

Common Safety Findings during Environmental Tours in Healthcare Facilities

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I. Assessments/Inspections

Job Hazard Assessment: The surveyed sites should conduct a job hazard assessment to determine the personal protective equipment (PPE) needed ([29 CFR 1910.132\(d\)](#)).

Boiler and Unfired Pressure Vessel Inspection Frequency: Boilers should be inspected according to Alaska Statute 18.60.320. For a pdf handout on Alaska statutes and regulations for Boiler and Unfired Pressure Vessels [click here](#) or visit the Alaska Statutes [webpage](#) (see below for excerpt).

[AS 18.60.320](#) *Inspection of boilers and unfired pressure vessels.*

(a) Each boiler and unfired pressure vessel used or proposed to be used in the state except boilers or unfired pressure vessels exempt under AS 18.60.210 shall be inspected as to construction, installation, condition, and operation, as follows:

- (1) power boilers and high pressure or high temperature water boilers shall be given a certificate inspection annually; the inspector may conduct an external inspection while the boiler is under pressure or an internal inspection if warranted;*
- (2) low pressure steam or vapor heating boilers shall be given a certificate inspection biennially with an internal inspection every four years if its construction permits an internal inspection;*
- (3) hot water heating, hot water supply, and coil heating boilers shall be given a certificate inspection biennially with an internal inspection at the discretion of the inspector;*

** Inspections can be completed by appointed special inspectors who meet state qualifications (e.g. insurance company), ([AS 18.60.240](#))

II. Compressed Gas Safety

Unsecured oxygen cylinder: Compressed gas cylinders should be secured to keep them from falling ([29 CFR 1910.104\(b\)\(8\)\(vi\)](#)). Also *NFPA 99 9.7.2.3* for health care.

Oxygen storage - back storage room/garage: 15 "H" cylinders containing oxygen were stored beneath the stairs to the mezzanine. Though the quantity and appearance of this storage had improved since the last survey, this was approximately 3,750 cubic feet of compressed oxygen.

NFPA 55 (Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks, 2005) does provide storage advice for non-medical buildings. Table 6.3.1 of this standard limits storage of oxidizing gases to 1,500 cubic feet in unsprinklered buildings without any specially rated enclosures (this would be six "H" cylinders).

Medical grade gases should be stored separate from non-medical grade *gases* (*Joint Commission Sentinel Event Alert, Issue 21-July 2001*).

Labeling is strictly regulated by FDA, e.g. medical gas, compressed air, etc.

Not all cylinders were appropriately secured,. Cylinders should be kept secure (*NFPA 99:9.4.8 (2005)* and *5.3.13.1.3*).

Some of the cylinder protection caps were not in place or were not hand-tightened (*NFPA 99-2005:9.7.2.2(4)*).

Air pressure for cleaning: Air hoses for cleaning purposes should be equipped with a device to ensure the air pressure cannot exceed 30 psi if dead ended. ([29 CFR 1910.242\(b\)](#))

Liquefied Petroleum Gas (LPG) storage: According to the 2008 edition of the Liquefied Petroleum Gas code NFPA 58:8.3.1(a), storage should not exceed four (4) pounds when stored inside a flammable storage cabinet.

Medical Gas Storage: Medical grade oxygen and nitrous oxide cylinders may sometimes be found stored with carbon dioxide and helium cylinders. Medical grade gasses should be stored separate from non-medical grade gasses (*Joint Commission Sentinel Event Alert, Issue 21- July 2001*)

III. Electrical

Electric panel-board labeling: There were labeling issues with every inspected panel board. Every breaker is to be correctly labeled ([29 CFR 1910.303\(f\)](#)).

Blocked electric panel – outpatient pharmacy: Boxes were left in front of an electric panel. A space at least three feet in depth should be kept clear in front of the electric panels ([29 CFR 1910.303\(q\)\(1\)\(i\)\(A\)](#)).

Storage in electrical room: Three feet clearance should be maintained in front of the electrical panels and switches ([29 CFR 1910.303\(q\)\(1\)\(i\)](#)).

