

SECTION 24.0 | RESPIRATORY PROTECTION

Occasionally our work may necessitate the use of respirators to protect against air contaminants. Due to the limitations of respirators and their uncomfortable nature, Hindsight Electric, LLC will make every effort to provide other means of protection, such as local exhaust ventilation, or substitution of less hazardous material, prior to requiring employees to wear them.

When it is clearly impractical to remove harmful dusts, fumes, mists, vapors, or gasses at their source, or where emergency protection against occasional and/or relatively brief exposure is needed, Hindsight Electric, LLC will provide, and the employee exposed to such hazard shall use, approved respiratory equipment.

Whenever respirators are required to be used to control harmful exposures, only respiratory equipment approved for that purpose shall be used and such equipment shall be approved by the National Institute for Occupational Safety and Health (NIOSH). Only parts approved for the specific respirator system shall be used for replacement.

24.1 | General Respiratory Protection Guidelines

1. Atmospheric contamination will be prevented wherever feasible through engineering controls such as enclosure or confinement of the operation, general and local exhaust ventilation, or substitution of less toxic materials. When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.
2. Hindsight Electric, LLC shall identify and evaluate the respiratory hazard(s) in the workplace; this evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Where Hindsight Electric, LLC cannot identify or reasonably estimate the employee exposure, the atmosphere shall be considered to be immediately dangerous to life or health (IDLH).
3. Respirators shall be provided when such equipment is necessary to protect the health of the employee.
4. Only NIOSH-certified respirators shall be used. The respirator shall be used in compliance with the conditions of its certification.
5. Hindsight Electric, LLC will provide respirators that are applicable and suitable for the purpose intended. Hindsight Electric, LLC shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.
6. Respirators shall be selected from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.
7. The safety program administrator 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.
8. Hindsight Electric, LLC will provide respirators, training, and medical evaluations at no cost to the employee.
9. Hindsight Electric, LLC will provide a medical evaluation to determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator in the workplace. Hindsight Electric, LLC may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.
10. Hindsight Electric, LLC will ensure that employees using a tight-fitting facepiece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT).
11. Hindsight Electric, LLC will establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres.
12. Hindsight Electric, LLC shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The supervisor or manager shall ensure that respirators are cleaned and disinfected.

13. All filters, cartridges and canisters used in the workplace must be legibly labeled and color-coded with the NIOSH approval label that must not be removed.
14. Training and information will be provided to employees who are required to use respirators. The training will be comprehensive, understandable, and recur annually, or more often if necessary.
15. The safety program administrator shall conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult with employees to ensure that they are using the respirators properly.
16. Written information regarding medical evaluations, fit testing, and the respirator program shall be retained indefinitely. This information will facilitate employee involvement in the respirator program, assist us in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.
17. Where respirator use is not required by a particular standard or hazard, Hindsight Electric, LLC may provide respirators at the request of employees or permit employees to use their own respirators if we determine that such respirator use will not in itself create a hazard. If voluntary respirator use is permissible, Hindsight Electric, LLC shall provide the respirator users with the information contained in Appendix D of section 5144 8CCR. ("Information for Employees Using Respirators When Not Required Under the Standard.")

24.2 | Respirator Selection Requirements

The proper respirator for the job and hazard shall be selected. This selection will be made in accordance with ANSI Z88.2-1980 standards. The correct respirator shall be specified for each job. The individual issuing them shall be adequately instructed to ensure that the correct respirator is used.

The manufacturers' recommendations and literature will also be reviewed to determine if the respirator provides protection against the expected contaminants. For instance, dust masks do not provide protection against gasses or vapors.

The Safety Program Administrator or another qualified individual shall review and approve all breathing air compressors and installations for compliance with appropriate OSHA regulations and safety procedures prior to use.

Respirators for IDLH atmospheres

Hindsight Electric, LLC shall provide the following respirators for employee use in IDLH atmospheres:

1. A full-facepiece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
2. A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
3. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.
4. All oxygen-deficient atmospheres shall be considered IDLH.

Respirators for atmospheres that are not IDLH

Hindsight Electric, LLC shall provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. The respirator selected shall be appropriate for the chemical state and physical form of the contaminant.

For protection against gasses and vapors

1. An atmosphere-supplying respirator, or
2. An air-purifying respirator, provided that the respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or if there is no ESLI appropriate for conditions in the workplace, Hindsight Electric, LLC will implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

For protection against particulates

1. An atmosphere-supplying respirator; or
2. An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air-purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or
3. For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

24.3 | Medical Evaluation Procedures

1. Employees shall not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work while using the required respiratory equipment.
2. Hindsight Electric, LLC shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations.
3. The medical evaluation shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.
4. Medical questionnaires and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.
5. The employee shall have an opportunity to discuss the examination results with the PLHCP.
6. The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:
 - The type and weight of the respirator to be used by the employee.
 - The duration and frequency of respirator use (including use for rescue and escape).
 - The expected physical work effort.
 - Additional protective clothing and equipment to be worn.
 - Temperature and humidity extremes that may be encountered.
7. Hindsight Electric, LLC shall provide the PLHCP with a copy of this written respiratory protection program and a copy of the OSHA regulations if they do not already have them.
8. In determining the employee's ability to use a respirator, Hindsight Electric, LLC shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:
 - Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator.
 - The need, if any, for follow-up medical evaluations; and
 - A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.
9. If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, Hindsight Electric, LLC shall provide a powered air purifying respirator (PAPR) if the PLHCP's medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then Hindsight Electric, LLC is no longer required to provide a PAPR.
10. Hindsight Electric, LLC shall provide additional medical evaluations that comply with the requirements of this section if:
 - An employee reports medical signs or symptoms that are related to ability to use a respirator.
 - A PLHCP, supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated.
 - Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
 - A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

24.4 | Fit Testing

1. Hindsight Electric, LLC shall ensure that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.
2. Hindsight Electric, LLC will conduct an additional fit test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
3. If after passing a QLFT or QNFT, the employee subsequently notifies the program administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator facepiece and to be retested.
4. The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol.

