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Originating Department	Final Approver	Date:	RMP	
Ashley Fraser	Thomas E. Stalcup	6/29/2023		
	Thomas E. Stalcup (Jul 11, 2023 09:46 MDT)			
Subject				
	Portable Gas Monitor Operation Pr	ogram		

1.0 PURPOSE / SCOPE

1.1 <u>Purpose</u>

Basin Electric Power Cooperative (BEPC) is committed to providing a safe and healthful environment for employees. It is our policy to protect employees from occupational injuries by implementing and enforcing safe work practices.

- 1.2 <u>Scope</u>
 - 1.2.1 To ensure accurate information is obtained from portable atmospheric gas monitors by providing training in the proper operation, maintenance and use of the equipment.
 - 1.2.2 To clarify the capabilities and limitations of the portable gas monitors used at the Dry Fork Station.
 - 1.2.3 This procedure applies to the operation and maintenance of MSA ALTAIR 4XR Multigas Detectors, ALTAIR 5x Multigas Detectors and an ALTAIR Pro: Hydrogen Cyanide HCN Detector.

2.0 **DEFINITIONS**

- 2.1 <u>8-Hour Time Weighted Average:</u> the employee's average airborne exposure in any 8-hour work shift of a 40-hour week which shall not be exceeded.
- 2.2 <u>8- Hour TWA PEL (TWA)</u>: is the level of exposure established as the highest level of exposure an employee may be exposed to without incurring the risk of adverse health effects
- 2.3 <u>Bump Test:</u> Bump testing is the process of briefly exposing the installed sensors to an expected concentration of calibration gas that is greater than the low alarm set point. Also referred to as a "functional test", the bump test checks for sensor and alarm *functionality* but does not measure sensor *accuracy* and no adjustments are made to the instrument during a bump test.
- 2.4 <u>Calibration:</u> All sensors gradually degrade over time. Without regular calibrations, sensor readings during instrument use will not accurately display true gas concentrations. During the calibration process, the instrument self-adjusts so that the sensors retain their ability to correctly measure and accurately display gas concentration values. When a sensor has degraded beyond an acceptable level, it has reached its end of life and will no longer pass a calibration.



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- 2.5 <u>On-Site Coordinator:</u> Basin Electric Power Cooperative (BEPC) on-site employee that interfaces with contractors.
- 2.6 <u>Operating Authority</u>: The Supervisory Staff in the Operation Section is the "Operating Authority" in the power plant and the administrator of this program. Operating Authority duties may also be assigned to the Lead Station Operator.
- 2.7 <u>Qualified Employee</u>: a person that has been trained in and familiar with the safe work practices, safety procedures and programs, and other safety requirements that pertain to their respective job assignments.
- 2.8 <u>Short Term Exposure Limits (STEL):</u> are the legal maximum average exposure for a 15-minute time period. Some chemicals also have an OSHA ceiling value that represent levels that must not be exceeded at any time.
- 2.9 <u>Supervisory Authority</u>: The Plant Manager is the "Supervisory Authority" of this program and administers manning the installation, maintenance and the operations of the procedure. This person may designate this authority if necessary.
- 2.10 <u>Zero:</u> Zeroing sets each installed sensor to recognize the ambient air as clean air. If the ambient air is not truly clean air, any gasses that are present and relevant to the installed sensor type will be measured and displayed as zero. Readings will be inaccurate until the unit is correctly zeroed in truly fresh air or with a zero-air cylinder.

3.0 APPLICABILITY/RESPONSIBILITY

- 3.1 <u>Applicability</u>
 - 3.1.1 This program applies to all employees and contractors that utilize gas monitoring equipment from Dry Fork Station.
 - 3.1.2 Adherence to the policies and directives in this program is mandatory for all BEPC and contract employees.
 - 3.1.3 Individuals failing to follow this program are subject to disciplinary action up to and including termination of employment.
- 3.2 <u>Responsibility</u>
 - 3.2.1 Safety Coordinator is responsible for:
 - 3.2.1.1 Providing assistance to individuals with questions regarding gas monitoring.
 - 3.2.1.2 Ensuring initial and subsequent training is completed.
 - 3.2.1.3 Maintaining training records.



