1.0 PURPOSE AND SCOPE

1.1 **Purpose**: This procedure is to:

1.1.1 Ensure that natural gas not be used as the cleaning media for internal pipe cleaning in new construction or cleaning of existing or repaired pipe.

1.1.2 Be used to ensure that natural gas is not introduced or evacuated from process vessels or piping in a manner that would result in a flammable, combustible or explosive mixture inside the vessel or piping.

1.1.3 Ensure that any venting of a flammable gas is performed in a safe manner and that vents discharge to a "Safe Vent Point Location" *(see 2.1.19)*.

1.1.4 Be used as a basis to develop site-specific procedures *(see appendix A for template)* for compliance with NFPA 56. This procedure shall not serve as a substitute for site-specific, system-specific procedures.

1.2 Scope: This applies to AEP Fossil Power Generation facilities downstream of the custody transfer meter where natural gas is used for industrial purposes such as power generation and burner ignition, including new construction. Any deviation from purging requirements must be approved by Plant Manager; One Level above Plant Manager; and Director of Generation Safety and/or their designees.

1.2.1 Applicability

1.2.1.1 This procedure is to be used for new construction as well as maintenance activities that allow process vessels and piping containing natural gas to become exposed to an air atmosphere. To determine applicability, use the Gas Purge Inert Decision Tree found in Appendix D

1.2.1.2 This procedure is to be used for Purging Into Service and Purging Out of Service as defined in NFPA 56.

1.2.2 Non-applicable

1.2.2.1 This procedure does not apply to appliance type equipment such as: ovens, wall mounted space heaters and domestic hot water heaters or where deemed not required per the Gas Purge Inert Decision Tree found in Appendix D.

1.2.2.2 Maintenance work may take place when small leaks from charged natural gas-fed piping or equipment are present. The key determination is if the atmosphere where work is being performed can be maintained below 10% of the LEL. Work may take place, but safeguards such as ventilation, continuous atmospheric monitoring, a hot work permit, fire resistant clothing, and an Emergency Action Plan, must be in place as well.

1.3 Alternative: When applying this procedure and the natural gas cannot be vented to a Safe Vent Point Location or a location that has been deemed safe by an engineering evaluation, then the safeguards defined in section 4.5 must be in place.

2.0 DEFINITIONS AND ABBREVIATIONS

2.1 Definitions:

2.1.1 Continuous Monitoring – The process of sampling the gas being discharged or the piping internal gas concentration at regular intervals to ensure the effectiveness of the purging out of service or the purging into service.

2.1.2 Exclusion Zone – The area around the natural gas venting process that has been cleared of all ignition sources, electrical equipment, hot work, and non-essential personnel.

2.1.3 Flammable Material – Liquids or gases that are considered flammable by National Fire Protection Association (NFPA 704 flammability rating of 1 or higher) or by U.S. Department of Transportation (DOT). Some examples of flammable materials typically used within the AEP Generation system include, Natural Gas, Propane, Propylene, Hydrogen, Acetylene, Gasoline, and Fuel Oil.

2.1.4 Flammable Mixture – A mixture of flammable vapor with air that will sustain combustion.

2.1.5 Gas Detector – A gas monitor, such as Industrial Scientific MX6 or an equal is to be used to verify elimination of oxygen by inert gas purging and complete reintroduction of gas into the system.

2.1.6 Incident Commander – AEP Representative assigned the responsibility of overseeing the venting process.

2.1.7 Inert Gas – A non-reactive gas that is used to displace oxygen and prevent combustion. Examples of inert gases are Argon and Nitrogen. (Note: Carbon Dioxide is used for Hydrogen Cooled Generators).

2.1.8 JSA – Job Safety Analysis. Briefing conducted prior to the commencement of the venting operation with all persons involved in performing the operation to review the procedure, hazards, communication plan and Emergency Response Plan. The JSA discussion will be led by the Incident Commander.

2.1.9 Lower Explosive Limit (LEL) – The minimum concentration of a flammable gas mixed with an air atmosphere that will sustain combustion. Also known as the Lower Flammable Limit (LFL).

2.1.10 Maximum Allowable Operating Pressure (MAOP) - The normal operating pressure of a vessel or piping. The MAOP is typically less than the maximum allowable working pressure (MAWP) established by the manufacturer.

2.1.11 Maximum Allowable Working Pressure (MAWP) – The maximum pressure that a vessel or piping is designed to operate within.