24.5 | Usage Rules

1. Hindsight Electric, LLC shall not permit respirators with tight-fitting face pieces to be worn by employees who have:
 - Facial hair that comes between the sealing surface of the facepiece and the face or that interferes with valve function; or
 - Any condition that interferes with the face-to-face piece seal or valve function.
2. If an employee wears corrective glasses or goggles or other personal protective equipment, Hindsight Electric, LLC shall ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user.
3. For all tight-fitting respirators, Hindsight Electric, LLC shall ensure that employees perform a user seal check each time they put on the respirator.
4. Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, Hindsight Electric, LLC shall reevaluate the continued effectiveness of the respirator.
5. Respiratory equipment shall not be passed on from one person to another until it has been cleaned and sanitized. Respirators individually assigned should be marked to indicate to whom it was assigned. This mark shall not affect the respirator performance in any way. The date of issuance should be recorded.
6. When not in use, respirators shall be stored to protect against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals. Plastic zip lock bags are suitable for storage.
7. Hindsight Electric, LLC shall ensure that employees leave the respirator use area:
 - To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or
 - If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or
 - To replace the respirator or the filter, cartridge, or canister elements.
8. If the employee detects a vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, Hindsight Electric, LLC will replace or repair the respirator before allowing the employee to return to the work area.
9. For all IDLH atmospheres, Hindsight Electric, LLC shall ensure that:
 - One employee or, when needed, more than one employee is located outside the IDLH atmosphere.
 - Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere, and the employee(s) located outside the IDLH atmosphere;
 - The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue.
 - The supervisor or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue.

- The supervisor or designee authorized to do so by Hindsight Electric, LLC, once notified, provides necessary assistance appropriate to the situation.
- Employee(s) located outside the IDLH atmospheres are equipped with pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or equivalent means for rescue where retrieval equipment is not required.

24.6 | Maintenance, Inspection and Care of Respirators

1. Hindsight Electric, LLC shall ensure that respirators are cleaned and disinfected using procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness to OSHA regulations. The respirators shall be cleaned and disinfected at the following intervals:
 - Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition.
 - Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals.
 - Respirators maintained for emergency use shall be cleaned and disinfected after each use.
 - Respirators used in fit testing and training shall be cleaned and disinfected after each use.
2. All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.
3. Emergency respirators shall be:
 - Kept accessible to the work area.
 - Stored in compartments or in covers that are clearly marked as containing emergency respirators.
 - Stored in accordance with any applicable manufacturer instructions.
4. All respirators used in routine situations shall be inspected before each use and during cleaning.
5. All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations and shall be checked for proper function before and after each use.
6. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.
7. Hindsight Electric, LLC shall ensure that respirator inspections include the following:
 - A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the face piece, head straps, valves, connecting tube, and cartridges, canisters, or filters.
 - A check of elastomeric parts for pliability and signs of deterioration.
8. In addition to the requirements above, self-contained breathing apparatus shall be inspected monthly.
9. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. The employer shall determine that the regulator and warning devices function properly.
10. For respirators maintained for emergency use, Hindsight Electric, LLC shall:
 - Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator.
 - Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.
11. Hindsight Electric, LLC shall ensure that respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

- Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator.
- Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed.
- Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer, or a technician trained by the manufacturer.

Procedures for Cleaning Respirators

1. Remove filters, cartridges, or canisters. Disassemble face pieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses or any components recommended by the manufacturer. Discard and replace any defective parts.
2. Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
3. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), running water. Drain.
4. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:
 - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C (110 deg. F); or,
 - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 deg. C (110 deg. F); or,
 - Other commercially available cleansers of equivalent disinfectant quality when used as directed if their use is recommended or approved by the respirator manufacturer.
5. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on face pieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.
6. Components should be hand-dried with a clean lint-free cloth or air-dried.
7. Reassemble face piece, replacing filters, cartridges, and canisters where necessary.
8. Test the respirator to ensure that all components work properly.

Mandatory Information for Employees Using Respirators When Not Required

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gasses, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

24.7 | Training

1. Hindsight Electric, LLC shall ensure that each employee required to use a respirator can demonstrate knowledge of at least the following:
 - Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
 - What the limitations and capabilities of the respirator are
 - How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions
 - How to inspect, put on and remove, use, and check the seals of the respirator
 - What the procedures are for maintenance and storage of the respirator
 - How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
2. The training shall be conducted in a manner that is understandable to the employee.
3. The training shall be provided prior to requiring the employee to use a respirator in the workplace.
4. Retraining shall be administered annually, and when the following situations occur:
 - Changes in the workplace or the type of respirator render previous training obsolete.
 - Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill.
 - Any other situation arises in which retraining appears necessary to ensure safe respirator use