Electrical Receptacles, Tamper Resistant (electrical outlets): Determining requirements or needs for electrical outlet covers to limit child access: The ideal solution is a two step process requiring a risk assessment as recommended by TJC to determine which outlets you want to address followed by installing tamper resistant receptacles. Installation of tamper resistant receptacles negates the need to add caps or covers which only work when in use. Many facilities have a difficult time keeping caps in the outlets they want to protect. In addition, some groups cite studies where caps are only effective for children under two years old. Older children often do not have trouble removing them. Some facilities consider use of outlet cover plates. However, due to their thickness, they may prevent the full insertion of a plug and thus create additional hazards. If either of these devices are considered, ensure they are UL listed (many are not) and trial them before purchasing stock and applying to the areas identified to protect.

In the October 2003 issue of the “Environment of Care News”, TJC discussed this topic. The National Electric Code, NFPA 70 (NEC) is cited. The scope of the NEC is for construction and installation and not existing facilities (NFPA 70-2008:517.1). To determine the NEC requirement, one would have to review the NEC in effect at the time the plans for the existing facility were approved.

The existing NEC may be used to determine the most current thinking in regards to electrical safety. The current NEC code regarding this issue is:

517.18 General Care Areas (C) Pediatric Locations. Receptacles located within the rooms, bathrooms, playrooms, activity rooms, and patient care areas of pediatric wards shall be listed tamper resistant or shall employ a listed tamper resistant cover.

The Joint Commission (TJC), in their EC Newsletter, recommends a facility conduct a risk assessment to determine which areas outside of a pediatric ward might warrant further protection. They recommend considering “areas that have a high number of children present daily, such as children’s play areas, on-site day care, public waiting areas, and so on.”

Power strip plugged in series (daisy chain): Power strips should not be plugged in series. This goes against their UL listing ([29 CFR 1910.303\(b\)\(2\)](#)).

Exposed wires: Electrical wires should be enclosed to protect from accidental contact ([29 CFR 1910.303\(q\)\(2\)](#)).

Permanent use of extension cords: Extension cords should not be used as a substitute for permanent wiring ([29 CFR 1910.305\(q\)\(1\)\(iii\)\(A\)](#)).

Electric cord through doorway: A damaged cord was run through the back exit (near an office). The cord was removed from service. Cords should not be run through doorways ([29 CFR 1910.305\(q\)\(1\)\(iv\)\(c\)](#)).

Bring wiring up to code: The electric cord for the negative pressure monitor was strung through the ceiling. Flexible electric cords should not be run through the ceiling or walls ([29 CFR 1910.305\(q\)\(1\)\(iii\)\(B\)](#)).

Damaged extension cord: A black extension cord was found where the cord was separating from the plug. This should be replaced or removed from service until repaired ([29 CFR 1910.334\(a\)\(2\)\(ii\)](#))

Temporary wiring: Christmas decorations with electrical wiring should be left up no longer than 90 days. ([CFR 1910.305\(a\)\(2\)\(i\)\(c\)](#))

Flexible cords and cables: May not be used where attached to building surfaces ([CFR 1910.305 \(q\)\(1\)\(iii\)\(D\)](#)).

Christmas Decorations: Decorations are not allowed on doors that require a fire rating of ¾ hour or longer (NFPA 80-1999:1-3.5).

Combustible decorations are prohibited unless they are flame retardant. An exception is for photographs and paintings, in such limited quantities that a hazard of fire development or spread is not present (NFPA 101-2000:19.7.5.4).

Electrical cords should not be run through doorways or walls ([29 CFR 1910.305\(q\)\(1\)](#)).

See also “Temporary wiring”

GFCI: Outlets within six feet of a sink should be provided with GFCI protection (NFPA 70-2008: 210.8(B))

Note: The NEC allows for the exception to GFCI protection in patient care areas (NEC 210.8.B(5) Exception 2). Patient care areas would include examination rooms and inpatient rooms (NFPA 70-2008: 517.2).

Though GFCI is not required in patient care areas, they are allowed. Facilities should consider installing GFCI in those outlets near sinks in patient care areas, where the disruption of power would not impact electrically powered equipment essential to life.

Unguarded lights: Live parts of electrical equipment operating at 50 volts or more shall be guarded against accidental contact by approved cabinets or other forms of approved enclosures or ...by elevation of eight feet or more above the floor or other working surface ([29 CFR 1910.303\(q\)\(2\)\(i\)\(D\)](#)).

Tamper resistant receptacles: receptacles located within the rooms, bathrooms, playrooms, activity rooms, and patient care areas of pediatric wards shall be listed tamper resistant or shall employ a listed tamper resistant cover (NEC 517.18).

