Respiratory Protection

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Revision List

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1. Purpose

1.1. The primary objective of the Evergy Respiratory Protection Program is to prevent or eliminate those conditions that create occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, sprays or vapors. This shall be accomplished as far as feasible by accepted engineering control measures. When effective engineering controls are not feasible or while they are being instituted, appropriate respiratory equipment shall be chosen and used in accordance with the guidelines established in this procedure.

2. Scope

2.1. This document applies to all Evergy employees and visitors when at any Evergy facility or while performing company duties.

2.2. If local, state or federal laws and/or regulations pertaining to any given condition are more stringent than the Evergy rule, the more stringent law or regulation shall take precedence.

3. References

3.1. OSHA Laws and Regulations

4. Definitions

4.1. Air-purifying respirators – a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element designed to remove specific gases and vapors, aerosols, or a combination of these contaminants.

4.2. Atmosphere-supplying respirator – a respirator which supplies the respirator user with Grade D breathing air from a source independent of the immediate **ambient** atmosphere. This includes the supplied-air respirator (SAR) and self-contained breathing apparatus (SCBA) units.

4.3. Assigned Protection Factor (APF) – is the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees.

4.4. Canister or cartridge – a container with a sorbent, filter and/or catalyst which removes specific contaminants from air passed through the container.

4.5. Disposable respirator – a respiratory protective device which cannot be re-supplied with an unused filter or cartridge and which is to be discarded in its entirety after its useful service life has been reached.

4.6. Employee exposure – exposure to a concentration of an airborne contaminant that would occur if the employee was not using respiratory protection.

4.7. End-of-service-life indicator (ESLI) – a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

4.8. Escape-only respirator – a respirator intended to be used only for emergency exit.

4.9. Filtering facepiece (dust mask) – a negative pressure particulate respirator with a filter as an integral part of the facepiece composed of the filtering medium.

4.10. Fit factor – a quantitative estimate of the fit of a respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

4.11. Fit test – the use of a protocol to quantitatively or in some cases, qualitatively evaluate the fit of a respirator on an individual.

4.12. High efficiency particulate air (HEPA) filter – a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

4.13. Immediately dangerous to life or health (IDLH) – an atmospheric concentration of any toxic, corrosive or asphyxiant substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

4.14. Loose-fitting facepiece – a respiratory inlet covering that is designed to form a partial seal with the face.

4.15. Maximum Use Concentration (MUC) – the maximum atmospheric concentration of a hazardous contaminant from which an employee can be expected to be protected when wearing a respirator, and is determined by multiplying the assigned protection factor specified by a respirator by the required OSHA PEL, short term exposure limit (STEL), or ceiling limit.

4.16. Medically Qualified – an employee is deemed Medically Qualified after written permission has been obtained from a physician or licensed health care provider that the employee is approved to wear a respirator.

4.17. Negative pressure respirator (tight fitting) – a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the outside air pressure and negative during inhalation in relation to the outside air pressure.

4.18. Oxygen deficient atmosphere – an atmosphere with oxygen content of less than 19.5% by volume.

4.19. Permissible Exposure Limit (PEL) – Established by OSHA (29 CFR 1910.1000, Subpart Z or other, analyte specific OSHA rule). The permissible concentration in air of a substance to which nearly all workers may be repeatedly exposed 8 hours a day, 40 hours a week, for duration of their working lives without adverse health effects.

4.20. Positive pressure respirator – an atmosphere-supplying respirator which is designed so that air pressure inside the facepiece is positive in relation to the outside air pressure during inhalation and exhalation

4.21. Powered air purifying respirator (PAPR) – an air-purifying respirator which uses a blower to deliver air through the air-purifying element to the users breathing zone.

4.22. Pressure demand respirator – a mode of operation for atmosphere-supplying respirators in which the air pressure inside the respirator is substantially maintained at a specific positive pressure differential with respect to the ambient air pressure. To maintain this pressure differential additional air is admitted on demand to the facepiece when the wearer inhales.

4.23. Respiratory inlet covering – is the portion of a respirator that forms the protective barrier between the user's respiratory tract and an air-purifying device or breathing air source, or both. It may be a facepiece, helmet, hood, suit, or a mouthpiece respirator with nose clamp.

4.24. Respirator Qualified – (applicable for mandatory and voluntary respirator use) is a qualification incorporating one or more of the following requirements, as applicable for the type of respirator in use, including: medical qualification, fit testing, and training.

4.25. Supplied Airline Respirator (SAR) – a respirator that delivers breathing air from either a compressor or compressed air cylinders through a supply hose connected to the respiratory inlet cover.

4.26. Self-Contained Breathing Apparatus (SCBA) – an atmosphere-supplying respirator for which the source of breathing air is designed to be carried by the user. SCBAs provide complete respiratory protection from toxic gases and/or where there is oxygen deficiency. The wearer does not depend on the surrounding atmosphere because he is breathing with a system which admits no outside air.

4.27. Tight-fitting facepiece – a respiratory inlet covering that forms a complete seal with the face.

4.28. User seal check – an action conducted by the respirator user to determine if the respirator is properly seated to the face.

5. Responsibility

5.1. All Evergy employees and visitors shall understand and comply with this document when at any Evergy facility or while performing company duties.

5.2. Employee

5.2.1. Adhere to plan requirements including pre-use and post-use inspection, use, cleaning, and storage information.

5.2.2. Participate in fit testing procedures and medical evaluation program.

5.2.3. Use a respirator for the specific application which is listed by the manufacturer. Do not alter or modify the equipment in any manner.

5.2.4. Ensure that a proper seal is achieved whenever a respirator is worn. During required use of a respirator, hair growth cannot be allowed to impede the face piece seal. Employees who would need to immediately respond to an emergency situation where respirator use would be required must meet the facial hair requirement at all times.

5.2.5. Leave an area immediately if breathing becomes difficult, dizziness or distress occurs or if a contaminant is detected (taste or small, irritation of eyes, nose, or throat).

5.2.6. Report any problems or concerns to your immediate supervisor and to the Corporate Medical Department, including reporting any changes to your health which could have a possible impact on your ability to safely use a respirator under expected conditions of use.

5.3. Supervisor

5.3.1. Ensure that employees have been properly trained and fit tested before being allowed to wear a respirator.

5.3.2. Before allowing employees to wear respirators, ensure that they have completed health evaluation forms and when necessary have passed respirator physical examinations.

5.3.3. Ensure that employees understand the hazards present and are following proper procedures.

5.3.4. Report any problems or concerns to the Corporate Medical Department, or the area safety professional.

5.3.5. Identify work areas and tasks that require the use of respirators. Ensure these areas and tasks are shared with the Safety Professional for consideration in the task based hazard assessment process.

5.3.6. If the supervisor is unsure of the need for respiratory protection, the supervisor should not verbally advise nor recommend personnel to don a respirator “voluntarily” for tasks when not required by OSHA or Evergy (e.g. airborne concentration of hazardous agent exceeds the Occupational Exposure Limit (OEL)) as this recommendation would change the classification from voluntary to required use.

5.4. Safety Professional

5.4.1. Fills the role of Respiratory Protection Program Administrator at the site level.

5.4.2. Determine the need for industrial hygiene testing, approve respiratory protection equipment, ensure cleaning and disinfecting practices are in place, ensure tagging and proper storage system is utilized, and address any other key issues concerning the application of the Respiratory Protection Program.

5.4.3. Alert Corporate Safety and Training - Industrial Hygiene group prior to any Industrial Hygiene monitoring activities to ensure sampling methodology is consistent with Evergy policies and procedures.

5.4.4. Ensure that employees have been properly trained and fit tested before being allowed to wear a respirator.

5.4.5. Ensure voluntary users have been provided a copy of Appendix D of 29 CFR 1910.134.

5.4.6. Conduct periodic inspections to evaluate the effectiveness of the program and ensure compliance with all respirator procedures.