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- 3.2.2 Supervisory Authority is responsible for:
 - 3.2.2.1 Safe administration of this program.
 - 3.2.2.2 Enforcing the Portable Gas Monitor Procedure and the disciplinary actions regarding violations of the procedure.
- 3.2.3 Supervisors are responsible for:
 - 3.2.3.1 Ensuring/providing training for their employees regarding instrument use.
 - 3.2.3.2 Ensuring atmospheric testing has been completed in accordance to DFS Confined Space and Hot Work Programs.
 - 3.2.3.3 Enforcing the Portable Gas Monitor Procedure and the disciplinary actions regarding violations of the procedure.
- 3.2.4 Operating Authority is responsible for:
 - 3.2.4.1 Calibrating and bump testing gas monitors.
 - 3.2.4.2 Maintaining and servicing of the instruments.
 - 3.2.4.3 Maintaining the docking station and associated equipment.
- 3.2.5 Employees are responsible for:
 - 3.2.5.1 Properly filling out the multi-gas monitor checkout log.
 - 3.2.5.2 Verifying calibration, bump test and functional checks are complete.
 - 3.2.5.3 Notifying the Operating Authority and/or supervisor if issues arise with gas monitors.
 - 3.2.5.4 Knowing how to utilize gas monitoring equipment and asking questions if functionality is not understood.
 - 3.2.5.5 Returning gas monitoring equipment to the operating authority when finished, an issue arises, or battery indicates the need for a charge.
- 3.2.6 Contractors are responsible for:
 - 3.2.6.1 Verifying calibration, bump test and functional checks are complete.
 - 3.2.6.2 Notifying the Operating Authority and/or supervisor if issues arise with gas monitors.



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- 3.2.6.3 Knowing how to utilize gas monitoring equipment and asking questions if functionality is not understood.
- 3.2.6.4 Returning gas monitoring equipment to the operating authority when finished, an issue arises, or battery indicates the need for a charge.

4.0 GUIDELINES/PROCEDURE

4.1 <u>Guidelines</u>

- 4.1.1 Gas monitors are potentially lifesaving instruments, designed to detect minute levels of contaminates in the range of Permissible Exposure Limits (PEL). The monitors are used to determine if an atmosphere is hazardous to humans. They are not designed to monitor high levels of a contaminant already known to be hazardous, or to determine process conditions.
- 4.1.2 Multi-gas monitors are required to be calibrated monthly.
- 4.1.3 A functional "bump" test must be performed prior to each day's use. A functional "bump" test is defined as a brief exposure of the monitor to a concentration of gases in excess of the lowest alarm set point for each sensor for the purpose of verifying sensor and alarm operation. If an instrument fails to operate properly following any functional test, full calibration should be performed prior to use.
- 4.1.4 The response time for instruments to obtain a stable measurement varies. Allow a minimum of 1 second per foot of sample line to allow the sample to be drawn through the sensors.
- 4.1.5 When monitoring for entries involving descent into atmospheres that may be stratified, the atmosphere should be tested at distance of approximately 4 feet. For example, testing a confined space from a lighter gas to heavier gas would consist of CO, O₂, H²S, SO² and NH3.
- 4.1.6 All monitors shall be obtained from the operating authority.
- 4.1.7 Once work is complete, the battery is low and/or the functionality of the monitor is compromised, the monitor shall be returned to the operating authority.

4.2 Procedure

- 4.2.1 MSA ALTAIR 4XR Multigas Detectors and ALTAIR 5x Multigas Detectors
 - 4.2.1.1 ALTAIR 5x Multigas Detectors are configured for gases that may be present at DFS. Each monitor is capable of measuring up to six gases simultaneously, which include Oxygen (O²), Lower Explosive Limit (LEL), Carbon Monoxide (CO), Hydrogen Sulfide (H²S), Sulfur Dioxide (SO²) and Anhydrous Ammonia (NH3).