TJC requires emergency power for the following (TJC EC.02.05.03):

- Alarm systems required by the Life Safety Code
- Exit route and exit sign illumination
- Emergency communication systems as required by the Life Safety Code.
- Elevators
- Equipment that could cause harm when it fails, including life support systems, blood, bone, and tissue storage systems; medical air compressors; and medical and surgical vacuum systems.
- Areas in which loss of power could result in patient harm, including operating rooms, recovery rooms, obstetrical delivery rooms, nurseries, and urgent care areas.

TJC requires the following tests on the generator (TJC EC.02.05.07):

- Monthly, 30 minute tests at 30% dynamic load of nameplate rating.
 - If 30% load cannot be achieved, then an annual test must be conducted using supplemental load to achieve certain percentages of the nameplate rating as outlined in the TJC standard. This may be an issue for the sub-regional clinics with larger generators.
- Monthly test of all automatic transfer switches.
- Every 36 months a four-hour test at a minimum of 30% load rating is conducted and documented.

IV. Emergency Action Plans

Emergency Action Plan: Each building should have a written emergency action plan. The plan should include procedures for reporting a fire and how to evacuate the building. Though this standard is only required if another OSHA standard requires it, this is standard industry practice and should be available ([29 CFR 1910.38](#)).

First Aid Kit Supplies: OSHA recommends a first aid kit have the supplies suggested in ANSI Z308.1 ([29 CFR 1910.151\(b\)](#)).

Eye Flushing Solution expired: Dispose of expired items per label

Expired personal eyewash – 1st floor mechanical room: A personal eyewash bottle expired in 2007. Due to their limited volume, personal eyewashes cannot take the place of required eyewash (ANSI Z358.1 – 1998, 6.1.1). If an ANSI approved eyewash is required in this area and one is not within 10-second travel distance, then plumbed eyewash (or a self-contained eyewash capable of providing flushing fluid for 15-minutes) should be installed. The chemical hazards in this area should be evaluated to determine if eyes of any person may be exposed to injurious corrosive materials ([29 CFR 1910.151\(c\)](#)).

ANSI Z358.a - Emergency Eyewash and Shower equipment.

- *The shower shall be accessible and require no more than 10 seconds to reach. The path of travel shall be free of obstructions that may inhibit the immediate use of the equipment (4.6.1).*
- *For strong acids or corrosives the eyewash should be immediately adjacent to the hazard (5.4.4)*
- *Hand-held drench hoses provide support for emergency shower and eyewash units but shall not replace them. (8.1).*

V. Fire/NFPA

Extinguishers: Fire extinguishers should be inspected monthly. Document this inspection. (most facilities use a fire extinguisher tag) ([29 CFR 1910.157\(e\)\(2\)](#)).

Fire extinguishers having a gross weight not exceeding 40 lb (18.14 kg) shall be installed so that the top of the fire extinguisher is not more than 5 ft above the floor. In no case shall the clearance between the bottom of the fire extinguisher and the floor be less than 4 in. (NFPA 10:1-6.10).

Fire extinguisher placement: Staff should not have to travel more than 75 feet to gain access to a fire extinguisher (NFPA 10-2007:6.2.1.1).

Blocked fire extinguisher – Ensure fire extinguisher access ([29 CFR 1910.157\(c\)](#)).

Fire blankets: Fire blankets may cause harm if personnel are not trained in how to use them properly. NFPA 99-2005 A.11.2.1.3.4 regarding fire blankets in laboratories illustrates the importance of training staff to appropriately respond with a fire blanket to a person of fire.

Fire rated doors propped open: Rated doors in a smoke or fire barrier should not be propped open. Any door in an exit passageway, stairway enclosure, horizontal exit, smoke barrier, or hazardous area enclosure shall be permitted to be held open only by an automatic release device (NFPA 101: 19.2.2.2.7 (2000))

Fire rated doors missing self-closing device: If a door is part of a fire rated enclosure a self-closing device should be installed to maintain the fire rating. Safety staff should have a floor plan of the hospital indicating the locations of fire and smoke barriers.

Alcohol-based hand rub: Containers of flammable liquids should not be placed above an ignition source such as an electrical switch or outlet. (NFPA 101:19.3.2.7(6) (2000))

Fabric Display: A fabric display on the wall created a potential fire hazard and appeared difficult to clean and disinfect. The Life Safety Code does not allow combustibles decorations unless they are fire retardant. There is an exception for limited quantities where the hazard of fire development is not present (NFPA 101: 19.7.5.4 (2000)).

