



NRAO Department of Environmental Safety & Security Facility Safety Inspection Checklist

Inspector Name:

Date:

Time:

Location of Inspection:

*** Inspections must be conducted on an annual basis
* Maintain checklist as documentation of this requirement**

| Item | Yes | No | N/A | Comments |
|--|-----|----|-----|----------|
| A. Means of Egress FS-04 | | | | |
| 1. Are aisles established and kept clear (minimum 36 inches)? | | | | |
| 2. Are there any trip hazards present? | | | | |
| 3. Are floors kept dry – not slippery? | | | | |
| 4. Are exits properly marked, exit signs illuminated? | | | | |
| 5. Is there adequate lighting (including emergency lighting)? | | | | |
| 6. Are corridors kept clear of equipment and supplies? | | | | |
| 7. Are there any locks, chains, or fastenings on doors to prevent escape from the inside of building? | | | | |
| 8. Can the exit route door be opened from the inside at all times without keys, tools, or special knowledge? | | | | |
| 9. Do exit doors swing in the direction of travel when an area is occupied by more than 50 people or where hazardous operations are conducted? | | | | |
| 10. Does the emergency exit discharge lead directly outside? | | | | |
| 11. Are doors, passageways or stairways that are not exits and be mistaken for an exit, marked with a sign reading "Not an Exit" or similar designation? | | | | |
| 12. Is the line-of-sight to an exit sign clearly be visible at all times? | | | | |
| 13. Are any items obstructing emergency fire equipment? | | | | |
| 14. Are there any items stored in hallways or corridors which are determined to be an immediate fire or life safety hazard? | | | | |
| B. Flammables FS-03 | | | | |
| 1. Is there more than 2 gallons of flammables stored outside of the flammable liquid storage area and/or no more than one day's supply in the immediate work area? | | | | |
| 2. Are all containers of flammable or combustible materials are properly labeled? | | | | |
| 3. Is a proper fire extinguisher readily available in/next to all flammable storage areas? | | | | |
| 4. Are all containers of flammable and combustible liquids away from operations areas? | | | | |
| 5. Are flammable and combustible containers closed when not in use? | | | | |
| 6. Are flammable liquids being dispensed from a large barrel? If yes, is the pump used approved for flammable material dispensing? | | | | |
| 7. Are flammable liquids being dispensed from a large barrel? If yes, is the barrel grounded to an earth ground? | | | | |

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|--|---|--|--|--|--|
| 8. | Is any class I flammable liquid being dispensed from a large drum to a smaller container? If yes, is the drum grounded and the drum and container bonded? | | | | |
| 9. | Are there any refrigerators used for storage of flammable materials? If yes, is the refrigerator specifically wired for flammable materials and properly labeled as storage for flammable materials? | | | | |
| 10. | Are all containers of flammables and combustibles, other than point-of-use containers, are in approved storage cabinets? | | | | |
| 11. | Is there more than a combined total of 120 gallons of Class I, Class II, and Class III liquids are stored in a FM or UL listed storage cabinet? Is there more than 60 gallons of the combined total of Class I and Class II liquids? | | | | |
| 12. | Are there more than three storage cabinets are located in one fire area? Additional storage cabinets may be permitted if a minimum separation of 100 feet is maintained between each group of three cabinets. | | | | |
| 13. | Is the flammable storage cabinet vented? If no, are the vent openings sealed with the bungs supplied with the cabinet? | | | | |
| 14. | Is the flammable storage cabinet is vented? If yes, is the cabinet is vented directly outdoors? | | | | |
| 15. | If ventilated with mechanical ventilation, is ventilation ducted and leading to an explosion proof blower to exhaust vapors to the atmosphere? | | | | |
| C. Piping and Utility Marking HC-01 | | | | | |
| 1. | Are above ground piping systems identified and labeled according to the context of the piping? See Figure: HC-01.3.1.1 PIPE MARKINGS | | | | |
| 2. | If there are above ground piping systems, are those labels oriented properly to indicate direction flow? | | | | |
| 3. | If there's above ground piping systems, are those labels placed; near valves, flanges, changes in pipe direction, both sides of ceiling, wall, or floor penetrations and at any line entry point? | | | | |
| D. Signs, Tags and Placards HC-02 | | | | | |
| 1. | Are immediate employees who use hazardous materials knowledgeable about the meaning of the signs, tags, and labels used throughout the workplace and any special precautions that are required? | | | | |
| 2. | Are signs placed at locations where identified hazards exist? | | | | |
| 3. | Do identified signs convey the hazards and actions to take to protect employees? | | | | |
| 4. | Are identified signs in good condition and properly secured? | | | | |
| 5. | Do existing vehicle placards meet DOT regulatory requirements? | | | | |
| E. Hazard Communication HC-03 | | | | | |
| 1. | Is the chemical inventory for the chemicals used in each area available? | | | | |
| 2. | Are original containers of hazardous material labeled, tagged, or marked with the identity of the material(s), appropriate hazard warnings, potential health effects, and the name and address of the manufacturer, importer, or other responsible party? | | | | |
| 3. | Are secondary containers of hazardous materials properly labeled with contents, HMIS, GHS or NFPA signage on the label? | | | | |

