

WE NEED TO GET YOU READY FOR YOUR UP COMING PHYSICAL INSPECTION BY THE STATE'S RADIOLOGICAL BRANCH, THE GOVERNING BODY FOR THE C-ARM AND IT'S USE. TO BE READY AND COMPLIANT FOR THEIR VISIT, PLEASE IMPLEMENT AND DO THE FOLLOWING:

- YOU NEED TO ASK YOUR WIFE TO READ AND SIGN OFF ON THE DELEGATION OF THE SAFETY OFFICER'S LETTER ATTACHED. PLACE THIS LETTER IN HER HR/CREDENTIALING FILE.
 - YOU NEED TO MAKE A COPY OF HER FLURO PERMIT & POST IT IN THE LOBBY EITHER LAMINATED OR BEHIND A SHEET PROTECTOR, OR YOU CAN FRAME IT IF YOU WANT. MAKE SURE TO WRITE ON THE PERMIT, IN RED PREFERABLY, "THIS IS A COPY".
 - YOU NEED TO MAKE A COPY OF THE RAD TECH LICENSE, AND POST IT IN THE LOBBY JUST LIKE YOUR WIFE'S COPY. EXACT DUPLICATE OF THE ABOVE INSTRUCTIONS.
 - GO TO GOOGLE, SEARCH FOR CALIFORNIA Code 17. When you find it, print the entire document up, there are many pages. This needs to be printed and placed in a binder with the spine labeled, CA Code 17. This binder should be located near the C-Arm for quick references if needed.
 - Go to page 4 of this policy manual attached, fill in the blank for the name of your company you use for the reading of your dosimetry badges. Write it in is fine too.
 - Print up and post on the Procedure room door, the caution x ray in use and notify staff if you think you might be pregnant sign. (see attached)
 - Each employee working in the procedure room should have a signed responsibilities document (see page 10) in their HR files.
 - The Rad Tech must have a signed job description attesting to their awareness to what their role is and what is expected of them. See attacheed job description with Quality Checks in place.
 - Once these above items are completed, you are ready for your inspection. They are usually always unannounced, being prepared for them makes it much easier and better for all peoples. Citations in compliance for radiology type infractions range any where from \$10K - \$70K per incident. So better to do this and do this right than to pay a hefty penalty for not being in compliance.
- Troy

Radiation Protection Program (RPP)

Radiation Safety Protocols

Policies & Procedures

Astro Surgical Center, LLC

Governing Body Approval:
11/2023

INTRODUCTION

Astro Surgical Center, LLC provides 1-radiation source and is registered under one facility with the radiological branch of California.

1. Organization and Administration

- a. The Radiation Safety Officer & Medical Director oversees the Radiation Protection Program and maintains all proper documentation for state and federal compliance.

2. Radiation Safety Policy

OSHA and other safety guidelines are followed regarding radiation safety in the clinical setting. Personnel Whole Body Radiation Dosimeters for radiation monitoring are furnished for all radiology workers. Dosimeters are to be worn at all times, and will be monitored on a monthly basis. Workers are provided their annual exposure levels at the end of each calendar year. Any exposure beyond the threshold of tolerance is investigated and dealt with at the time of exposure reading. Monthly readings are monitored by the Fluro Tech and then submitted quarterly for discussion to the quality committee.

The purpose is to inform workers of procedures that must be followed to ensure radiation safety through the proper use and monitoring of radiation exposure.

a. Radiation Monitoring

- i. Personal Radiation Dosimeters for radiation monitoring are furnished for radiology workers and are to be worn as part of the uniform.
- ii. The dosimeter must be worn during all exposure activities in the clinical setting.
- iii. All workers|employees who have declared pregnancy, a fetal badge must be worn at all times.
- iv. Dosimetry reports will be distributed monthly and the workers|employees must review and log results on the Dosimetry Log Sheet.
- v. All Social Security Numbers and birth-dates will be removed for worker|employee protection.

b. ALARA Program for All worker|employee Exposure Limits

- i. The following levels of exposure for the ALARA program have been established and are listed below.
- ii. If a worker|employee exceeds the Level I exposure limit in a month, the worker|employee will receive a verbal advising by the Program Director.
- iii. If a worker|employee exceeds the Level II exposure limit in a month, the Radiation Safety Officer will meet with the worker|employee to determine the cause of the high exposure and counsel the worker|employee on how to reduce the exposure they are receiving.