2.1.12 Minimum Oxygen Concentration (MOC) – The oxygen concentration, when oxygen is mixed with a flammable material, below which ignition cannot be supported (also known as Limiting Oxygen Concentration).

2.1.13 Pressure Relief Device (PRD)– A protection device designed to prevent personnel injury and equipment damage from overpressure.

2.1.14 Pressure Purge – The technique of purging process equipment and piping from a zero pressure state by adding an inert gas to the system at a low pressure (typically atmospheric) and raising it to a higher pressure (typically normal operating pressure of the system or 200 psig, whichever is lower) and then venting the system back to the starting pressure. This process is repeated for a predetermined number of cycles to reduce the air concentration below the minimum oxygen concentration level to eliminate flammable conditions.

2.1.15 Purge Cycles – The number of times the pressure purge process is completed to ensure that an air atmosphere that will support combustion does not exist.

2.1.16 Purge Into Service – The act of replacing the air or inert gas in a closed system by a flammable gas.

2.1.17 Purge Out of Service – The act of replacing the normal flammable content of a closed system by inert gas.

2.1.18 Safe Location – an area that is below 10% LEL

2.1.19 Safe Vent Point Location – Natural gas shall not be vented indoors. Natural gas vents are to be located outdoors at elevations 10 feet above any building or structure, including overhead electric lines, within a 50 feet radius column (right-circular cylinder) above the point of discharge. Nearby structures may block air currents and not allow for dilution which, in turn, may allow natural gas being vented to accumulate. If the natural gas were to ignite and explode, a structure typically reflects the blast wave and increases the force of the explosion. In addition, buildings typically have walking/ working platforms that may expose personnel. Overhead electrical lines and, in particular, Transmission equipment is a potential ignition source due corona effects and other operations such as reclosures, and air breakers. In lieu of criteria above, an engineering evaluation shall be used to determine a Safe Vent Point Location.

2.1.20 Sweep Purge – The technique of purging process equipment and piping by adding inert gas at a constant velocity for a specified period of time. The inert gas displaces the flammable gas or air over a period time.

2.1.21 Upper Explosive Limit (UEL) – The maximum concentration of a flammable gas mixed with an air atmosphere that will sustain combustion. Also known as the Upper Flammable Limit (UFL).

2.2 Abbreviations:

2.2.1 AEP – For the purposes of this document, American Electric Power, Inc. and all of its subsidiaries responsible for generating power using fossil fuels.

2.2.2 CEC– Construction Environmental Coordinator

2.2.3 NFPA– National Fire Protection Association

2.2.4 PEC– Plant Environmental Coordinator

2.2.5 P&IDs – Process and Instrument Diagrams

3.0 ROLES AND RESPONSIBILITIES

3.1 Facility Manager shall:

3.1.1 Ensure this procedure is communicated to facility personnel and that they are trained in using this procedure.

3.2 Persons working for or on behalf of AEP Shall:

3.2.1 Be trained in the use of this procedure.

3.2.2 Follow this procedure when process vessels or piping that contains natural gas is exposed to an air atmosphere.

3.3 Supervisors shall:

3.3.1 Conduct a JHA/JSA and ensure that all parameters of this procedure are clearly identified and followed including:

- Number of purge cycles
- Initial purge pressure
- Maximum purge pressure
- Ending cycle pressure
- Appropriate purging equipment
- Final oxygen concentration
- System isolation points (clearance boundaries)
- Inerting location(s)
- Go / no-go, criteria
- Venting location(s)
- Gas detection sample points

3.4 Safety & Health Professionals shall:

3.4.1 Provide resources necessary for supervisors to follow this procedure and conduct the JHA/JSA.

4.0 DETAILS

4.1 <u>General Requirements</u>

4.1.1 Personnel working in the affected area(s) as determined by this procedure shall be informed of the hazards associated with this activity prior to the initiation of any purging/inerting/recharging activities. All non-essential personnel must be removed from the affected area(s) during these activities.

4.1.1.1 Affected personnel shall successfully complete Key Course SAF-Nat Gas Awareness and repeat as defined in the training matrix.

4.1.1.2 Affected personnel shall successfully complete the Key Course SAF-NatGasPurgeVent-O and repeat as defined in the training matrix.

4.1.1.3 Affected personnel shall follow the site specific Job Hazard Analysis (JHA)

4.1.1.4 Affected personnel shall use Mechanical Design Standard document: MDS-PI-20-001 (Nitrogen Purge/Vent Maintenance Tool Assembly) or equivalent to construct the Nitrogen Rig.