5.4.7. Conduct comprehensive hazard assessment including identification and evaluation by job classification, task and airborne agent.

5.4.8. Conduct annual respiratory program audit as deemed necessary.

5.4.9. Manage the respiratory hazards evaluation records, and all training, and fit testing records. (Be sure to copy fit testing records to Corporate Medical Department.)

5.4.10. Report any problems or concerns to the location manager and Corporate Safety and Training - Industrial Hygiene group.

6. Safety

6.1. None additional.

7. Instructions

7.1. Inclusion in Respiratory Protection Program

7.1.1. Generation – Every Evergy Generation employee assigned to work at a generation station (or energy center) shall be respirator qualified (e.g., fit tested, medically qualified and trained), unless medically exempted. To be declared medically exempt, personnel shall follow the accommodation process through Human Resources.

7.1.1.1. Employees that are not permanently assigned to work at a generation station (or energy center), but whose regular job duties require them to perform work at a generation station shall be evaluated on a case-by-case basis by the Safety Department.

7.1.1.2. Visitors are not normally required to be Respirator Qualified.

7.1.1.3. Local exceptions for clerical and administrative personnel (who are never assigned to enter the plant) may be made, as deemed applicable, by local management.

7.1.1.4. In cases of voluntary respirator use (e.g., elastomeric half-mask, full face piece, tight fitting PAPR, etc.), the following elements of the respiratory protection program apply: medical qualification, 29 CFR 1910.134 Appendix D and applicable training.

7.1.1.4.1. Voluntary use of a filtering facepiece (e.g., N95, P100) does not require medical qualification. Voluntary use of a filtering facepiece (e.g., N95, P100) requires the user is provided a copy of 29 CFR 1910.134 Appendix D and complete all applicable training as defined within 29 CFR 1910.134.

7.1.2. Transmission and Distribution – Every Evergy T&D employee assigned to perform work as a member of an exposed worker group shall be Respirator Qualified unless medically exempted. To be declared medically exempt, personnel shall follow the accommodation process through Human Resources.

7.1.2.1. Potentially exposed T&D worker groups shall be identified through quantitative worker exposure data or a qualified exposure assessment; in consultation with the Director of Evergy Safety and Industrial Hygiene group.

7.1.2.2. In cases of voluntary respirator use (e.g., elastomeric half-mask, full face piece, tight fitting PAPR, etc.), the following elements of the respiratory protection program apply: medical qualification, 29 CFR 1910.134 Appendix D and applicable training.

7.1.2.2.1. Voluntary use of a filtering facepiece (e.g., N95, P100) does not require medical qualification. Voluntary use of a filtering facepiece (e.g., N95, P100) requires the user is provided a copy of 29 CFR 1910.134 Appendix D and complete all applicable training as defined within 29 CFR 1910.134.

7.2. Respiratory Hazards

7.2.1. Inhaled contaminants that can adversely affect the respiratory system may be classified into the following general categories: Particulates, Fibers, Vapors or Gases.

7.2.2. Particulate Matter – Material of varying sizes, that when deposited in the lungs, may produce tissue damage, inflammation, reaction, or physical plugging of lung passages.

7.2.3. Fiber – An elongated particle having an aspect ratio (i.e., a ratio of length to width greater than 3:1). A fiber may be naturally occurring or synthetic.

7.2.4. Vapors or Gases – Vapors and gases, when inhaled into the lungs, may produce a variety of toxic responses. Typical classifications are as follows:

7.2.4.1. Chemical asphyxiates – interfere with supply or utilization of oxygen. Examples include carbon monoxide and hydrogen cyanide.

7.2.4.2. Irritants – corrosive in nature; may cause irritation of the respiratory system, skin and eyes. Examples include ammonia, sulfur dioxide, and chlorine.

7.2.4.3. Anesthetics – cause loss of feeling and sensation with unconsciousness and possible death. Examples include carbon tetrachloride, benzene, and hydrocarbons found in some solvents.

7.2.4.4. Systemic poisons – cause damage to organ systems other than respiratory. An example is mercury.

7.3. Selection of Respiratory Protective Equipment

7.3.1. An appropriate respirator shall be selected based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.

7.3.1.1. This shall be determined through the completion of a hazard assessment considering job classification, task and airborne agent.

7.3.2. Only National Institute for Occupational Safety and Health (NIOSH)-certified respirators shall be selected and used in compliance with the conditions of its certification.

7.3.3. Workplace respiratory hazard(s) shall be identified and evaluated by completing a hazard assessment and obtaining an estimate of employee exposures and an identification of the contaminant's chemical state and physical form. If a reasonable estimate of the employee exposure cannot be identified, the atmosphere will be considered to be immediately dangerous to life or health (IDLH). All oxygen-deficient atmospheres (less than 19.5% oxygen by volume) shall be considered to be IDLH.

7.3.4. Respiratory Protection Selection and Evaluation – To adequately evaluate the type of respiratory protection needed for each work situation, the following information shall be used in the decision process:

7.3.4.1. The nature of the hazard;

7.3.4.2. The physical and chemical properties of the air contaminant;

7.3.4.3. The adverse health effects of the respiratory hazard;

7.3.4.4. The relevant hazardous exposure level;

7.3.4.5. The results of workplace sampling of airborne concentrations of contaminants;

7.3.4.6. The nature of the work operation or process;

7.3.4.7. The period of time respiratory protection will be worn by employees during the work shift;

7.3.4.8. The work activities of the employee and the potential stress of these work conditions on the employee wearing the respirator;

7.3.4.9. Fit test results;

7.3.4.10. Warning properties of the hazardous chemical;

7.3.4.11. The physical characteristics, functional capabilities, and limitations of the various types of respirators.

7.3.5. Respirators for IDLH Atmospheres. The following respirators shall be used in IDLH atmospheres:

7.3.5.1. A full facepiece pressure demand self-contained breathing apparatus (SCBA) certified by NIOSH for a minimum service life of thirty minutes, or

7.3.5.2. A combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.

7.3.5.3. An atmosphere supplying respirator shall be utilized to provide respiratory protection for airborne asbestos concentrations up 1000 times the permissible exposure limit.

7.3.6. Respirators for Non-IDLH Atmospheres

7.3.6.1. Gases or Vapors – The following respirators shall be provided for protection against gases and vapors.

7.3.6.1.1. An atmosphere-supplying respirator, or

7.3.6.1.2. An air-purifying respirator, provided that

7.3.6.1.2.1. The respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant.

7.3.6.1.2.2. If there is no appropriate ESLI, a change schedule shall be implemented that will ensure that canisters and cartridges are changed before the end of their service life.

7.3.6.1.2.3. 3M organic vapor (OV), acid gas (AG) and combination OV/AG canisters and cartridges are rated for protection up to 10 times the OSHA PEL when used with a half-face respirator and up to 50 times the OSHA PEL when used with a full-face respirator.

7.3.6.1.2.4. Based on monitoring data obtained to-date, airborne concentrations are not expected to exceed the OSHA PEL during normal operations. Therefore, 3M OV, AG, and OV/AG cartridges shall be changed on a weekly basis, unless any odor or irritation is experienced. Any detection of chemical concentration would indicate that the end of service life has been reached.

7.3.6.2. Particulates – The following respirators shall be used for protection against particulates.

7.3.6.2.1. An atmosphere-supplying respirator; or

7.3.6.2.2. An air-purifying respirator equipped with a high efficiency particulate air (HEPA) filter (e.g. 3M P100 cartridge).

7.4. Medical Considerations

7.4.1. The Full Medical Evaluation Questionnaire (Attachment E) shall be provided 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.

7.4.1.1. The Full Medical Evaluation Questionnaire (Attachment E) and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.

7.4.1.2. New employees or employees transferred within the company, who have not currently medically qualified to wear a respirator, shall complete the Full Medical Evaluation Questionnaire (Attachment E) and pass a fit test prior wearing a respirator.