Region	Level I	Level II
Whole body (monthly)	250 mrem	500 mrem
Pregnancy monitor (monthly)	25 mrem	50 mrem

c. Excessive Radiation Exposure

- i. The Radiation Safety Officer will monitor all dosimetry reports.
- ii. If a worker's|employee's dosimeter reading exceeds the limit, the Radiation Safety officer will investigate the causes for the excessive exposure readings.
- iii. The investigation may include interviews with the worker|employee and all relevant individuals.
- iv. All previous exposure readings for the worker|employee and clinical facility will be evaluated.
- v. The investigation is to evaluate why the exposure readings are elevated.
- vi. A report of the information for interviews and all other sources will be shared for corrective action and placed in the workers|employees file.
- vii. The counseling form will be used to document the event and be placed in worker|employee file.
- viii. If corrective action of the worker|employee is not implemented, and dose readings do not reduce, worker|employee will be removed from the clinical setting either by reassignment or termination.

ci. Radiation Safety Procedures for the Declared Pregnant Worker

The following radiation procedures must be followed:

- i. Continue to wear your whole body dosimeter on the outside of your collar.
- ii. Wear a second dosimeter, fetal badge, at the waist level.
- iii. If wearing a lead apron, the fetal badge goes under the lead at the level of the waist.
- iv. If there is not a wrap lead skirt, wear a lead shield and a half wrap apron wrapped around the back.
- v. Keep maximum distance between yourself and the tube and the patient.
- vi. It is our policy not to use the pregnant employee for the purpose of any fluoro radiation type work. She is to be removed from the OR, if assigned, and replaced. Reassignment of tasks appropriate to skill. Should this not occur, then she is to follow the above procedures.

- vii. Review the monthly fetal dosimeter exposure every month with the Radiation Safety Officer.

3. ALARA – As Low As Reasonable Achievable

- a. Any unauthorized exposure or activation of equipment will result in the worker's|employee's dismissal from the facility.
- b. A worker|employee is required to exercise sound radiation protection practices at all times. At no time may a worker|employee participate in a procedure utilizing unsafe protection practices.
- c. workers|employees shall practice “as low as reasonably achievable” (ALARA) guidelines, with respect to themselves, peers, healthcare personnel and patients.
- d. workers|employees are not allowed to expose any human being to the direct x- ray beam while in the facility.
 - i. workers|employees engaged in practices must work under the direct supervision of a qualified practitioner.
- e. Phantoms and positioning devices are provided, as necessary.
- f. workers|employees must remain behind the primary barrier for all exposures, except:
 - i. When wearing protective lead apparel for directly supervised fluoroscopic procedures.
- g. The worker|employee is required to wear a lead apron with their dosimetry device worn on the collar outside the apron for fluoroscopic experiments.
- h. The program provides lead glasses, aprons, gloves, gonad shields and mobile shields for protective use.

4. Dosimetry and Reports to Individuals

a. Occupational Workers

- i. The facility utilizes _____ as a provider of dosimetry devices and analysis.
- ii. Workers|employees are provided with dosimetry monitoring.
- iii. Each month the dosimetry results are reviewed by the Radiation Safety Officer and posted in a designated area in the facility.
- iv. All dosimetry records are archived in the Radiation Safety Officer's office or the Clinical Coordinators Office. All dosimetry records are kept indefinitely, according to CA Code of Regulations (CCR), Title 17.
- v. workers|employees are provided dosimeter devices and are mandated to wear them during clinical days, with their dosimetry device worn on the collar outside the apron.
- vi. Each worker|employee is subject to the occupational exposure limits and the requirements for the determination of the

doses which are declared in CCR, Title 17.