| E. Hazard Communication HC-03 - Cont. | | | | |
|---|------------|-----------|------------|-----------------|
| Item | Yes | No | N/A | Comments |
| 4. Are chemicals/hazardous materials properly stored according to chemical compatibility? | | | | |
| 5. Are employees knowledgeable about; proper use, proper storage, proper disposal of chemicals/hazardous materials in the immediate work area? | | | | |
| 6. Do employees know what to do in case of spill or leak of the chemicals/hazardous materials in the immediate work area? | | | | |
| 7. Do employees know how to access SDS sheets in case of emergency? | | | | |
| F. Compressed Gas Safety – HM-02 | | | | |
| 1. Is the Safety Data Sheet on file for compressed gases and/or liquids? | | | | |
| 2. Are there any combustible wastes including wood, paper or rags, in the work area? | | | | |
| 3. Is there anything on top of an acetylene cylinder which may damage the safety device or interfere with the quick closing of the valve? | | | | |
| 4. Are combustible gas cylinders grounded to prevent static electricity buildup? | | | | |
| 5. Is the protective cap that comes with a cylinder of gas on the cylinder when not in use or connected to a regulator or manifold? | | | | |
| 6. Are there any compressed gases stored beyond the recommended maximum retention periods of 36 months for liquefied flammable gases, flammable gases, and oxygen? | | | | |
| 7. Are gas cylinders secured with straps, bars, or chains connected to a wall bracket or other fixed surface, or by use of a cylinder stand? | | | | |
| 8. Is the chain high enough on the cylinder to keep it from tipping over? | | | | |
| 9. Is the compressed gas cylinder properly labeled with the contents of cylinder? | | | | |
| 10. Are oxidizers (ex. Oxygen) stored separate from combustibles or flammables by a minimum distance of 20 feet or by a non-combustible barrier at least 5 feet high with a fire-resistance rating of at least one-half hour? | | | | |
| 11. Are cylinders separated by compatibility of contents? | | | | |
| 12. Are empty cylinders labeled with an "Empty" sticker? | | | | |
| 13. Are attached regulators in good condition without broken covers? | | | | |
| 14. Are regulator hoses in good condition? | | | | |
| G. Cryogenic Safety – HM-03 | | | | |
| 1. Have employees been trained in Cryogenic safety? | | | | |
| 2. Are face shields, safety glasses, cryogenic gloves and aprons available and in good condition? | | | | |
| 3. If required, is an oxygen monitor available and in proper working order? | | | | |
| 4. Are dewars properly labeled? | | | | |
| 5. Are site-specific standard operating procedures available? | | | | |
| 6. Are proper cryogenic solid tools available? | | | | |
| 7. Are attached regulators in good condition without broken covers? | | | | |