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- 4.2.1.2 The Altair 5X Multigas detectors use a PID to detect the concentration of anhydrous ammonia. The reading is shown under the VOC label on the monitor.
- 4.2.1.3 ALTAIR 4XR Multigas Detectors are configured specifically for gases that may be present at DFS. Each monitor is capable of measuring up to four gases simultaneously, which include Oxygen (O²), Lower Explosive Limit (LEL), Carbon Monoxide (CO) and Hydrogen Sulfide (H²S).
- 4.2.1.4 The docking station located in the operation tool room, is an automated instrument management system. It performs daily functional checks and monthly calibrations. These tests are performed automatically when the instrument is placed in the Docking Station. Completion of the tests is recorded in a computer database created by the software program.
- 4.2.1.5 The user of the 4XR/5x can simply place the monitor in the Docking Station and the monitor will automatically perform this test. The user may also perform a forced bump or calibration using the controls located on the base of the Docking Station.
- 4.2.2 Overview of the Altair 5X



Figure 2 Device view

LEDs

- ¹ 2 red "Alarm", 1 green "Safe" and 1 yellow "Fault"
- 2 Horn
- 3 Display
- 4 ▲ Button
- 5 U Button
- 6 ▼Button
- 7 Bluetooth Status LED



- IRDA communication port
- 9 Pump inlet
- 10 Filter

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- 11 RFID tag
- 12 Charging port
- 13 Charge Status LED



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4.2.3 Altair 5x LED Indicators

LED Definitions

LED	Description				
RED (Alarm)	The red alarm LEDs are visual indications of an alarm condition or any type of error in the device.				
GREEN (Safe)	The Safe LED flashes once every 15 seconds to notify the user that the device is ON and operating under the conditions defined below:				
	The green SAFE LED is enabled				
	Combustible reading is 0 % LEL or 0 % Vol				
	Oxygen (O ₂) reading is 20.8 %				
	All other sensor readings are 0 ppm				
	No gas alarms are present (low or high)				
	Device is not in Low Battery warning or alarm				
	STEL and TWA readings are 0 ppm				
	This option can be turned OFF through the MSA Link software.				
YELLOW (Fault)	The Fault LED activates if any of several fault conditions are detected during device operation This includes:				
	A device memory error				
	A sensor determined to be missing or inoperative				
	A pump fault				
	These faults are also indicated by activation of device alarm LEDs, horn, and vibrating alarm.				

4.2.4 Altair 5x Alarms

4.3 Alarms

The device is equipped with multiple alarms for increased user safety:

lcon	Alarm	
	Vibrating Alarm	The device vibrates when any alarm condition is active. This can be turned OFF through the SETUP- ALARM OPTIONS menu (\rightarrow Device Setup).
(1)	Horn	The device is equipped with an audible alarm.
		The horn can be turned OFF through the SETUP- ALARM OPTIONS menu (\rightarrow Device Setup).
	InstantAlert™ Alarm	The InstantAlert exclusive feature allows the user to manually activate an audible alarm to alert those nearby to potentially dangerous situations. Holding the ▼ button for approximately 5 seconds while in Normal Measure Mode activates the InstantAlert alarm. Access to this feature may be restricted by user settings. See 5.5 Device Setup for means to allow/disallow user access.
	MotionAlert™ Alarm	If MotionAlert is turned ON (\rightarrow 5.5 Device Setup), the device activates a "Man Down" alarm if motion is not detected within 30 seconds. The Alarm LEDs flash, and the horn activates with an increasing audible frequency. MotionAlert is always turned OFF when the device is turned OFF.
		Access to this feature may be restricted by user settings. See 5.5 Device Setup for means to allow/disallow user access.

