray barcoding

Risk v Reward

Risk

- Fines
- Downtime (regulator driven)
- PR
- Worker Health
(Maintenance personnel
highest risk)

Benefit

- High throughput
- Accurate detection
- Hands free operation
- Non invasive
- Low cost per unit
- High reliability

Mandatory Controls

Soft Controls

- Signage
- Training
- Supervision
- Compliance checks

Hard Controls

- Interlocks (Everything)
- Guarding
- Shielding (Dose Limits)

Common non-compliances

- No regulatory approval
- Missing regulatory safety documentation / personnel
- Missing warning labels / signs
- Unapproved modifications
- Unlicensed maintenance

No Regulatory Approval

RECEIVED
12 SEP 2018
BY: [REDACTED]

Queensland Government

Enquiries to:
Telephone: [REDACTED]
Email: [REDACTED]
Our reference: [REDACTED]

[REDACTED]

Acquisition of a radiation source without approval

I am advised that [REDACTED] has acquired a radiation source without holding an approval to acquire the source.

Requirement for approved acquisition of a radiation source

Acquisition of a radiation source without approval is a contravention of section 23 of the *Radiation Safety Act 1999* (the Act) which states that a person must not acquire a radiation source, unless the person is a possession licensee for the source and the holder of an approval to acquire the source. This is a serious matter and as a consequence the Act assigns a maximum penalty which would be \$252,300.00 in this particular circumstance¹.

It is immaterial whether, subsequent to the acquisition of the radiation source, you made or intended to make an application for an approval to acquire the radiation source. Any application made after the acquisition has occurred removes the ability for the chief executive to consider its appropriateness and places you at risk of the now acquired source being seized if it is, in fact, considered inappropriate.

The main reasons for requiring an application to be made before a radiation source is acquired are:

- so an assessment can be made of your suitability to possess the source,
- so an assessment can be made of the radiation source itself to determine if it is an approved or acceptable type and is suitable for the purpose you wish to use it for,
- so the source you intend to acquire can be registered in line with the main purpose of the Act i.e. to control sources of radiation,
- if the source is a radioactive substance, so an assessment can be made of the suitability of the proposed arrangements for storage and for disposal when the source is no longer required., and
- if the source is a security enhanced source, so an assessment can be made of the suitability of the security arrangements for the source.

¹ The maximum penalty is 400 penalty units for a source that is not a security enhanced source or 2,500 penalty units for a source that is a security enhanced source. The penalty for a corporation is five times these amounts. As of 1 July 2017, one penalty unit is \$126.15.

Postal: Radiation Health Unit, Health Protection Branch
Department of Health
PO Box 2368
FORTITUDE VALLEY BC QLD 4020

Internet: www.health.qld.gov.au/radiation/health/

Contact: Phone: 3228 9310
Fax: 3228 9522
Email: radiation_health@health.qld.gov.au