| Item | Yes | No | N/A | Comments |
|---|-----|----|-----|----------|
| H. Housekeeping – OS-05 | | | | |
| 1. Are any materials stacked within 18 inches of fire sprinkler heads or fire system? | | | | |
| 2. Is work area clean and free of debris? | | | | |
| 3. Are there any items which obstructs utility panels, utility valves, or electrical receptacles? | | | | |
| 4. Are there combustible materials outside of enclosed cabinets? This includes journals, papers, books and boxes. | | | | |
| 5. Are there any recycling materials outside of approved recycling containers? | | | | |
| 6. Are passageways, storerooms, and service rooms clean and orderly and in a sanitary condition? (VVS-02) | | | | |
| 7. Are floors of workroom in a clean and, so far as possible, in dry condition? | | | | |
| 8. Are there any protruding nails, splinters, holes, or loose boards on the floors? | | | | |
| 9. Are stored materials stacked in stable piles? Materials such as pipe which could roll must be chocked or braced to prevent rolling. | | | | |
| 10. Is the work well organized and tidy? | | | | |
| Housekeeping – OS-05 (General Electrical Safety – EL-01) | | | | |
| 1. Are entrances to electrical rooms locked and marked with conspicuous signs? | | | | |
| 2. Is there a free and clear distance of 36 inches in front of electrical panels and enclosures? | | | | |
| 3. Are extension cords in use in good condition without any nicks, cuts, frays or missing insulation or ground pins? | | | | |
| 4. Are extensions cords used for longer than 90 days? | | | | |
| 5. Is there any “daisy chaining” of extension cords or surge protectors? | | | | |
| 6. Are any extension cords used as permanent wiring? (Running through ceilings, doors, windows, running across pipes, coming out of walls) | | | | |
| 7. Are extension cords covered with rugs, carpeting or other combustible materials? | | | | |
| 8. Are any appliances, copiers, etc... plugged into surge protectors which can exceed the load rating? | | | | |
| 9. Are electrical panels identified and labeled? | | | | |
| I. Materials Storage and Handling Area – MH-03 | | | | |
| 1. Are heavy and frequently used materials stored at waist height? | | | | |
| 2. Are there materials at floor level? | | | | |
| 3. Are materials; tacked, racked, blocked, interlocked, or otherwise secured and stored in tiers to prevent sliding, falling or collapse? | | | | |
| I. Materials Storage and Handling Area – MH-03 - Open Yard Storage | | | | |
| 4. Are driveways between and around combustible storage piles at least 15 feet wide and free from accumulation of rubbish, equipment, or other articles or materials? | | | | |
| 5. Is entire storage site free from accumulation of unnecessary combustible materials? Are weeds and grass mowed? Is there a regular procedure provided for the regular cleanup of the entire area? | | | | |
| 6. Are combustible material stored outdoors within 10 feet of a building or structure? | | | | |

| I. Materials Storage and Handling Area – MH-03 – Contd. | | | | |
|--|--|--|--|--|
| I. Materials Storage and Handling Area – MH-03 - Indoor Storage | | | | |
| 1. | Is there any material within 36 inches of a fire door opening? | | | |
| 2. | Is there a 3-foot clearance between storage and any heating unit? | | | |
| 3. | Do lights have shades or guards or are the bulbs shatter resistant? | | | |
| 4. | Is there availability of mechanical aids for lifting or moving loads? | | | |
| 5. | Are drum dollies available for moving 55 gallon or larger drums? | | | |
| J. Site Emergency Eyewash - MD-05 | | | | |
| 1. | Is the eyewash located between 33 to 45 inches from the floor, and a minimum of 6 inches from the wall or nearest obstruction? | | | |
| 2. | Is there a drainage system for the excess water? | | | |
| 3. | Is the eyewash accessible in no more than 10 seconds (50 to 100 feet) from the hazards? | | | |
| 4. | Is the eyewash located next to or come into contact with any electrical equipment? | | | |
| 5. | Is the emergency eyewash path obstructed? | | | |
| 6. | Is the eyewash protected from freezing if installed outdoors? | | | |
| 7. | Is the eyewash capable of delivering fluid to both eyes simultaneously at a rate of not less than 0.4 gallons/minute for 15 minutes? | | | |
| 8. | Is the eyewash inspected monthly? | | | |
| 9. | Is there a log of monthly eyewash inspection/tests? | | | |
| 10. | Has the annual flushing of eyewash(es) been performed? | | | |
| J. Site Emergency Shower - MD-05 | | | | |
| 1. | Does the emergency shower deliver a pattern of water with a diameter of at least 20 inches at 60 inches? | | | |
| 2. | Is the shower head located between 82-96 inches from the floor? | | | |
| 3. | Is the minimum volume of spray delivered 20 gallons/minute? | | | |
| 4. | Is there a drainage system for the excess water? | | | |
| 5. | Is the emergency shower path obstructed? | | | |
| 6. | Is the emergency shower located next to or come into contact with any electrical equipment? | | | |
| 7. | Is the emergency shower inspected monthly? | | | |
| 8. | Is there a log of monthly emergency shower inspections/tests? | | | |
| 9. | Has the annual flushing of the emergency shower been performed? | | | |
| K. Hand Tools – TM-01 | | | | |
| 1. | Are any tools broken or damaged? | | | |
| 2. | Do all cutting tools have a proper handle? | | | |
| 3. | Do torque wrenches have a documented annual calibration test performed? | | | |
| 4. | Is proper PPE available and in good condition? | | | |