- vii. Occupational dose limits for adults (18 years of age or older):
 - Total effective dose of 5.0 rems (0.05 Sv) or effective dose of 15 rems (0.15 Sv) to the eye or 50 rems (0.5 Sv) to the skin or extremities.
- viii. Occupational dose limits for minors (under 18 years of age):
 - Total effective dose of 0.5 rems (0.05 Sv) or effective dose of 1.5 rems (0.15 Sv) to the eye or 5.0 rems (0.5 Sv) to the skin or extremities.
- ix. Requests for copies of dosimetry records will be accommodated within 30 days by the Radiation Safety Officer.

b. Pregnant Workers

- i. Definition of declared pregnant worker: A woman (female worker|employee) who has voluntarily informed her employer in writing¹ of her pregnancy and estimated due date.
- ii. The worker|employee is not required to resign his/her position.
- iii. A worker|employee may withdraw their written declaration of pregnancy at any time.
- iv. Any worker|employee who declares her pregnancy in writing to the Safety Officer and who desires to continue working in the clinical setting will be required to wear an additional fetal dosimetry device and continue active and direct participation in the patient care setting, while practicing proper radiation safety.
- v. The worker|employee is encouraged to talk to the Safety Officer about any questions or concerns she may have.

5. Area Monitoring and Radiological Controls

a. Area Radiation Monitoring

- i. The entrance to each x-ray room whereby radiation is used is marked with signage, "Caution: X- ray".
- ii. Conspicuously posted in the energized area are the following:
 - Operating and emergency procedures applicable to radiation sources.
 - A current copy of Department Form RH-2364 (Notice to Employees).
 - Any notice of violation(s) or any order pursuant to the applicable regulations (immediately).
 - Current copies of user licenses
- iii. Proper signage is maintained by the Safety Officer.
- iv. Current copies of CCR Title 17, incorporated sections of 10 CFR 20 are available by or near the C-Arm in a binder labeled "Title 17".

writing- using the standard notification of pregnancy form attached

NOTICE OF PREGNANCY

THE EMPLOYEE|WORKER BELOW IS
NOTIFYING YOUR ORGANIZATION OF HER
PREGNANCY.

i

EXPECTED DUE DATE

EMPLOYEE SIGNATURE

b. Instrument Calibration and Maintenance

- i. Procedures are performed using inspected x-ray machines, which are inspected annually using instruments and procedures compliant with CCR Title 17.
- ii. The facility maintains service contracts for all x-ray machines and utilizes these contracts as necessary to correct any potential problems.
- iii. Registration and physicist certification of all machines are available for review in the Safety Officer's office.
- iv. Operator manuals for each machine are available for review in the Safety Officer's office.
- v. The disposal of x-ray machines is made in compliance with CCR Title 17.

c. Quality Assurance/Quality Control

- i. The program maintains all records regarding performance evaluations, acceptance testing and radiation safety of all x-ray machines.
- ii. The program maintains required QC testing equipment in proper working order, including records of calibration frequency and type.
- iii. Records are kept at least three years.

6. Emergency Exposure Situations

- a. A worker|employee is required to notify the Radiation Safety Officer in writing when a situation arises that the worker|employee knows may affect the quality of the radiation monitoring report.
 - i. Examples may be leaving it attached to a lead apron or lab coat which has been stored in a radiographic/fluoroscopic room, passing it through an airport security (radiation) system or wearing it during a medical procedure.
- b. In the event that a worker|employee receives an excessive dosimetry reading, a consultation with the Radiation Safety Officer is required.
 - i. An excessive dose will be considered as one that appears out of usual range for a worker|employee or usual practice, or exceeds regulatory limits.
 - ii. The Radiation Safety Officer will investigate to determine the reason (i.e.: worker|employee practices, equipment, or erroneous badge handling or reading). The worker|employee will be counseled regarding radiation safety practices.
 - iii. The worker|employee will be provided a written conference form for their record; a copy will also be kept HR Dept. for five years as part of the worker|employee record.
 - iv. The CDPH-RHB will be notified (via telephone and in writing) of the event:

- Within 24 hours for any exposure that causes or is likely to cause a total effective dose of 5 rems (0.05 Sv) or effective dose of 15 rems (0.15 Sv) to the eye or 50 rems (0.5 Sv) to the skin or extremities.
 - Immediately for any exposure that causes or is likely to cause a total effective dose of 25 rems (0.25 Sv) or effective dose of 75 rems (0.75 Sv) to the eye or 250 rems (2.5 Sv) to the skin or extremities.
 - Reports will contain the caller's name and call-back telephone number, description of event with exact location, date and time, the quantities and physical form of the licensed material involved, manufacturer and model number of any equipment that failed or malfunctioned, any personnel radiation exposure data available and corrective actions taken or planned.
- v. The CDPH-RHB address is P.O. Box 997414, MS 7610, Sacramento, CA 95899-7414. The telephone number is (916) 327-5106.
 - vi. If a worker|employee has been found to have willfully mishandled or influenced the reading of another worker's|employee's film badge, the worker|employee may be dismissed and reported to appropriate agencies.