Blocked exit- Exit routes must be free and unobstructed ([29 CFR 1910.37\(a\)\(3\)](#)).

Locked Door- Door leaves to be opened readily from the egress side whenever the building is occupied (NFPA 7.2.1.5.1)

Emergency Lighting: Ensure emergency lights are tested and operational ([29 CFR 1910.37\(a\)\(4\)](#)).

Standard practice is:

- Functional test at 30-day intervals for a minimum of 30 seconds
- Annual test for a duration of 1.5 hours.
- If not required but present, shall be either maintained or removed. 2009 NFPA 4.6.13.3 (**applies to existing life safety features obvious to the public**)

Sprinklers & clearance: Ensure 18" vertical clearance (exception is given to storage against a wall) between sprinklers and material below ([29 CFR 1910.159\(c\)\(10\)](#)) (NFPA13:8.8.6.1)

Sprinklers being painted:

6.2.6.2* Painting

- 6.2.6.2.1 Sprinklers shall only be painted by the sprinkler manufacturer.
- 6.2.6.2.2 Where sprinklers have had paint applied by other than the sprinkler manufacturer, they shall be replaced with new listed sprinklers of the same characteristics, including orifice size, thermal response, and water distribution.

Exit signs: Exit signs should be posted so that someone standing in the middle of a wing can see the exit signs ([29 CFR 1910.37\(b\)\(4\)](#)).

Exit not maintained: Snow had not been cleared from this exit. The egress path from the exit must be kept cleared and unobstructed ([29 CFR 1910.37\(a\)\(3\)](#)).

Sprinkler missing escutcheon: To maintain the sprinkler's listing specifications, the escutcheon should be replaced (NFPA 13:6.1.1.1)

Unsealed firewall penetration: If the hot water line is kept in the stairwell, the penetrations should be appropriately sealed to maintain the fire rating ([29 CFR 1910.36\(a\)\(2\)](#)). OSHA does not provide a citation forbidding the hot water line in the stairwell, however, this is prohibited by the Life Safety Code (NFPA 101: 7.1.3.2.1(e)) unless the hot water line is used to heat the stairwell

Exit discharge marking: Stairs above the top occupied floor did not lead to exit discharge. They led to the penthouse (which was appropriately locked) or hatches to the roof. Just as there are signs and impediments to take the stairs to the basement, there should also be an effective means to stop and notify people that there is no discharge above the top occupied floor (NFPA 101: 7.7.4).

Stair exit landing: The elevation of a floor surface shall be maintained on both sides of the door for a distance not less than the width of the widest leaf (NFPA 101:7.2.1.3.2).

Diminished egress width: You should not decrease the capacity of an exit route ([29 CFR 1910.36\(f\)\(2\)](#)).

Bench in hall: A bench was in the hall for patients to use while waiting for x-rays. The bench would not be easily moved during a fire situation. Consider replacing the bench with plastic chairs (without wheels) that can be easily stacked and placed out of the way when not in use or during fire events. Though the required corridor width for existing facilities is four

feet (NFPA 101: 19.2.3.3), “existing life safety features that do not meet the requirements for new buildings (which in this case is an 8 foot corridor), but that exceed the requirements for existing buildings, shall not be further diminished (NFPA 101: 4.6.7). In other words the permanent placement of items in the corridor is not allowed if it diminishes the corridor width to less than eight feet.

Boxes in corridor: Boxes were stored in the corridor. Corridors should not be used for general storage. General storage areas should either be in a fire protected area or if the storage is for routine office supplies, within the room of individual “tenant” spaces (NFPA 101: 39.3.2.2, A39.3.2.2 (2000)). (Business Occupancy)

Pharmacy aisle width: According to the available Life Safety drawings, the outpatient pharmacy is in the **business occupancy** section of the hospital. As the outpatient pharmacy likely serves less than 50 people, the aisle egress width should be in compliance with section 7.3 of the Life Safety Code (NFPA 101:39.2.3 (2000)). The minimum width should not be less than 36 inches, though an exemption is given for existing buildings of 28 inches (NFPA 101:7.3.4.1 (2000)). When remodeling is considered for this area, ensure all aisles are a minimum of 36 inches in width.