7.4.2. The Medical Department and the Safety Professional shall maintain an updated list of medically qualified employees.

7.4.3. The Full Medical Evaluation Questionnaire (Attachment E) is to be filled out every two calendar years by any employee who wishes to maintain their medical qualification.

7.4.4. The Abbreviated Medical Evaluation Form (Attachment F) may be utilized in, in lieu of the Full Medical Evaluation Questionnaire (Attachment E), in alternating years, as deemed applicable.

7.4.5. If an employee is unable to fill out the Full Medical Evaluation Questionnaire (Attachment E) or the Abbreviated Medical Evaluation Form (Attachment F), as applicable, that individual should contact the Medical Department.

7.4.6. A physician or other licensed health care professional shall perform medical evaluations using the medical questionnaire as shown in Attachment E or an initial medical examination that obtains the same information as the medical questionnaire.

7.4.6.1. A follow-up medical examination shall be provided for any employee whose initial medical examination demonstrates the need for a follow-up medical examination as deemed necessary by the company physician or company licensed health care professional.

7.4.6.2. The follow-up medical examination shall include any medical tests, consultations, or diagnostic procedures necessary to make a final determination.

7.4.7. The following information should be provided to the physician or licensed health care professional before a recommendation is reached concerning an employee's ability to use a respirator.

7.4.7.1. The type and weight of the respirator to be used by the employee;

7.4.7.2. The duration and frequency of respirator use (including use for rescue and escape);

7.4.7.3. The expected physical work effort;

7.4.7.4. Additional protective clothing and equipment to be worn;

7.4.7.5. Temperature and humidity extremes that may be encountered.

7.4.7.6. A copy of the Evergy written Respiratory Protection Program.

7.4.8. Medical Determination

7.4.8.1. A written recommendation shall be obtained regarding the employee's ability to use the respirator from the physician or licensed health care professional. The recommendation shall provide the following information:

7.4.8.1.1. 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 if the employee is medically able to use the respirator;

7.4.8.1.2. The need, if any, for follow-up medical evaluations; and

7.4.8.1.3. A statement that the physician or licensed health care professional has provided the employee with a copy of their written recommendation.

7.4.8.2. If the physician or licensed health care professional finds a medical condition that may place the employee's health at an increased risk if a negative pressure respirator is used, a powered air purifying respirator (PAPR) shall be provided; if it is deemed acceptable that the employee can use such a respirator.

7.4.8.2.1. If a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then the PAPR shall no longer be provided.

7.5. Fit Testing

7.5.1. All employees using a tight-fitting facepiece respirator must pass a fit test. Fit testing shall be conducted only after the employee has been medically qualified, prior to initial use and at least annually thereafter. The employee must be fit tested with the same make, model, style and size of respirator that will be used.

7.5.1.1. The use of a loose fitting PAPR does not require fit testing.

7.5.1.2. Employees shall not have facial hair during fit testing. If an employee presents themselves with facial hair deemed to impede the sealing surface, the fit test shall be delayed, giving the individual an opportunity to shave, or rescheduled.

7.5.2. Additional fit testing shall be conducted whenever a different respirator facepiece is used or whenever the employee reports or the physician or other licensed health care professional, 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.

7.5.3. The fit test shall be administered using an OSHA-accepted qualitative (Attachment G) or quantitative (Attachment H) fit test protocol.

7.5.4. If after passing a qualitative or quantitative fit test, the employee subsequently notifies the program administrator, supervisor, physician or other licensed health care professional 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.

7.5.5. Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators shall be accomplished by performing quantitative or qualitative fit testing in the negative pressure mode, regardless of the mode of operation that is used for respiratory protection.

7.5.6. Quantitative fit-testing (e.g., Porta Count) is required for all respirators where it is known or anticipated the device will be utilized in atmospheres where airborne concentrations are expected to exceed ten times the PEL for the contaminant of concern.

7.5.6.1. Quantitative fit-testing protocol for tight-fitting respirators is Evergy's preferred method for assuring proper fit.

7.5.6.2. Quantitative fit-testing is required for SCBA and SAR use.

7.5.7. Qualitative fit testing (e.g., irritant smoke protocol) is permissible for use for respirators that will be utilized in atmospheres where maximum airborne concentrations are <u>known</u> to be less than ten times the PEL for the contaminant of concern.

7.6. Use of Respirators

7.6.1. Face-piece to face-seal leak testing such as positive and negative pressure tests shall be performed each time a respirator is donned. The tests are performed as follows:

7.6.1.1. Positive Pressure Test – Close the exhalation valve and exhale gently into the face piece. The face piece fit is considered satisfactory if a slight positive pressure can be built inside the face piece without any evidence of outward leakage of air at the seal. For most respirators, this method of leak testing requires that the wearer first remove the exhalation valve cover and the carefully replace it after the test.

7.6.1.2. Negative Pressure Test – Close off the inlet opening of the cartridge(s) by covering with the palm of the hands or by sealing the cartridge with material such as plastic or foil. Inhale gently so that the facepiece collapses slightly and hold breath approximately 10 seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the fit of the respirator is satisfactory.

7.6.2. Facepiece Seal Protection – Employees who have the following shall not be allowed to wear respirators with tight-fitting facepieces:

7.6.2.1. Any hair growth between the skin and the face piece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface (1910.134 App A, A9).

7.6.2.2. Any condition that interferes with face-to-facepiece seal or valve function.

7.6.2.3. Corrective glasses or goggles or other personal protective equipment shall be worn in a manner that does not interfere with the seal of the facepiece to the face of the user.

7.6.2.3.1. Employees requiring corrective glasses can obtain prescription inserts for full face and SCBA respirators.

7.6.3. Appropriate surveillance shall be maintained of work area conditions. When there is a change in work area conditions or degree of employee exposure or stress, respirator effectiveness shall be reevaluated.

7.6.4. Employees shall stop the use of respirator and seek additional medical evaluations due to the following circumstances:

7.6.4.1. An employee reports medical signs or symptoms that are related to the ability to use a respirator;

7.6.4.2. A physician or licensed health care professional, supervisor, or the safety professional determines the need for an employee to be reevaluated.

7.6.4.3. Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation;

7.6.4.4. A change occurs in workplace conditions that may result in a substantial increase in the physiological burden placed on an employee.

7.6.4.5. The company shall obtain a new written recommendation regarding the employee's ability to use the respirator from the physician or licensed health care professional prior to using a respirator again.

7.6.5. Employees shall be allowed to leave the respirator use area due to the following circumstances:

7.6.5.1. To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use;

7.6.5.2. If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece;

7.6.5.3. To replace the respirator or the filter, cartridge or canister elements.

7.7. Maintenance and Care of Respirators

7.7.1. Inspection

7.7.1.1. All respirators used in routine situations shall be inspected before each use.

7.7.1.2. All respirators maintained for emergency situations shall be inspected and documented at least monthly in accordance with the manufacturer's recommendations and checked for proper function before and after each use.

7.7.1.3. Air and oxygen cylinders shall be maintained in a fully charged state and recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. It shall be determined that the regulator and warning device function properly.

7.7.1.4. SCBA and SAR systems must be operated and maintained in accordance with manufacturer recommendations (e.g., air flow testing, etc.).

7.7.2. Cleaning and Disinfecting – Respirators shall be maintained clean, sanitary and in good working order.

7.7.2.1. Remove any filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.

7.7.2.2. Wash components in warm 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.

7.7.2.3. Rinse components thoroughly in clean, warm running water. To prevent microbial growth, respirators shall be allowed to completely dry before returning to storage.

7.7.2.4. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.

7.7.2.5. The respirator shall be tested to ensure that all components work properly.

7.7.2.6. Respirators shall be thoroughly cleaned and disinfected after each use.

7.7.3. Repair

7.7.3.1. When respirators are found to need repair, attach tag indicating respirator is defective or properly dispose of the respirator and permanently remove from service.