7. Record Keeping and Reporting

- a. It is the responsibility of anyone to promptly report to the Radiation Safety Officer any condition which may lead to or cause a violation of department regulations, inspection provisions, or an unnecessary exposure to radiation.
 - i. The Safety Officer will notify the CDPH-RHB (via telephone and in writing) of the event within 24 hours, according to Title 17.
 - ii. Individuals may choose to report the situation or incident directly to the CDPH-RHB.
 - iii. The CDPH-RHB address is P.O. Box 997414, MS 7610, Sacramento, CA 95899-7414. The telephone number is (916) 327-5106.

8. Radiation Safety Training

- a. Occupational Workers
 - i. The facility provides training on each x-ray machine to each worker. Documentation of this training is archived in the Safety Officer's office.
 - ii. No one is allowed to operate the C-Arm without having been trained and California licensed to operate.
 - iii. The supervising permit and technician trained in Fluoroscopic Radiation may or may not be a full-time employee and may in fact be a 1099 per diem. However, the regulations still apply and are expected to be compliant at all times.

9. Internal Audit Procedures

- a. The Radiation Safety Officer maintains an annual, formal assessment of dosimetry results and compliance and reports the data.
- b. The Radiation Safety Officer maintains an annual, formal audit of all other aspects of the Radiation Protection Program pertinent to their clinical setting. Items include:
 - i. Inspections and results
 - ii. QA/QC
 - iii. Training
- c. Internal audit data is available to the CDPH-RHB, program advisory committees and the public, upon request and in compliance with FERPA.

10. Total Compliancy is expected of all employees and users of the radiation, ensuring that we will:

CDPH-RHB must be notified when an individual is exposed to excessive radiation (for other than prescribed medical purposes):

Immediate notification

Total effective dose 25 rems (0.25 Sv) or more Eye dose equivalent of 75 rems (0.75 Sv) or more Shallow dose of 250 rems (2.5 Sv) or more
24-hour notification.

Total effective dose 5 rems (0.05 Sv) or more Eye dose equivalent of 15 rems (0.15 Sv) or more Shallow dose of 50 rems (0.5 Sv) or more

Health and Safety Code

Unlawful for any person to direct, order, assist or abet a violation of certification provision.

Anyone who violates, aids or abets the violations of any of the provisions of the law or regulations is guilty of a misdemeanor.

Technologists are to work within scope of certification and permits Equipment must be within compliance

Technologists must be competent in and comply with:

Knowing the exact examination ordered before making an exposure

Clearing the fluoroscopy room of all non-essential person

Collimating to area of interest Using gonad shields as appropriate

Using correct technical factors (optimum kVp, lowest mA possible) Positioning the patient correctly before exposure

Minimizing patient motion, while keeping the patient comfortable and under constant observation

Techs are prohibited by law from: Fluoroscoping without a specific order. Making diagnoses.

Reporting diagnoses to patients unless ordered to do so by a physician.

Operating equipment without having been trained on it.

Performing fluoroscopy procedures without a posted, valid state permit.

Performing fluoroscopy procedures without appropriate supervision of a licensed technologist.

Lead aprons must be worn by every person in the exam room, except the patient.

Techs should stand as far away from the beam as possible

Behind the primary barrier, if possible

Additional protective devices should be worn, as appropriate; glasses, gloves, shields."

worker|employee RESPONSIBILITIES

1. workers|employees are not allowed to hold a patient.
2. workers|employees must ensure a ratio of 1:1,
3. workers|employees who are working in fluoroscopy, whether in the fluoroscopy room or the OR, will only work with a state licensed technologist only.
4. workers|employees must have be a fluoroscopy licensed technologist

The worker|employee will understand and comply with the policies and procedures contained in this manual.

Employee Signature|Date|Time

REGULATORY CONTACT INFORMATION

California Dept of Public Health – Radiation
Health Branch P. O. Box 997414, MS 7610
Sacramento, Ca 95899-7414
(916) 327-5106
www.cdph.ca.gov/rhb