VI. Hallways

Railings - HVAC room access stairs: Though the access in the HVAC room may not be the indicated fire egress route, they still must meet OSHA regulations. Fixed industrial stairs (not serving as emergency egress) still must have railings and handrails ([29 CFR 1910.24\(h\)](#)). These must be installed according to OSHA standards ([29 CFR 1910.23](#)). This office can provide dimensions if requested. New handrails shall be continually graspable along their entire length (NFPA 101:7.2.2.4.5(4)).

Healthcare: One cannot diminish the effective width of an egress corridor to less than that required for a new healthcare occupancy (NFPA 101:4.6.7 (2000)). The required egress width for new healthcare is eight feet (NFPA101:18.2.3.3 (2000)).

TJC has allowed patient care items to be stored in the hall temporarily, but for only a 30 minute maximum time limit (e.g. medical equipment, linen and janitor’s cart).

VII. Hazard-Communication

A written hazard communication program should be established ([29 CFR 1910.1200](#)).

In addition, an employee should not have to ask for an MSDS (this would be perceived as a barrier). They should be trained how to access them without having to go through a supervisor (OSHA Standard Interpretations 12/07/1999 – Employee access to MSDSs required by ([29 CFR 1910.1200](#) vs. [19 CFR 1910.1020](#)).

Chemical labeling/handling – Janitor’s closet: The janitor’s closet had unlabeled squirt bottles. In addition to product name, a secondary label should have appropriate hazard warnings ([29 CFR 1910.1200\(f\)\(5\)](#)).

Ensure documentation of a Job Hazard Assessment: The clinic should conduct a job hazard assessment for all positions to determine the personal protective equipment (PPE) needed ([29 CFR 1910.132\(d\)](#)). The facility already has a policy and format for this assessment. In the past, the Occupational Safety and Health Administration has cited healthcare facilities in Alaska for not conducting and documenting this assessment. The assessment is an important step in ensuring staff have appropriate PPE when needed.

[1910.1200\(b\)\(6\)\(ix\)](#)

Any consumer product or hazardous substance, as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended;

OSHA has written interpretation letters on this topic: The following interpretation specifically addresses Windex. An excerpt from this web page (http://www.osha.gov/pls/oshaweb/owadis.show_document?p_table=INTERPRETATIONS&p_id=25043):

Question 2: *Additionally, the offices of my client purchase products such as Windex and Office Cleaner so that their employees may clean their work stations. Would the office cleaning products used by my client’s employees come under the consumer products exemption of the HCS?*

Answer: *You have indicated that these products are provided by your client for their employees to use for the occasional cleaning of*

work stations and not in situations related to a required work assignment. If your client's employees utilize the office cleaning products you mention (Windex and Office Cleaner) with the frequency and duration as that of a normal consumer, then the use of those cleaning chemicals would fall under the HCS exemption for consumer products, ([29 CFR 1910.1200\(b\)\(6\)\(ix\)](#)).

You included different types of chemical products in your inquiry. The products in question are being used for a variety of purposes and in a variety of quantities. A consumer product that is used in a workplace in such a way that the duration and frequency of use are the same as that of a consumer is not required to be included in an employer's hazard communication program. Again, it is your client's responsibility to make this determination for his workplace by assessing the exposure potential of the consumer products he may utilize and ensuring that the frequency and duration of use of these products, by his employees, are not greater than that of normal consumer use.

VIII. Housekeeping

Walking surfaces should be kept clean and orderly and in a sanitary condition ([29 CFR 1910.22\(a\)](#)).

Horizontal surface dusting: Horizontal surfaces in exam rooms were found to be dusty. Dusting should be improved to provide a clean environment for patients (TJC EC.02.06.01(EP20)).

Unsecured stacking of file boxes: The stack height exceeded the rule of thumb to only allow a stack to be three times as high as the minimum dimension of the base (The National Safety Council's Text: Accident Prevention Manual for Business & Industry Engineering and Technology, 12th edition, p.420) ([29 CFR 1910.176\(b\)](#)).

Janitor's closet clutter: Improve housekeeping to limit tripping hazards ([29 CFR 1910.176\(c\)](#)).

Food and drink items should not be stored in bathrooms or on the floor ([29 CFR 1910.141\(g\)\(4\)](#)).

1910.141(g)(4) Sanitary storage. No food or beverages shall be stored in toilet rooms or in an area exposed to a toxic material.