7.7.3.2. Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations, using parts designed for the respirators.

7.7.3.3. No repairs shall be performed that are outside the manufacturer's recommendations concerning the type and extent of repairs that can be performed.

7.7.4. Storage

7.7.4.1. After inspection, cleaning, and necessary repair, respirators shall be stored to protect them against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals.

7.7.4.2. Routinely used respirators, such as dust respirators, may be placed in plastic bags. Respirators should not be stored in areas such as lockers or tool boxes unless they are in carrying cases or cartons.

7.7.4.3. Respirators should be packed or stored so that the face piece and exhalation valve will rest in a normal position and the function will not be impaired by the elastomer setting in an abnormal setting position.

7.7.4.4. Emergency respirators shall be kept accessible to the work area. In locations where weathering, contamination or deterioration of the respirator could occur, respirators shall be stored in compartments built to protect them. Such compartment shall be clearly marked as containing emergency respirators and shall be used in accordance with any applicable manufacturer instructions.

7.8. Breathing Air Quality

7.8.1. Compressed air and compressed oxygen used for respiration shall be of high purity. Compressed oxygen shall meet the requirements of the United States Pharmacopoeia for medical or breathing oxygen.

7.8.2. Compressed breathing air shall meet at least the requirements of the specification for Type 1-Grade D breathing air as described in ANSI/Compressed Gas Association Commodity Specification for Air G7.1-1989.

7.9. Identification of Filters, Cartridges and Canisters

7.9.1. All filters, cartridges and canisters used in the workplace shall be properly labeled and color coded with the NIOSH approval label before they are placed in service.

7.9.2. The atmospheric contaminant to be protected against with the corresponding OSHA designated standard color code is provided in Attachment C.

7.10. Employee Training and Information

7.10.1. Training shall be provided before the employee is required to use a respirator in the workplace. Minimum training shall include the following:

7.10.1.1. Instruction in the nature, extent and effects of respiratory hazards which may be encountered.

7.10.1.2. A discussion of proper respirators for particular purposes.

7.10.1.3. A general review of the capabilities of the respirator, including its construction, operating principles and limitations, including a discussion on how improper fit, usage or maintenance can compromise the protective effect of the respirator.

7.10.1.4. Instruction in procedures for inspection, donning, and removal, checking the fit and seals, and in the wearing of the respirator, including sufficient practice to enable the employee to become thoroughly familiar with, confident, and effective in performing these tasks.

7.10.1.5. An explanation of the procedures for maintenance and storage of the respirator.

7.10.1.6. Instruction on how to deal with emergency situations involving the use of respirators, including situations in which the respirator malfunctions.

7.10.1.7. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.

7.10.1.8. The contents of 29 CFR 1910.134, the Occupational Safety and Health Administration, Respiratory Protection Standard; the contents of Evergy's written Respiratory Protection Program, and the location and availability of both documents.

7.10.2. Training shall be documented as to date, information covered, names of trainees and name of trainer.

7.10.3. Retraining shall be administered annually, and when the following situations occur:

7.10.3.1. Changes in the workplace or the type of respirator render previous respirator selection obsolete;

7.10.3.2. Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the necessary understanding or skill;

7.10.3.3. Any other situation arises in which retraining appears necessary to ensure safe respirator use.

7.11. Voluntary Respirator Use When Use is not Required

7.11.1. When voluntary respirator use is deemed permissible, information must be provided as shown in 29 CFR 1910.134, Appendix D, "Information for Employees Using Respirators When Not Required Under the Standard" (See Attachment D).

7.11.2. Any employee using a respirator voluntarily for comfort shall be medically able (e.g., medically qualified) to use that respirator and clean, store and maintain it so that its use does not present a health hazard to the user.

7.11.2.1. Voluntary use of a filtering facepiece (e.g., N95, P100) does not require medical qualification.

7.11.2.1.1. Voluntary use of a filtering facepiece (e.g., N95, P100) requires the user is provided a copy of 29 CFR 1910.134 Appendix D and completion of all applicable training as defined within 29 CFR 1910.134.

7.11.2.1.2. Voluntary use of a filtering facepiece (e.g., N95, P100) in an IDLH atmosphere shall not be permitted.

7.11.3. If Evergy has determined that there is no respiratory hazard, voluntary users are not prohibited by 29 CFR 1910.134 from wearing a beard. However, traditional good industrial hygiene practice recommends that facial hair that interferes with the face-to-facepiece seal should be avoided.

7.11.4. If an evaluation determines that voluntary use of a respirator could create an additional hazard, such as interference with the individual's line-of-sight or communication, voluntary use will be prohibited in that circumstance.

7.11.5. Tightfitting respirators voluntarily worn when not required by OSHA or Evergy do not require a fit test.

8. Documentation and Recordkeeping

8.1. Corporate Safety will maintain this document. The original will be stored electronically by Corporate Safety and a copy will be available for use on the Safety website. A signed hard copy will be maintained by Corporate Safety. There will be no other hard copies produced or maintained. This procedure shall be reviewed periodically by Corporate Safety in accordance

with department policy. Superseded revisions shall be archived in accordance with corporate policy.

8.2. Records of medical evaluations must be retained and made available in accordance with 29 CFR 1910.1020, Access to employee Exposure and Medical Records.

8.3. To request a revision to this document, see your supervisor or Safety Coordinator.

9. Attachments

9.1. Attachment A – Respiratory Protective Equipment Table Approved for use within Evergy

9.2. Attachment B – Respiratory Protective Equipment Chart Approved for use within Evergy

9.3. Attachment C – OSHA Color Coded Filters and Cartridges

9.4. Attachment D – Information for Employees Using Respirators When Not Required Under the Standard

9.5. Attachment E – Full Medical Evaluation Questionnaire

9.6. Attachment F – Abbreviated Medical Evaluation Form

9.7. Attachment G – Qualitative Fit Test Protocol

9.8. Attachment H – Quantitative Fit Test Protocol

9.9. Attachment I – Respirator Hazard Assessment Tool

9.10. Attachment J – Evergy Analyte Classification

Attachment A

Respiratory Protective Equipment Table Approved for use within Evergy

Stock No.	Type	Style	Mfg.	Mfg. No.	Notes
80565198247	Filter Retainer	N/A	3M	501	Used to hold 3M Particulate Filters 5N11 and 5P71/07194(AAD) in place on top of 3M Respirators 5000 Series and 3M Cartridges 6000 Series and 3M Filter Adapter 603
80565198200	Filter Retainer	N/A	3M	502	Used to attach 3M Particulate Filters 2000 Series and 7093 to the 3M Respirators 5000 Series and 3M Cartridges 6000 Series
80565198218	Filter Cartridge	N/A	3M	2071	Particulate Filter P95

80565190281	Filter Cartridge	N/A	3M	2091	Particulate Filter, P100
80565198222	Filter Cartridge	N/A	3M	2091	Particulate Filter, P100
650225	Filter Cartridge	N/A	3M	2097	Particulate Filter, P100 with nuisance level organic vapor relief.
80565198226	Filter Cartridge	N/A	3M	6001	Organic Vapor Cartridge
699146	Filter Cartridge	N/A	3M	6004	Ammonia Methylamine Cartridge.
702033	Filter Cartridge	N/A	3M	6006	Multi Gas/Vapor Cartridge; NIOSH approved against certain organic vapors, acid gases, ammonia, methylamine, and formaldehyde.
80565190285	Filter Cartridge	N/A	3M	6009	Mercury Vapor or Acid Gas Cartridge
N/A	Respirator	Full Face	3M	6800	Special order (FEOs)
N/A	Respirator	Full Face	3M	6900	Special order (Insulators).
702028	Filter Cartridge	N/A	3M	7093	Particulate filter, P100; Protection against exposure to lead, asbestos, cadmium, arsenic, and MDA
702004	Respirator	Half Face	3M	7501	SMALL;SILICONE;REUSABLE
702021	Respirator	Half Face	3M	7502	MEDIUM;SILICONE;REUSABLE
702027	Respirator	Half Face	3M	7503	LARGE;SILICONE;REUSABLE
711037	Cartridge Holder	N/A	3M	7891	Cartridge Holder
702072	Respirator	Mask	3M	8210	Particulate Respirator, N95; Disposable
659213	Respirator	Disposable	3M	8214	Particulate Respirator, N95, with Faceseal and Nuisance Level Organic Vapor Relief; Disposable
80565190090	Respirator	Mask	3M	8511	Particulate Respirator N95; Disposable
702029	Filter Cartridge	N/A	3M	60926	Multi Gas/Vapor Cartridge, P100
N/A	Respirator	PAPR	Miller	259385	PAPR with Hard Hat and Titanium 9400 Weld Mask