| Item | Yes | No | N/A | Comments |
|--|-----|----|-----|----------|
| K. Hand Tools – TM-01 – Contd. | | | | |
| 5. Do Electrician pliers have insulated grips in good condition? | | | | |
| 6. Are portable power tools in good condition? | | | | |
| 7. Are portable power tools double insulated? | | | | |
| 8. Are portable power tool cords in good condition without fraying, stress or ground plug missing? | | | | |
| 9. Are circular saw blades in good condition? | | | | |
| 10. Is the hose on a pneumatic tool more than ½ inch diameter? If yes, is there an excess flow check valve at the air source to shut off the air in event of a hose or connection failure? | | | | |
| 11. For all compressed air used for cleaning chips etc., does the nozzle exceed 30PSI? | | | | |
| 12. Is the load rating for a portable hydraulic jack(s) clearly visible and permanently adhered to the jack? | | | | |
| 13. Does portable hydraulic jack(s) have a stop indicator in good condition? | | | | |
| 14. Are abrasive wheels ring tested? | | | | |
| 15. Are power cords for abrasive wheels in good condition without nicks, stress or missing ground pins? | | | | |
| J. Machine Tools and Guarding – TM-02 | | | | |
| 1. Is machine equipped with an emergency stop? | | | | |
| 2. Are there fixed guards for power transmission points? | | | | |
| 3. Are all required guards in-place? | | | | |
| 4. Do interlocks have a failsafe? | | | | |
| 5. Is all machinery 7 feet or less from the ground, equipped with belts, flywheels, chain drives, cranks, connecting rods, and shafting equipped with guards to protect employees from the moving parts? | | | | |
| 6. For machinery with revolving parts, are all set-screws or other projections flush to the machinery or guarded? | | | | |
| 7. Is there a mechanical or electrical power control on each machine to allow the operator to cut off the power from each machine without leaving the point of operation? | | | | |
| 8. For saws, are push sticks or blocks available in several sizes and types suitable for the work? | | | | |
| 9. For power-driven woodworking machines is there a disconnect switch that can be locked in the off position? | | | | |
| J. Machine Tools and Guarding – TM-02 – Abrasive Wheel Grinder | | | | |
| 10. Are abrasive wheels enclosed on the top with a maximum angular exposure of the periphery and sides not exceeding 180 degrees? | | | | |
| 11. Are abrasive wheel guards adjustable? | | | | |
| 12. Are work rests are well constructed and adjusted for wheel wear? | | | | |
| 13. Is the maximum opening between the wheel and rest 1/8 inch? | | | | |
| 14. Is abrasive wheel grinder firmly attached to the floor or work bench? | | | | |

| Item | Yes | No | N/A | Comments |
|---|-----|----|-----|----------|
| K. Wall, Floor Opening, Walking and Working Surfaces – WS-02 | | | | |
| 1. Are the floor and/or stairs maintained in a clean and, so far as possible, a dry condition? | | | | |
| 2. Where wet processes are used, is there sufficient drainage and gratings, mats, or raised platforms provided? | | | | |
| 3. Are floors and passageways free from protruding nails, splinters, holes, or loose boards, heaved concrete, loose grading or other degradation which could result in slips, trips or falls? | | | | |
| 4. Are load rating limits marked and conspicuously posted on plates/elevated floors used for storage and/or walking surfaces? | | | | |
| 5. Are there any floor and wall openings where there is a drop of greater than 4 feet over adjacent surfaces which are not guarded? | | | | |
| 6. If using guard rails, are guard rails 42 inches (including top rail), intermediate rail (21 inches), and toe board (4 inches)? | | | | |
| 7. Are stairways, with 4 or more stairs, equipped with standard handrails? | | | | |
| 8. Are fixed industrial stairs strong enough to carry five times the normal anticipated live load? | | | | |
| 9. Are doors and gates opening directly onto a stairway, have a platform that extends beyond the swing of the door or gate? | | | | |

Return the Completed Form to: ES&S Site Safety Division

Copy to: NRAO ES&S Admin Support – Diana Torres: dltorres@nrao.edu