- 4.2.4.1 The device has four gas alarms for each toxic gas:
 - 4.2.4.1.1 HIGH Alarm
 - 4.2.4.1.2 LOW Alarm
 - 4.2.4.1.3 STEL Alarm



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	4.2.4.1.4	TWA Alarm			
4.2.4.2		concentration rea or TWA limits, the		eeds the alarm	set point or
	4.2.4.2.1	Alarm message the correspondir	• •		bination with
	4.2.4.2.2	Backlight turns c	n.		
	4.2.4.2.3	Alarms sounds.			
	4.2.4.2.4	Alarm LEDs flas	h		
	4.2.4.2.5	Vibrating alarm t	riggers		
	COMB 20 0 1 : 30PM HI	02 20.8 0 0.0 H2S S02 MSA C GH ALARM	1 30 PM Ма %LEL РРМ 0 00	а (ла %Vol 20.8 о РРМ н. 0.0	

PPM

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0.0

HIGH ALARM

PPM



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4.2.5 Overview of the Altair 4XR



Figure 1 Device overview

1	Datalink Communication port	8	Display
2	Bump LED (green/red) and Fault LED (-yellow)	9	Alarm LEDs (4)
3	Sensor Inlets	10	Belt Clip
4	Hom	11	Charging Connection
5	▲ Button	12	Screws (4)
6	▼ Button	13	Charge LED (red/green/orange)
7	0 Button	14	Bluetooth Status LED

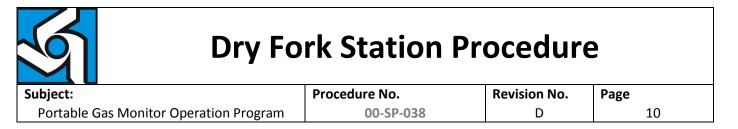
4.2.6 Altair 4XR LED Indicators

LED	Description
GREEN/RED(Bump LED)	After a successful Bump Test, the green LED will flash every 15 seconds for a 24-hour period.
	When the device fails a bump test or when the 24-hour period expires, the red LED flashes every 15 seconds.
	This option can be turned off through the MSA GALAXY GX2 Test Stand or MSA Link software.
RED(Alarm LED)	The red alarm LEDs are visual indications of an alarm condition or any type of error in the device.
YELLOW (Fault LED)	The yellow fault LED is a visual indication of an device fault condition. This LED turns on with the following conditions:
(raut LED)	Device memory error
	Sensor Missing
	Sensor Error
RED/GREEN/ORANGE	The charge LED is a visual indication of charge status.
(Charge LED)	RED: device is charging
	GREEN: charge is complete
	ORANGE: problem detected during charging



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4.2.7	Altair 4XF	R Alarms			
	4.2.7.1	Vibrating A	Alarm: vibrates when any ala	arm condition is a	activated.
	4.2.7.2	Horn: prov activated.	vides an audible alarm when	any alarm cond	ition is
	4.2.7.3	The device has four gas alarms for each toxic gas:			
		4.2.7.3.1	HIGH Alarm.		
		4.2.7.3.2	LOW Alarm		
		4.2.7.3.3	STEL Alarm		
		4.2.7.3.4	TWA Alarm		
	4.2.7.4	If the gas device:	set point, the		
		4.2.7.4.1	Backlight turns on.		
		4.2.7.4.2	Triggers a vibrating alarm.		
		4.2.7.4.3	Displays and flashes the Al Minimum icon (LOW alarm icon (HIGH alarm).		
		4.2.7.4.4	Enters and alarm state.		
4.2.8	Altair Pro	Hydrogen (Cyanide (HCN) Detector		
	4.2.8.1	0 0	s detector to be utilized for d g upset conditions with the c s.	0,00	5
	4.2.8.2	Not to be	used in Oxygen deficient or	enriched situatio	ns.
	4.2.8.3	Alarm fund	ction check and bump test sl	hall be complete	d prior to use.
	4.2.8.4	Do not blo	ock the sensor.		
	4.2.8.5	5 Leave area immediately if a gas alarm condition is reached.			ched.
	4.2.8.6	automated functional	ng station located in the ope d instrument management sy checks and monthly calibrat	/stem. It perform tions. These test	s daily s are