N/A	Respirator	PAPR	3M	7007162351 9	3M Adflo PAPR with 3M Speedglass Welding Helmet 9100FX
699339	Filter/Regulator Panel	Supplied Air	3M	256-02-00	Portable Compressed Air Filter and Regulator Panel 256-02-00, 50 cfm, 4 outlets, with Carbon Monoxide Filtration and Monitor
80565198243	Prefilter	N/A	3M	5P71	P95 particulate filter for use with 3M 5000 & 6000 Series replaceable cartridges or 3M Filter Adapter 603, and 3M Filter Retainer 501.
80565190305	Filter Cartridge	N/A	3M	6003/07047	Organic Vapor/Aid Gas Cartridge
N/A	Respirator	Full Face	3M	6900PF	Special order (FEOs & Insulators). Face mounted PAPR
N/A	Flame Seal	N/A	3M	70-0707-9861-9	Flame Seal
80565190314	Respirator	Full Face	3M	7800S-L	SIZE (TEXTUAL):LARGE;MATERIAL:SILICONE
711036	Respirator	Full Face	3M	7800S-M	MEDIUM;SILICONE;REUSABLE
N/A	SCBA	Pack	Scott	Air Pak	SCBA Equipment for Confined Space Rescue
N/A	Respirator	Full Face	Scott	AV-3000	Mask for confined space SCBA equipment.
N/A	Breathing Tube	N/A	3M	BT-40	Breathing Hose for Versaflow PAPR
N/A	Respirator	PAPR	3M	GVP-1	Belt-Mounted PAPR Assy; Includes: GVP-100 - PAPR Unit, GVP-110 - Power Cord, GVP-111 - Battery Pack, GVP-112 - Battery Charger, GVP-113 - Flow Indicator, L-181 - Flow indicator

					Adapter, GVP-115 - Blower Plugs, GVP-127 - Waist Belt
651384	Filter Cartridge	PAPR	3M	GVP-402	Acid Gas cartridge for PAPR
651385	Filter Cartridge	PAPR	3M	GVP-440	High Efficiency Particulate Filter
699343	Filter Cartridge	PAPR	3M	GVP-440	High Efficiency Particulate Filter
N/A	Filter Cartridge	PAPR	3M	GVP-440	High Efficiency Particulate Filter
651394	Filter Cartridge	N/A	3M	GVP-443	Organic Vapor/Acid Gas/High Efficiency Cartridge
N/A	Filter Cartridge	PAPR	3M	GVP-443	Organic Vapor/Acid Gas/High Efficiency Cartridge
699414	Filter Cartridge	PAPR	3M	GVP-444	Ammonia/High Efficiency Cartridge
699340	Respirator	PAPR	3M	GVP-CB	Kit: Assembly; Air purifying Respirator; GVP-112 Battery Charger; GVP-111 Battery; GVP-100 Respirator; CB-1000 Adjustable Belt; Power Cord; Flow Meter
N/A	Respirator	PAPR	3M	GVP-CB	Kit: Assembly; Air purifying Respirator; GVP-112 Battery Charger; GVP-111 Battery; GVP-100 Respirator; CB-1000 Adjustable Belt; Power Cord; Flow Meter
699345	Seal	N/A	3M	L-121-5	Replacement face seal
699342	Breathing Tube	PAPR	3M	L-122	Breathing Tube for PAPR
N/A	Breathing Tube	PAPR	3M	L-122	Breathing Tube for PAPR
699344	Lense Cover	N/A	3M	L-133-100	Replacement lense cover for use with L-701

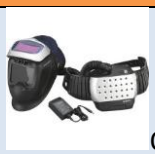
N/A	Lense Cover	N/A	3M	L-133-100	Replacement lense cover for use with L-701
N/A	Lense Cover	N/A	3M	L-133-25	Protective Cover for use with 3M Wide View Lens
699338	Hard Hat	PAPR	3M	L-701	Hard Hat with Wide-View Faceshield
N/A	Hard Hat	PAPR	3M	L-701	Hard Hat with Wide-View Faceshield
699337	Hard Hat	PAPR	3M	L-705	Hard Hat with Welding Shield for PAPR
N/A	Respirator	PAPR	3M	M-407	Versaflow PAPR Helmet with Visor and Flame Resistant Shroud
N/A	Lense Cover	N/A	3M	M-928	Lense Cover for M-407 Visor
651386	Lense Cover	N/A	3M	N/A	Lense Cover
N/A	Respirator	PAPR	Pureflow	PRO2000-SHL-B2B	PAPR with Hard Hat and Weld Mask
N/A	Prefilter	PAPR	3M	TR-3600	Prefilter for Versaflow PAPR
N/A	Filter Cartridge	PAPR	3M	TR-3710N	HEPA Filter for Versaflow PAPR
699341	Cooling Assy	Supplied Air	3M	V-100	Supplied Air Respirator Vortex Cooling Assembly
N/A	Cooling Assy	Supplied Air	3M	V-100	Supplied Air Respirator Vortex Cooling Assembly
316072	Filter Cartridge	PAPR	3M	W-3267-36	High Efficiency Filter for PAPR System W-3265S-L
699346	Hose Assy	Supplied Air	3M	W-9435-50	Supplied Air Respirator Hose
N/A	Respirator	Half Face	Miller	ML00894	Sleeker Half Face Respirator to go under hoods
N/A	Filter Cartridge	Half Face	Miller	SA00818	Particulate filter, P100; Only fits Miller Half Face ML00894. Filters provide protection from Hexavalent Chromium (Stainless Steel), Zinc Oxide (Galvanized Steel), Manganese,

					Aluminum, Nickel, Iron Oxide, Copper, Cadmium, Lead and Beryllium fumes.

Attachment B

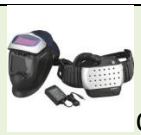
Respiratory Protective Equipment Chart Approved for use within Evergy

Mask	Filter(s)	Task:	Protects Against:
General			
 Dust Mask	N/A	Fuel Crew Activities, Work near the coal yard	Dusts
 Dust Mask	N/A	Where ever there is a visible dust cloud	Dusts
 Dust Mask	N/A	Working around water mists	Bacteria (Legionella)
 Half Face	 Ammonia Cartridge (6004)	Working around Ammonia	Ammonia Vapors

 Get the Gas Meter	Contact the Safety Department	Working around high concentrations of flue gas	No Entry if 6 way gas meter sounds
 Half Face	 AND  P100 Filter (2091) & Mercury Cartridge (6009)	Working around Mercury	Mercury vapors and dusts
 Half Face	 P100 Filter (2091)	Working around Lead	Lead fume and dust
Hot Work			
 OR  PAPR Helmet or Full Face	 OR  HEPA Canister (GVP 440) OR P100 Filter (2091)	Arc Gouging OR Hard-Facing	Metal Fumes, Dusts
 Half Face	 P100 Filter (2091)	Long Duration Welding, Cutting OR Grinding Projects (>1hr)	Metal Fumes, Dusts
 Dust Mask	N/A	Short Duration Welding, Cutting, OR Grinding Projects (<1hr)	Metal Fumes, Dusts