4.1.2 P&IDs or Flow Diagrams (whichever is available) shall be assembled for the affected system(s).

4.1.3 SDS or MSDS shall be on hand for the fuel gas as well as the inert purge media.

4.1.4 A thorough assessment of the piping system including determination and evaluation of discharge points, design of temporary piping, location of and access to control valves and the possibility of trapped liquids/solids/deposits shall be prepared.

4.1.5 Any valve which must be operated during this procedure shall be located in a safe location.

4.1.6 Continuous monitoring using gas detectors (Refer to specific gas monitor OEM manual for sample time vs. length of tubing, etc), whether by use of a sample port within the piping system or taking a sample at the point of discharge must be included with steps 4.2, 4.3, 4.4, and 4.5 of this procedure. The monitor shall be located such that levels can be read and recorded from a safe location.

4.1.6.1 The gas detectors are to be configured for the specific measurement needed. For example, when measuring a lean mixture of natural gas, a gas detector configured with oxygen, LEL, and IR sensors is appropriate. The oxygen sensor is used to confirm that the atmosphere is acceptable for the LEL detector to function properly. The LEL detector typically requires at least 10% oxygen to read LEL. The IR sensor is used to measure 0-100% LEL methane in an oxygen deficient atmosphere. It is recommended that dedicated detectors are used for this process and are calibrated and bump tested. When configuring these instruments, one is to be designated for measuring fuel rich mixtures and will be configured only with the IR cell (0-100% Methane by volume) and oxygen since the Catalytic LEL cell will become saturated and quickly be consumed at high concentrations of natural gas. An oxygen sensor is still recommended since high concentration of methane can lead to an oxygen deficient atmosphere. Do not use these dedicated gas detectors for confined space entry since they do not have the standard four gas configuration.

4.1.7 Prior to discharging any gases to the environment, the PEC or CEC shall be contacted to ensure regulatory compliance.

4.1.8 Environmental conditions such as wind, temperature, barometric pressure, topography, and their impact on this procedure shall be evaluated.

4.1.9 Control of ignition sources within the affected area(s) such as smoking, hot work, and static electricity (bonding and/or grounding) shall be addressed.

4.1.10 A communications plan for this procedure which addresses topics such as emergency response, general facility notification of procedure start/stop, and notification of local emergency responders shall be prepared.

4.1.11 Personnel responsible for using monitoring instruments as part of this procedure shall have training on the equipment that will be used.

4.1.12 Where an inert gas is to be used with this procedure, the possibility of an asphyxiating atmosphere exists. A plan to prevent personnel from being exposed to oxygen-deficient atmospheres shall be developed in conjunction with this procedure. All personnel using this procedure shall be informed of the hazards of nitrogen/inert gas through a detailed JSA discussion regarding the hazards and controls to prevent exposure.

4.1.13 Site-specific, system-specific procedures *(see Appendix A)* shall receive an independent safety validation, and the safety validation shall be approved by the Facility Manager prior to the conduct of any purging/inerting/charging activities covered under this procedure.

4.1.14 During the execution of these procedures, atmospheric monitoring with a gas detector is to be conducted as close as practical to the 50' zone around the gas vent location. For vents that are located in safe locations, this is to be conducted as a first time evolution to validate the procedure. Periodic reviews or spot checks of these safe location vents should be conducted to ensure the effectiveness of this procedure. These will be based on the frequency of the use of the procedure and the previous results. The Facility Manager will use these effectiveness tests to review the site's procedures.

4.1.15 Establish Go / NO Go Criteria such as: inverted atmosphere (fog), rain, lightning, or if personnel cannot be located or removed from exclusion zone. Action levels at 10% LEL and 25% LEL must be clearly identified.

4.2 <u>Purge Into Service:</u> Prepare equipment for initial fill or reintroduction (charge/pack) of natural gas {equipment starting in a 100% air-state condition}.

4.2.1 The system is to be controlled by a clearance permit.

4.2.2 Nitrogen is to be used to purge the air from the system and provide an inert atmosphere inside the piping/vessels prior to introduction of natural gas.

4.2.3 Nitrogen may be delivered from cylinders, tube trailers, or cryogenic storage depending on the size of the system to be placed into service.

4.2.4 For inerting, nitrogen is controlled at pressures to optimize purging while preventing overpressure of the system. Table 1 (below) lists the maximum nitrogen pressure, pressure relief device setting, and number of pressure purge cycles for typical maximum allowable operating pressures.