Under Stair Storage: Area serving as a storage area. Enclosed, usable space shall be permitted under stairs, provided that the following criteria are met:

1. the space is separated from the stair enclosure by the same fire resistance as the exit enclosure.
2. entrance to the enclosed, usable space shall not be from within the stair enclosure (*NFPA 101: 7.2.2.5.3.2, (also 7.1.3.2.3)*)

IX. Infection Control

Extracted teeth storage: Some extracted teeth were kept in the lab in a jar containing bleach solution. Teeth were saved for later educational use. The CDC in their "[Guidelines for Infection Control in Dental Health-Care Settings – 2003](#)" state that most chemical germicides "do not reliably disinfect both external surface and interior pulp tissue." They recommend that teeth not containing amalgam be steam sterilized. Teeth containing amalgam may be placed in 10% formalin solution for two weeks before use. Before using formalin, a hazard assessment should be conducted to ensure appropriate controls or personal protective equipment are in place. The steam sterilization of teeth containing amalgam may release mercury vapors. Teeth should remain hydrated before steam sterilization. When kept hydrated, a biohazard label should be affixed to the container (page 33 of the CDC guidelines).

If teeth will not be disinfected per the above recommendations, they should be labeled as a biohazard and appropriate standard precautions should be used when handled.

Alcohol-based hand rub: See fire

Labeling of sterilized instruments: Instruments are to be labeled with the month and year of sterilization. Label sterilized items with a load number that indicates the sterilizer used, the cycle or load number, the date of sterilization, and, if applicable, the expiration date ([CDC Guidelines For Disinfection and Sterilization, 2008](#)).

Negative pressure room monitoring: The inpatient negative pressure rooms should have a negative pressure assessment conducted each time the room is used for negative pressure. When not in routine use, the rooms should be checked monthly and documented ([CDC Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005](#)).

Red bag use: While not forbidden, red bags are not recommended for use to collect normal bathroom waste. Regulated medical waste is more expensive to dispose. Housekeeping staff should be informed of the definition of regulated medical waste and ensure that only regulated medical waste is disposed of in red bags.

Sharps Container: Item was sticking out of the container. Items should not be allowed to stick out of the sharps container ([29 CFR 1910.1030\(d\)\(4\)\(iii\)\(A\)\(2\)\(i\)](#) and (iii)).

X. Ladders

A fixed ladder should have a cage or well when the height is more than 20' ([29 CFR 1910.27\(d\)\(1\)\(ii\)](#)).

The question arose regarding the fall protection requirements for a fixed ladder on the roof of the facility. The need for fall protection depends on the height of the ladder. The length of this ladder was not measured. If the ladder is higher than 20 feet then a cage or well shall be provided per OSHA specifications ([29 CFR 1910.27\(d\)\(1\)\(ii\)](#)). Ladder safety devices (such as lifelines, friction brakes or sliding attachments meeting the design requirements of the ladders which they serve) may be used in lieu of a cage ([29 CFR 1910.27\(d\)\(5\)](#)).

XI. Laundry

Negative pressure indicator for dirty side of laundry: The Siemens pressure indicator on the dirty side of the laundry showed that negative pressure was not being maintained (it indicated “no isolation”). This has reportedly been a long standing situation. The following issues should be considered or evaluated:

- Determine where the pressure readings are being made. The indicator was in the dirty side. A sensor should be located on the clean side.
- The purpose for negative pressure on the dirty side is to: “minimize the potential for re-contaminating cleaned laundry with aerosolized contaminated lint, areas receiving contaminated textiles should be at negative air pressure relative to the clean areas” ([CDC Guidelines for Environmental Infection Control in Health-Care Facilities](#), p. 99).

XII. Lead/Asbestos

The construction dates of the buildings were unknown. Buildings constructed before 1980 may contain lead based paint or asbestos. Construction or maintenance activities that might disturb the building structure should not take place in buildings built before 1980 until the status of potential lead based paint or asbestos is established.

XIII. Lights

Unshielded lights: Light bulbs under 8' in height should be guarded ([29 CFR 1910.303\(a\)\(2\)](#)).

Emergency light tests: Ensure the emergency lights are tested and operational ([29 CFR 1910.37\(a\)\(4\)](#)).

Standard practice is:

- Functional test at 30-day intervals for a minimum of 30 seconds
- Annual test for duration of 1-1/2 hours.

Emergency lighting for emergency and standby power systems: Battery-powered emergency lighting shall be provided for the room containing an emergency generator. This requirement shall not apply to units located outdoors in enclosures that do not include walk-in access ([NFPA 110:7.3.1 \(2010\)](#)).