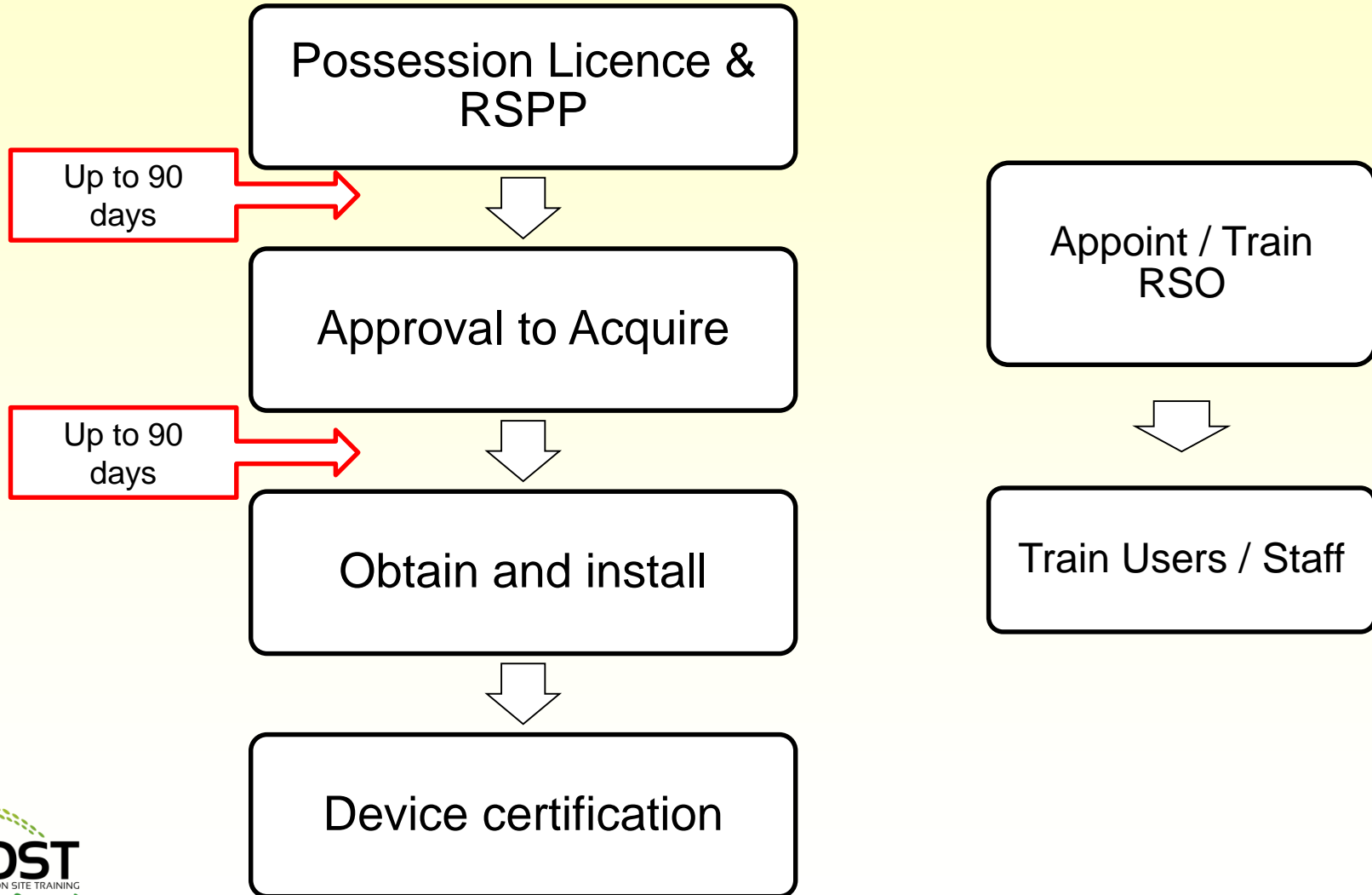
Potential \$252 300 fine

Section 23 – Act reference

Immaterial if you have / are going to apply. Obtaining a unit without the ATA = trouble

Penalty is 400 penalty units (current value \$126.15) x 5 for a corporation

The QLD Process



Contact

National On Site Training

(07) 3391 1718

- Tim: tim@nost.edu.au
- Anthony: anthony@nost.edu.au

Detailed explanation of requirements available by email.

Customer Information of Radiation Regulations by State

NEW SOUTH WALES:

- Before an X-ray machine can be delivered to a customer they must hold a Radiation Management Licence
- To application form for the Management Licence can be found at <http://epa.nsw.gov.au/resources/radiation/radiation-management-licence-application-own-store-give-away-sell-possess-170302.pdf>
- Cabinet X-ray systems are not required to be registered. X-ray apparatus that is not intended to be used for medical, veterinary or dental diagnostic purposes is not required to be registered.

VICTORIA:

- Before an X-ray machine can be delivered to a customer they must hold a Management license to possess the equipment.