4.2.5 Natural gas vents are to be located outdoors at elevations 10 feet above any building or structure, including overhead electric lines, within a 50 foot radius column (right-circular cylinder) above the point of discharge.

4.2.6 With the vent valve closed and the nitrogen purge valve open, slowly open the nitrogen flow valves to allow the system to reach the nitrogen purge pressure as determined in Table 1 (below) based on the system's maximum allowable operating pressure.

4.2.7 Close the nitrogen flow valve and hold for approximately 10 to 15 minutes to allow the gases to mix.

4.2.8 Use approved leak-testing medium (Snoop®, RC Snoop®, and/or Sherlock5®) or other leak testing procedure (i.e. ultrasonic leak detection, helium test, etc.) to check for leaks in the piping system being placed into service. Leak testing shall be performed on any section of piping which is disturbed and any other areas with suspected or probable leaks. Leak testing is to be performed to avoid the need for another inerting purge cycle after the system is purged into service to make repairs on additional leaks. Depressurize the system and repair any leaks before proceeding.

4.2.9 Slowly open the nitrogen vent valve allowing the system to displace the air and nitrogen mixture and reach a pressure of approximately 0 psig.

4.2.10 Repeat steps 4.2.6 through 4.2.9 for the number of pressure purge cycles as indicated in Table 1 for the nitrogen purge pressure and system maximum allowable operating pressure. When using the same connection for the nitrogen introduction and to vent the system down, additional purge cycles may be required than the number listed in Table 1.

Table 1 – Purging	MAOP 40psig ≤ 80psig	MAOP >80psig ≤ 200psig	MAOP >200psig ≤ 1000psig
N2 Purge Pressure	35 psig	80 psig	200 psig
Into Service Purge Cycles	**3**	**3**	**2**
Out of Service Purge Cycles	4	3	2
Purge System Pressure Relief Device (PRD) Setting	40 psig*	100 psig*	250 psig*

*If the purge system PRD setting is greater than the MAWP (Maximum Allowable Working Pressure), this table cannot be used. Must use engineering calculation worksheet (Appendix C) and a properly sized PRD for the system.

4.2.11 Close the nitrogen vent valve.

4.2.12 Vent down the nitrogen fill hose and disconnect the nitrogen purge system from the system that was purged and inerted.

4.2.13 Measure the oxygen concentration with the gas detector to ensure the oxygen concentration is below 5% (see Appendix B).

4.2.14 The system is ready for gas introduction.

4.2.15 With the system purged of air and inerted, verify that there is natural gas supply pressure and a calibrated and bump tested gas detector that will measure natural gas in nitrogen (i.e. utilizes an infrared, or IR, sensor). The range of the instrument must be 0 to 100% methane by volume. The detector must also be equipped with a sample pump.

4.2.16 Locate the sample point in the vent line that will be used to monitor natural gas introduction. The sample point shall be brought to a safe location for personnel to access throughout the gas charging procedure.

4.2.17 Place the gas detector sample tube into/near sample point and begin gas introduction.

4.2.18 Slowly open the natural gas supply valve to the system and purge nitrogen from the system with natural gas through the vent.

4.2.19 Closely monitor the gas detector watching for natural gas breakthrough (the reading will change from 0%).

4.2.20 The purging process is complete when the gas detector reads 90% by volume or greater.

4.2.21 Close the natural gas supply valve and natural gas vent.

4.2.22 As an alternative for systems that are controlled by Burner Management Systems or Turbine Gas Control Systems, those systems may be placed into service directly from the inert gas state at zero pressure to charging of natural gas to the operating gas pressure state without venting gas to bring the gas composition to the minimum 90% methane level. This is an alternative permitted under NFPA 56 rules where systems with a fuel/burner management system permits and controls a lean fuel mixture during startup.

4.3 Purge Out Of Service: Preparing equipment for maintenance (venting and purging, system that is in the 100% natural gas state).

4.3.1 The system is to be controlled by a clearance permit.

4.3.2 The natural gas that is in the system is to be vented to a Safe Vent Point Location.

4.3.3 The amount of gas to be vented is to be kept to a minimum. Consider consuming as much gas as is possible in the fueled process (i.e. by gradually lowering system pressure as the unit is running, provided it will not impact flame stability or operability) prior to conducting the maintenance activity.

4.3.4 Isolate the natural gas supply from the system to be maintained.

4.3.5 Slowly vent down the natural gas until the system reaches a zero psig state. Take a pressure reading at this time and note this as time zero. The value should be approximately 0 psig.