XIV. Lock-Out/Tag-Out

A lockout/tagout (LO/TO) program should be documented to “ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source and rendered inoperative ([29 CFR 1910.147\(c\)](#)).”

XV. Machine guarding:

Unguarded shafts, moving parts: Mechanical power-transmission apparatus under seven feet in height should be guarded ([29 CFR 1910.219](#)).

Fan with guard removed – medicine room: A fan with the guard removed was found in the medicine room. Either ensure the guard is placed and kept on the fan or remove the fan ([29 CFR 1910.212\(a\)\(5\)](#)).

Paper cutter guard: The paper cutter should have point of operation guarding such as a single rod barrier or a shield the length of the blade attached to the cutting board ([29 CFR 1910.212\(a\)\(3\)\(ii\)](#)).

XVI. Noise:

The noise level of operations shall not exceed the OSHA standard (85dBA-8hr time weighted average) without implementation of a hearing conservation program ([29 CFR 1910.95 \(c\)](#)).

XVII. Physical Hazards:

Overhead beam: The beam at the top of the stairs to the mezzanine was low enough so that the average person would have to duck to prevent striking their head. This beam should be marked with yellow to caution people of the hazard ([29 CFR 1910.144\(a\)\(3\)](#)).

Tripping Hazard: A raised lip at the entrance to room xxx created a tripping hazard. Mark the lip to warn entrants of the change in elevation ([29 CFR 1910.144\(a\)\(3\)](#)). Yellow/black striped marking as used in other places of the building will suffice.

IV Solution/Blanket Warmer-Urgent Care: the top chamber to the unit had an appropriate temperature for IV solutions (below 110 degrees F). The bottom unit (used for blankets) would be too hot for IV solutions at around 137 degrees F. The clinic should consider posting the ideal temperature. National organizations recommend keeping all temperatures below 110 degrees F. in case the blanket warmer compartment is also used for IV solutions. If the clinic decides to keep the blanket warmer above 110 degrees F, consider placing a sign forbidding the storage of IV solutions.

XVIII. Respiratory Protection Program

Respirator use: If respirators are used, ensure training, fit testing, medical clearance, and written program comply with ([29 CFR 1910.134](#)).

Respiratory Protection

[1910.134\(c\)\(3\)](#)

The employer shall designate a program administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

[1910.134\(f\)\(5\)](#)

The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol. The OSHA-accepted QLFT and QNFT protocols and procedures are contained in Appendix A of this section.

Appendix A to § 1910.134: Fit Testing Procedures (Mandatory)

Part I. OSHA-Accepted Fit Test Protocols

B. Qualitative Fit Test (QLFT) Protocols

1. General

(a) The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and ensure that test equipment is in proper working order.

(b) The employer shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

XIX. Training

First Aid: In the absence of an infirmary, clinic or hospital in near proximity to the workplace, a person or persons should be adequately trained to render first aid. Adequate first aid supplies shall be readily available ([29 CFR 1910.151\(b\)](#)).

XX. Waste Issues

Regulated Medical Waste: It was noted that full urine containers were disposed in the regulated medical waste containers. Though this practice is permissible, it is probably not necessary and may be costing money.

“Urine is not classified as a body fluid that could reasonably transmit blood-borne pathogens. In order for urine to be classified as potentially infectious, blood must be visibly present or the presence of blood reasonably anticipated due to the patient having a medical condition that would lead to blood in the urine (OSHA interpretation letter: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=22135).

XXI. Water Supply

Backflow prevention: The lab sink had a hose attached to it without backflow protection. A vacuum breaker or backflow preventer should be installed (*2000 International Plumbing Code: 608.15.4.2*).

Water Temperature: The water temperature for showers and bathing should be appropriate for comfortable use and the 2001 AIA guidelines permit a temperature range between 105F and 120F. The AIA guidelines seek to balance potential risks of scalding against the risks of exposure to Legionella, since the older standard (110F) is near the temperature supporting growth of Legionella (77–108F). CDC recommends maintaining water temperatures at 124F or higher and cold-water temperatures at 68F to control Legionella. Mixing pressure valves must then be used to control water temperature at the use outlet so that the water system can be maintained at the higher temperature without risk of scalding. Such decisions are important safety and cost/benefit issues and are determined state by state (*AIA recommendation from APIC text, 2005 (p. 107-6)*).

XXII. Vacant (for future use)