Maintenance			
 Dust Mask	N/A	General Maintenance	Dusts
 Dust Mask	N/A	Maintenance around fly ash OR coal dust OR limestone	Dusts
		Maintenance around Acids OR Caustics	Acid Gas, Organic Vapors

Half Face	OV/AG Cartridge (6003)		
 Half Face	 AND  P100 Filter (2091) & OV/Form Cartridge (6005)	Maintenance using Adhesives OR Epoxies OR Solvents OR Resins	Formaldehyde, Organic Vapors
 Half Face	 P100 Filter (2091)	Concrete Work	Dusts
 Half Face	 P100 Filter (2091)	Insulation Work	Dusts and Fibers
Cleaning			
 Dust Mask	N/A	General Cleaning Tasks	Dusts
 Half Face	 P100 Filter (2091)	Cleaning with Compressed Air	Dusts
 Dust Mask	N/A	Cleaning bird/rodent droppings	Bacteria, Mold, and Dusts
 OR  PAPR Helmet or Full Face	 OR  HEPA Canister (GVP 440) OR P100 Filter (2091)	Vacuuming Fly ash or Coal Dust	Dusts
Testing OR Troubleshooting			
 Half Face	 P100 Filter (2091)	UT Testing, Coal Fineness Testing, Lab Duties	Dusts

 OR  PAPR Helmet or Full Face	 OR  HEPA Canister (GVP 440) OR P100 Filter (2091)	Trouble shooting in Precipitator or Coal Dust Collector	Dusts
Spray Applications:			
 OR  Half Face or Full Face	 AND  P100 Filter (2091) & OV/AG Cartridge (6003)	Spray Painting	Organic Vapors, Mists and Dusts
 Half Face	 AND  P100 Filter (2091) & OV/AG Cartridge (6003)	Spraying Pesticides	Organic Vapors, Mists and Dusts

 Adapters (3M 502) are needed to connect the chemical cartridges with the Pink P100 filters. 

Attachment C

OSHA COLOR CODED FILTERS AND CARTRIDGES

Atmospheric Contaminants to be Protected Against	Colors Assigned
Acid gases	White
Hydrocyanic acid gas	White with 0.5” green stripe completely around the canister near the bottom
Chlorine gas	White with 0.5” yellow stripe completely around the canister near the bottom
Organic vapors	Black
Ammonia gas	Green
Acid gases and ammonia gas	Green with 0.5” white stripe completely around the canister near the bottom
Carbon monoxide	Blue
Acid gases and organic vapors	Yellow
Hydrocyanic acid gas and chloropicrin vapor	Yellow with 0.5” blue stripe completely around the canister near the bottom
Acid gases, organic vapors and ammonia vapors	Brown
Radioactive materials, excepting tritium and noble gases	Purple (magenta)
Particulates (dusts, fumes, mists, fogs or smokes) in combination with any of the above gases or vapors	Canister color for contaminant as designated above with 0.5” gray stripe completely around the canister near the top

Attachment D

Information for Employees Using Respirators

When Not Required Under the Standard

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 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 choose to wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If you choose to voluntarily use the respirators provided by Evergy, 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 respirators 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 gases, vapors, or very small solid particles of fume or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

5. If Evergy has determined that there is no hazard, voluntary users are not prohibited by 29 CFR 1910.134 from wearing a beard. However, traditional good industrial hygiene practice recommends that facial hair that interferes with the face-to-facepiece seal should be avoided.

6. Tightfitting respirators voluntarily worn (when not required by OSHA or Evergy) **do not require a fit test.**

7. Tightfitting respirators voluntarily worn (when not required by OSHA or Evergy) require the individual to be trained (as defined by 29 CFR 1910.134) and be medically qualified as defined within CORP-SR-3003.

8. Voluntary use of a filtering facepiece (e.g., N95, P100) does not require medical qualification. Voluntary use of a filtering facepiece (e.g., N95, P100) requires the user is provided a copy of 29 CFR 1910.134 Appendix D and that the user completes all applicable training as defined within 29 CFR 1910.134.

Attachment E

FULL MEDICAL EVALUATION QUESTIONNAIRE

Can you read (circle one): Yes / No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it (see below…).

EMPLOYEE SHOULD COMPLETE THIS QUESTIONNAIRE EVERY 2 CALENDAR YEARS IN PRIVATE AND RETURN COMPLETED QUESTIONNAIRE IN A SEALED, CONFIDENTIAL ENVELOPE ADDRESSED TO THE EVERGY MEDICAL DEPARTMENT, 4400 East Front Street, Kansas City, MO 64120-1039.

Part A. Section 1.

The following information must be provided by every employee who has been selected to use any type of respirator (please print).

1. Today's date: _____
2. Your name: _____
3. Your age: _____
4. Sex (circle one): Male / Female
5. Your height: _____ feet _____ inches
6. Your weight: _____ pounds
7. Your job title: _____
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (including the Area Code):
   _____
9. The best time to phone you at this number: _____
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one):

    Yes / No

11. Check the type of respirator you will use (you can check more than one category):

    a. _____ N, R, or P disposable respirator (filter-mask, non-cartridge type only).

    b. _____ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).

12. Have you worn a respirator (circle one): Yes / No

    If "yes", what type(s): _____
    _____
    _____

Part A. Section 2.

Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (circle one):

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month:

   Yes / No

2. Have you ever had any of the following conditions?

A.	Seizures (fits)	Yes / No
B.	Diabetes	Yes / No
C.	Allergic reactions that interfere with your breathing	Yes / No
D.	Claustrophobia	Yes / No
E.	Trouble smelling odors	Yes / No

3. Have you ever had any of the following pulmonary or lung problems?

A.	Asbestosis	Yes / No
B.	Asthma	Yes / No
C.	Chronic bronchitis	Yes / No
D.	Emphysema	Yes / No
E.	Pneumonia	Yes / No
F.	Tuberculosis	Yes / No
G.	Silicosis	Yes / No
H.	Pneumothorax (collapsed lung)	Yes / No
I.	Lung cancer	Yes / No
J.	Broken ribs	Yes / No
K.	Any chest injuries or surgeries	Yes / No
L.	Any other lung problem that you've been told about	Yes / No

4. Do you currently have any of the following symptoms of pulmonary or lung illness:

A.	Shortness of breath	Yes / No
B.	Shortness of breath when walking fast on level ground or walking up a slight hill or incline	Yes / No
C.	Shortness of breath when walking with other people at an ordinary pace on level ground	Yes / No
D.	Have to stop for breath when walking at your own pace on level ground	Yes / No
E.	Shortness of breath when washing or dressing yourself	Yes / No
F.	Shortness of breath that interferes with your job	Yes / No
G.	Coughing that produces phlegm (thick sputum)	Yes / No
H.	Coughing that wakes you early in the morning	Yes / No
I.	Coughing that occurs mostly when you are lying down	Yes / No
J.	Coughing up blood in the last month	Yes / No
K.	Wheezing	Yes / No
L.	Wheezing that interferes with your job	Yes / No
M.	Chest pain when you breathe deeply	Yes / No
N.	Any other symptoms that you think may be related to lung problems	Yes / No

5. Have you ever had any of the following cardiovascular or heart problems?

A.	Heart attack	Yes / No
B.	Stroke	Yes / No
C.	Angina	Yes / No
D.	Heart failure	Yes / No
E.	Swelling in your legs or feet (not caused by walking)	Yes / No
F.	Heart arrhythmia (heart beating irregularly)	Yes / No
G.	High blood pressure	Yes / No
H.	Any other heart problem that you've been told about	Yes / No

6. Have you ever had any of the following cardiovascular or heart symptoms?

A.	Frequent pain or tightness in your chest	Yes / No
B.	Pain or tightness in your chest during physical activity	Yes / No
C.	Pain or tightness in your chest that interferes with your job	Yes / No
D.	In the past two years, have you noticed your heart skipping or missing a beat	Yes / No
E.	Heartburn or indigestion that is not related to eating	Yes / No
F.	Any other symptoms that you think may be related to heart or circulation problems	Yes / No

7. Do you currently take medication for any of the following problems?

A.	Breathing or lung problems	Yes / No
B.	Heart trouble	Yes / No
C.	Blood pressure	Yes / No
D.	Seizures (fits)	Yes / No

8. If you have never used a respirator, check the following space and go to question 9.

(___) I have never used a respirator.