4.3.6 Install a low pressure pressure gauge to detect a small increase in pressure due to leakage (Dwyer series LPG4 0-35" water column gauge or equivalent). Close the vent valve and allow the system to stabilize for approximately 5 minutes. Take a pressure reading at this time. Ideally this pressure should be approximately 0" water column, indicating that the supply valve has zero leakage. A pressure rise of 15" water column or greater over a 5 minute period may indicate the boundary isolation valves may not be holding and requires a more in-depth questioning attitude.

4.3.7 Nitrogen is to be used to purge the residual natural gas from the system and provide an inert atmosphere for the maintenance activities.

4.3.8 Nitrogen may be delivered from cylinders, tube trailers, or cryogenic storage depending on the size of the system to be placed into service. Careful planning is required to match the source of nitrogen (cylinders, tube trailers, cryogenic supply) for the specific job that is going to take place.

4.3.9 For inerting, nitrogen is controlled at pressures to optimize purging while preventing overpressure of the system. Table 1 lists the maximum nitrogen pressure, pressure relief device setting, and number of pressure purge cycles for typical maximum allowable operating pressures.

4.3.10 Natural gas vents are to be located outdoors at elevations 10 feet above any building or structure, including overhead electric lines, within a 50 foot radius column (right-circular cylinder) above the point of discharge.

4.3.11 With the vent valve closed and the nitrogen purge valve open, slowly open the nitrogen flow valves to allow the system to reach the nitrogen purge pressure as determined in Table 1 based on the system's maximum allowable operating pressure.

4.3.12 Close the nitrogen flow valve and hold for approximately 10 to 15 minutes to allow the gases to mix.

4.3.13 Slowly open the nitrogen vent valve allowing the system to displace the air and nitrogen mixture and reach a pressure of approximately 0 psig.

4.3.14 Repeat steps 4.3.11 through 4.3.13 for the number of pressure purge cycles as indicated in Table 1 for the nitrogen purge pressure and system maximum allowable operating pressure. When using the same connection for the nitrogen introduction and to vent the system down, additional purge cycles may be required than the number listed in Table 1.

Table 1 - Purging	MAOP 40psig ≤ 80psig	MAOP >80psig ≤ 200psig	MAOP >200psig ≤ 1000psig
N2 Purge Pressure	35 psig	80 psig	200 psig
Into Service Purge Cycles	3	3	2
Out of Service Purge Cycles	**4**	**3**	**2**
Purge System Pressure Relief Device (PRD) Setting	40 psig*	100 psig*	250 psig*

*If the purge system PRD setting is greater than the MAWP (Maximum Allowable Working Pressure), this table cannot be used. Must use engineering calculation worksheet (appendix C) and a properly sized PRD for the system.

4.3.15 Close the nitrogen vent valve.

4.3.16 Measure the system contents with the gas detector that is configured with the 0-100% LEL Methane IR to ensure that it is at or below 10% of the LEL of methane.

4.3.17 Vent down the nitrogen fill hose and disconnect the nitrogen purge system from the system that was purged and inerted.

4.3.18 The system is ready to perform the maintenance activities. Danger: Pure nitrogen is heavier than air. Asphyxiation can occur when there is a static head in the piping (vertical runs of pipe) and when there is work being performed below the release area, allowing nitrogen to flow to the work area; therefore, nitrogen shall be air- purged to remove such hazard

4.3.19 When the maintenance work is completed, follow the steps in 4.2 to purge into service.

4.4 Sweep Purge – Sweep purging can only be performed on systems that have injection fittings and vent fittings at the extremities of the piping section. The sweep purge introduces a gas (inert gas in purging out of service) into one end of the piping section and in a slow, controlled manner and shoves out the gas that is inside of the piping system thru the vent at the opposite end of the piping section. In a straight piping

section where little mixing occurs, a volume of purging gas greater than the internal volume of the piping is required to shove out the gas being removed. In piping sections where there are complex piping configurations, differing piping sizes, vessels as part of the section, liquid traps, and elevation changes significantly, an amount of purging gas many times the internal piping system volume is required. Dead legs, closed branches, and large eddy spaces are to be avoided.

4.4.1 When the sweep purge technique is selected for purging a flammable gas piping system into or out of service, substitute the sweep purge at steps 4.2.6 and 4.3.11 and follow the steps below.

4.4.2 Nitrogen may be delivered from cylinders, tube trailers, or cryogenic storage depending on the size of the system to be placed into or out of service.