If you have used a respirator, have you ever had any of the following problems?

A.	Eye irritation	Yes / No
B.	Skin allergies or rashes	Yes / No
C.	Anxiety	Yes / No
D.	General weakness or fatigue	Yes / No
E.	Any other problem that interferes with your use of a respirator	Yes / No

9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire?

Yes / No

Questions 10 to 15 below <u>must</u> be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For employees who have been selected to use other types of respirators, answering these questions is voluntary.

10. Have you ever lost vision in either eye (temporarily or permanently)?

Yes / No

11. Do you currently have any of the following vision problems?

A.	Wear contact lenses	Yes / No
B.	Wear glasses	Yes / No
C.	Color blind	Yes / No
D.	Any other eye or vision problem	Yes / No

12. Have you ever had an injury to your ears, including a broken ear drum?

Yes / No

13. Do you currently have any of the following hearing problems?

A.	Difficulty hearing	Yes / No
B.	Wear a hearing aid	Yes / No
C.	Any other hearing or ear problem	Yes / No

14. Have you ever had a back injury?

Yes / No

15. Do you currently have any of the following musculoskeletal problems?

A.	Weakness in any of your arms, hands, legs or feet	Yes / No
B.	Back pain	Yes / No
C.	Difficulty fully moving your arms and legs	Yes / No
D.	Pain or stiffness when you lean forward or backward at the waist	Yes / No
E.	Difficulty fully moving your head up or down	Yes / No
F.	Difficulty fully moving your head side to side	Yes / No
G.	Difficulty bending at your knees	Yes / No
H.	Difficulty squatting to the ground	Yes / No
I.	Climbing a flight of stairs or a ladder carrying more than 25 pounds	Yes / No
J.	Any other muscle or skeletal problem that interferes with using a respirator	Yes / No

Part B. Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.

1. In your present job, are you working at high altitudes (over 5000 feet) or in a place that has lower than normal amounts of oxygen?

   Yes / No

   If “yes”, do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you’re working under these conditions?

   Yes / No

2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals?

   Yes / No

   If “yes”, name the chemicals if you know them:

   _____
   _____
   _____
   _____

3. Have you ever worked with any of the materials, or under any of the conditions, listed below:

A.	Asbestos:	Yes / No
B.	Silica (in sandblasting):	Yes / No
C.	Tungsten/cobalt (grinding or welding this material):	Yes / No
D.	Beryllium:	Yes / No
E.	Aluminum:	Yes / No
F.	Coal (mining):	Yes / No
G.	Iron:	Yes / No
H.	Tin:	Yes / No
I.	Dusty environments:	Yes / No
J.	Any other hazardous exposures:	Yes / No

If “yes”, describe these exposures:

_____
_____
_____
_____

4. List any second jobs or side businesses you have:

_____
_____

5. List your previous occupations:

_____
_____

6. List your current and previous hobbies:

_____
_____

7. Have you been in the military services?

Yes / No

If “yes”, were you exposed to biological or chemical agents (either in training or combat)?

Yes / No

8. Have you ever worked on a HAZMAT team?

Yes / No

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications)?

   Yes / No

   If “yes”; name the medications if you know them:

   _____
   _____

10. Will you be using any of the following items with your respirator(s)?

A.	HEPA filters	Yes / No
B.	Canisters (for example, gas masks)	Yes / No
C.	Cartridges	Yes / No

11. How often are you expected to use the respirator(s) (circle “yes” or “no” for all answers that apply to you)?

A.	Escape only (no rescue)	Yes / No
B.	Emergency rescue only	Yes / No
C.	Less than 5 hours per week	Yes / No
D.	Less than 2 hours per day	Yes / No
E.	2 to 4 hours per day	Yes / No
F.	Over 4 hours per day	Yes / No

12. During the period you are using the respirator(s), is your work effort:

    A. **Light** (less than 200 kcal per hour): Yes / No

    If “yes”, how long does this period last during the average shift:
    _____ hours _____ minutes

    Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1 - 3lbs.) or controlling machines.

    B. **Moderate** (200 to 350 kcal per hour): Yes / No

    If “yes”, how long does this period last during the average shift:
    _____ hours _____ minutes

    Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheel barrow with a heavy load (about 100 lbs.) on a level surface.

C. **Heavy** (above 350 kcal per hour): Yes / No

If “yes”, how long does this period last during the average shift:
_____ hours _____ minutes

Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).

13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you’re using your respirator?

Yes / No

If “yes”, describe this protective clothing and/or equipment:
_____
_____
_____
_____
_____

14. Will you be working under hot conditions (temperature exceeding 77° Fahrenheit)?

Yes / No

15. Will you be working under humid conditions?

Yes / No

16. Describe the work you’ll be doing while you’re using your respirator(s):
_____
_____
_____
_____

17. Describe any special or hazardous conditions you might encounter when you’re using your respirator(s) (for example, confined spaces, life-threatening gases):
_____
_____
_____
_____

18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):

Name of the first toxic substance:	
Estimate maximum exposure level per shift:	
Duration of exposure per shift:	
Name of the second toxic substance:	
Estimated maximum exposure level per shift:	
Duration of exposure per shift:	
Name of third toxic substance:	
Estimated maximum exposure level per shift:	
Duration of exposure per shift:	

The name of any other toxic substances that you'll be exposed to while using your respirator:
_____
_____
_____

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, and security):
_____
_____
_____
_____

Employee Name _____

Employee Signature _____ / Date _____

Attachment F

Abbreviated Medical Evaluation Form

Employee should complete this form in years that ATTACHMENT E (Full Medical Evaluation Questionnaire) is not required.

Test Date: _____ Name (First / Last):_____

Employee ID: _____ **Location:**_____

Have you been medically cleared to wear a respirator in the past calendar year?

☐ Yes – You were qualified for respirator use in the past calendar year.

☐ No – You were not qualified for respirator use in the past calendar year.

In the last calendar year I have not had any change in my physical health that would prevent me from wearing a respirator or that I wish to speak to a physician about. I authorize the below technician to conduct respirator fit testing using one or more types of respirators if applicable (No fit test required for PAPR's).

Employee Signature: _____

Fit Test Technician Signature: _____

Attachment G

Qualitative Fit Test Protocol

1. Qualitative fit tests – The irritant smoke test shall be used by Evergy for determining qualitative fit tests.

2. The irritant smoke test is a qualitative test which involves exposing the respirator wearer to an irritating aerosol. The material used is pumice impregnated with stannic chloride. The highly irritating smoke produced causes coughing or sneezing. This involuntary reaction reduces the likelihood of the wearer giving a false indication of proper respirator fit.

3. General Requirements and Precautions

    3.1. The respirator to be tested shall be equipped with high efficiency particulate air (HEPA) or P100 series filters.

    3.2. Only stannic chloride smoke tubes shall be used for this protocol.

    3.3. No form of test enclosure or hood for the test subject shall be used since the smoke can be irritating to the eyes, lungs and nasal passages. The fit test shall be performed in an area with adequate ventilation to prevent exposure of the individual conducting the fit test or the build-up of irritant smoke in the general atmosphere.

4. Sensitivity Screening Check

    4.1. The person to be tested must demonstrate his or her ability to detect a weak concentration of the irritant smoke. This is accomplished by breaking open both ends of a ventilation smoke tube and attaching one end to an aspirator squeeze bulb. The test operator shall carefully direct a small amount of the irritant smoke in the test subjects' direction to determine that he/she can detect it.

5. Irritant Smoke Fit Test Procedure

    5.1. The person being fit tested shall don the respirator without assistance, and perform the required user seal checks as described later in this section.

    5.2. The test subject shall be instructed to keep his/her eyes closed.

    5.3. The test operator shall direct the stream of irritant smoke toward the face seal area of the test subject. The test operator shall begin at least 12 inches from the facepiece and move the smoke stream around the whole perimeter of the mask. Two more passes shall be made around the perimeter of the mask, moving to within six inches of the respirator.

    5.4. If the person being fit tested has not had an involuntary response and/or detected the irritant smoke, proceed with the test exercises.

5.5. The following exercises shall be performed by the test subject while the respirator seal is being challenged by the smoke, directed around the perimeter of the respirator at a distance of six inches: normal breathing, deep breathing, turning head side to side, moving head up and down, talking, bending over or jogging, and normal breathing.

5.6. Each test exercise shall be performed for one minute.

5.7. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment constitutes failure, requiring that the test be repeated.

Attachment H

Quantitative Fit Test Protocol

1. Quantitative Fit Tests – The Porta Count Fit Tester shall be used by Evergy for determining quantitative fit tests.

2. The purpose of the quantitative fit test is to determine the proper fit and degree of integrity of the face fit under actual wearing conditions. It is intended to provide the best method of fitting the respirator to the individual, using sensitive methods of detection for leakage or malfunction.

3. If the fit factor, as determined through an OSHA-accepted quantitative fit test protocol, is equal to or greater than 100 for tight-fitting half facepieces, or equal to or greater than 500 for tight-fitting full facepieces, the quantitative fit test has been passed with that respirator.

4. Quantitative respirator fit tests involve exposing the respirator to a test atmosphere containing an easily detectable aerosol, vapor or gas as the test agent and then measuring the penetration of the test atmosphere of the test agent into the respirator. Quantitative respirator fit tests can also be performed using the Porta Count Fit Test machine from TSI, Inc. Using ambient air as the test medium, the Porta Count "counts" the particulate concentration inside the mask and in the outside air then computes a fit factor.

5. Porta Count Fit Test Requirements

5.1. Check the respirator to make sure the respirator is fitted with a high-efficiency filter and that the sampling probe and line are properly attached to the facepiece.

5.2. Instruct the person to be tested to don the respirator for five minutes before the fit test starts. This purges the ambient particles trapped inside the respirator and permits the wearer to make certain the respirator is comfortable. This individual shall already have been trained on how to wear the respirator properly.

5.3. Check the following conditions for the adequacy of the respirator fit: chin properly placed; adequate strap tension; fit across nose bridge; respirator of proper size to span distance from nose to chin; tendency of the respirator to slip; self-observation in a mirror to evaluate fit and respirator position.

5.4. Have the person wearing the respirator to do a user seal check. If leakage is detected, determine the cause. If leakage is from a poorly fitting facepiece, try another size of the same model respirator, or another model of respirator.

5.5. Follow the manufacturer’s instructions for operating the Porta Count and proceed with the test.

5.6. The following exercises shall be performed by the test subject: normal breathing, deep breathing, turning head side to side, moving head up and down, talking, grimace, bending over, and normal breathing.

5.7. Each test exercise shall be performed for 60 seconds except for the grimace exercise which shall be performed for 15 sec.

5.8. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment constitutes failure, requiring that the test be repeated.

6. Porta Count Test Instrument

6.1. The Porta Count will automatically stop and calculate the overall fit factor for the entire set of exercises. The Pass or Fail message will indicate whether or not the test was successful.

6.2. Since the pass or fail criterion of the Porta Count is user programmable, the test operator shall ensure that the chosen criterion meets the requirements for the minimum respirator performance established in this Section.

6.3. A record of the test shall be kept on file, assuming the fit test was successful. The record must contain the test subject's name; overall fit factor; make, model, style, and size of respirator used; and date tested.

6.4. Additional face-piece to face-seal leak testing such as positive and negative pressure tests should be performed each time a respirator is donned. The tests are performed as follows:

6.4.1. Positive Pressure Test – Close the exhalation valve and exhale gently into the face piece. The face piece fit is considered satisfactory if a slight positive pressure can be built inside the face piece without any evidence of outward leakage of air at the seal. For most respirators, this method of leak testing requires that the wearer first remove the exhalation valve cover and the carefully replace it after the test.

6.4.2. Negative Pressure Test – Close off the inlet opening of the cartridge(s) by covering with the palm of the hands or by sealing the cartridge with material such as plastic or foil. Inhale gently so that the facepiece collapses slightly and hold breath approximately 10 seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the fit of the respirator is satisfactory.

Attachment I

Respirator Use – Hazard Assessment Tool

Date:	Location:	Department/Area:	

Task/Job/Process Description:

Chemicals/Agents Workers are Exposed to or Encounter Performing Task/Job/Process

Chemical / Agent(s)	Acute Effects	Chronic Effects

Notes: *4 = Illness resulting in fatality or serious, potentially irreversible damage to one or more organ systems (e.g., carcinogen); 3 = Illness resulting in significant debilitation to one or more organ system, irreversible tissue damage, serious respiratory irritation, significant lost work time; 2 = Illness resulting in medical care or otherwise OSHA recordable, notable respiratory irritation which may initiate, promote, or accelerate adverse health effects through other mechanisms; 1 = Minor illness requiring little or no first-aid care, mild respiratory irritation, transient manifestation of minor symptoms of limited duration, no medical care required, no lost work time.*

Check one of the following:

☐ Particulate	☐ Liquid	☐ Gas/Vapor

Estimated Duration of Exposure (check one or more)

	Duration of Exposure Period	Once per Shift	Multiple Times per Shift
☐	< 15 minutes		
☐	15 – 60 minutes		
☐	> 1 hour		
☐	> 2 hours		
☐	> 1 hour		
☐	Nearly the Entire Shift		

Controls to Mitigate Exposure Currently in Place (check one):

☐ LEV	☐ Dilute Vent	☐ Isolation	☐ Alrm/wrn	☐ Det./Shutoff.	☐ Closed Sys.	☐ Job Rotation	☐ Procedure	☐ Resp. Prot.	☐ Other

Previous Air Sampling Data for Task & SEG:

Additional Notes & Comments:

Certification of Assessor: **Date:**

Attachment J

Evergy Analyte Classification

Ongoing collection of Industrial Hygiene data has the potential to generate new respiratory protection requirements. Analyte profiles are actively under development and the ongoing collection of integrated personal breathing zone sampling data may trigger the need for respiratory protection.

Implementation of a “Respirator Qualified” Workforce Requirement is a protective safety measure for Evergy personnel as these profiles are being characterized. Examples include but are not limited to:

a. Respirable Particulate (PNOR) - Air samples have indicated worker exposures in excess of the OSHA PEL triggering use of Respiratory Protection in select areas within the Evergy Generation division.

b. Respirable Crystalline Silica (RCS) - Air samples have consistently reported BELOW OSHA PEL and Action Level. No Respiratory Protection requirements have been initiated related to RCS within the Evergy Generation or Delivery divisions.

c. Asbestos Containing Materials (ACM) – When called upon to conduct Class III work, without the use of a glove bag, if there is visible debris and/or historical knowledge of ACM, there may be a likelihood personnel shall be asked to don respiratory protection as a precaution within the Evergy Generation or Delivery divisions.

d. Lead (Pb) – All data collected for lead has indicated below OEL concentrations within the Evergy Generation or Delivery divisions.

e. Chrome (VI) – Limited data has indicated that some scenarios may have the potential to warrant a respiratory protection requirement within the Evergy Generation or Delivery divisions.