4.4.3 In sections with relatively straight and same diameter piping starting at 0 psig in the piping, use a low pressure purge (20 psig at injection point) and introduce 2 times the volume of purging gas as the internal volume of the pipe. Ensure that the regulator pressure is set prior to use to prevent stratification of the natural gas and nitrogen.

4.4.4 In piping sections that have non-uniform piping diameters, vessels as part of the piping section, or elevation changes, inject purging gas at a higher pressure (max. operating pressure of the section or 100 psig, whichever is lower) to provide mixing of the purging gas and gas initially inside the piping section. Inject at least 4 times the volume of purging gas as the internal volume of the pipe.

4.4.5 At the completion of injection of gas (in 4.4.3 or 4.4.4), sample the composition of the gas at the vent to ensure that the gas concentration expected is attained (less than 10% of the LEL of methane when purging out of service, and less than 5% O_2 when purging into service).

4.4.6 Vent to a Safe Vent Point Location.

4.5 Vent Not to Safe Location Requirements

4.5.1 Establish an exclusion zone beginning 10 feet below the point of discharge and extending in a radius of 50 feet (right-circular cylinder) around and above the point of discharge. During the purge process, remove or isolate all potential sources of ignition inside the exclusion zone.

4.5.2 Procedures written for the venting process shall include emergency response planning, incident command roles and responsibilities, JHA/JSA and PPE.

4.5.3 Atmospheric monitoring (weather conditions), continuous gas monitoring of the exclusion zone boundaries, and go / no-go criteria (such as lightning near the venting activity) are to be part of the venting process safeguards.

4.5.4 Intrinsically rated (Class I, Div. 1, Group D) radios, lights and Gas Detectors must be used.

4.5.5 Only Gas Detectors with a recent calibration and bump-tested prior to the venting operation shall be used. Redundant Gas Detectors which display combustible gas levels in % LEL are required.

4.5.6 Establish roles and responsibilities including an Incident Commander.
4.5.7 Conduct a JSA prior to conducting the venting operation.
4.5.8 Communication with local emergency responders shall be established.
4.5.9 PPE requirements (such as hard hat, safety glasses, safety toed shoes, Fire Retardant (FR) top layer, FR or cotton under layer and hearing protection) within the exclusion zone and outside of the exclusion zone shall be identified.
4.5.10 Communication and alarm requirements such as use of the phonetic alphabet and three way communication techniques shall be clearly defined.
4.5.11 Establish a headcount system, evacuation routes and muster points.

5.0 REFERENCES

5.1 Crowl, Daniel, Chemical Process Safety: Fundamentals with Applications, Prentice Hall, 1990
5.2 NFPA 56PS, Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems 2012 Edition
5.3 Key Course SAF-NatGasAwareness-O (online)
5.4 Key Course SAF-NatGasPurgeVent-O (online)
5.5 Mechanical Design Standard document: MDS-PI-20-001 (Nitrogen Purge/Vent Maintenance Tool Assembly)

6.0 APPENDICES

6.1 Reference A: Frequently Asked Questions
6.2 Appendix A: Site Specific JHA templates for Pressure Purge & Sweep Purge
6.3 Appendix B: MX-6 Dilution Tube Use
6.4 Appendix C: Engineering Calculation Worksheet
6.5 Appendix D – Gas Purge Inert Decision Tree

7.0 REVIEW AND REVISION HISTORY

7.1 Annually or more often if required to address management of change

DATE	REVISION #	COMMENTS	REVIEWER
1-1-2013	Rev 0	Original	Gas Vent Team

Appendix A: Site Specific JHA templates for Pressure Purge & Sweep Purge

CTRL + Click Link Here =➔

http://ehap/Pages/LaunchJHA.aspx?JobId=8860

Appendix B: MX-6 Dilution Tube Use

Copy web address below and paste in browser =➔

http://aepsharepoint/EnvSafetyandHealth/shdocs/Shared%20Documents/Dilution%20Tube%20Instructions.pdf

Appendix C – Engineering Calculation Worksheet

CTRL + Click Link Here =➔

http://aepsharepoint/EnvSafetyandHealth/shdocs/Lists/Natural%20Gas%20Safety/AllItems.aspx

Appendix D – Gas Purge Inert Decision Tree

Copy web address below and paste in browser ➔

http://aepsharepoint/EnvSafetyandHealth/shdocs/Shared%20Documents/Gas%20Purge%20Inert%20Decision%20Tree.pdf