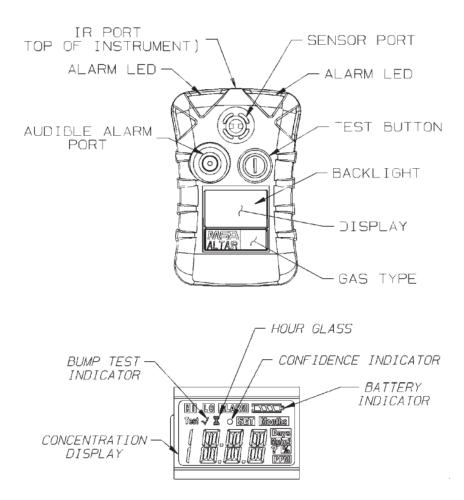
performed automatically when the instrument is placed in the



Docking Station. Completion of the tests is recorded in a computer database created by the software program.

4.2.8.7 The user of the Altair Pro HCN detector can simply place the monitor in the Docking Station and the monitor will automatically perform this test. The user may also perform a forced bump or calibration using the controls located on the base of the Docking Station.

4.2.9 Overview of Altair Pro HCN Detector





4.2.10 Altair Pro HCN Alarms

4.2.10.1 Vibrating Alarm: activates when a gas concentration exceeds an alarm set point.

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	Audible Ala alarm set p	arm: activates when a gas co oint.	oncentration exc	ceeds an
4.2.10.3	The device	has four gas alarms for eac	ch toxic gas:	
	4.2.10.3.1	HIGH Alarm		
	4.2.10.3.2	LOW Alarm		
	4.2.10.3.3	STEL Alarm		
	4.2.10.3.4	TWA Alarm		
	If the gas c device:	oncentration reaches or exc	eeds the alarm	set point, the
		Backlight turns on for 20 sec condition.	conds during an	alarm
	4.2.10.4.2	Triggers a vibrating alarm.		
		Displays and flashes the Ala Minimum icon (LOW alarm) alarm).		

- 4.2.10.4.4 Enters and alarm state.
- 4.2.11 Reference the Altair Pro Manual for calibration and bump test procedures.

4.3 Health Effects and Hazardous Concentration Levels

Concentration Of Oxygen	Effects
23.5 % Volume	Maximum "Safe Level" - OSHA
21 %	Normal Oxygen Concentration of Air (20.954%)
19.5 %	Minimum "Safe Level" – OSHA, NIOSH
17 %	Impairment of judgment starts to be detected.
16 %	First signs of anoxia appears.
16 – 12 %	Breathing and pulse rate increases, muscular co- ordination is slightly impaired.
14 – 10 %	Consciousness continuous; emotional upsets, abnormal fatigue upon exertion, disturbed respiration.
10 – 6 %	Nausea and vomiting, inability to move freely and loss of consciousness may occur.
< 6 %	Convulsive movements and gasping respiration occurs; respiration stops and a few minutes later heart action ceases.
Source:	NIOSH, OSHA

4.3.1 Oxygen (O²) Levels



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- 4.3.2 Carbon Monoxide (CO) Levels
 - 4.3.2.1 CO is a colorless gas. To the human senses it is invisible. CO is a byproduct of combustion and will appear naturally in any situation where burning has taken place. CO is lighter than air.
 - 4.3.2.2 CO is a highly toxic gas which is termed a toxic asphyxiant, meaning it reduces the oxygen transport properties of the blood. It reacts with the hemoglobin in the blood forming carboxyhemoglobin which prevents the hemoglobin from transferring oxygen. Low PPM doses of carbon monoxide can cause headaches and dizziness. If the victim is removed to fresh air no permanent damage will result. High doses can be fatal.

	Deputting Operativity of Cff and Operative
CO Levels in PPM	Resulting Conditions/Effects On Humans
50	Permissible Exposure Level for 8 hours (OSHA)
200	Possible mild frontal headache in 2 to 3 hours.
400	Frontal headache and nausea after 1 to 2 hours. Occipital after 2-1/2 to 3-1/2 hours.
800	Headache, dizziness, and nausea in 45 minutes. Collapse and possible death in 2 hours.
1600	Headache, dizziness, and nausea in 20 minutes. Collapse and death in 1 hour.
3200	Headache and dizziness in 5 to 10 minutes. Unconsciousness and danger of death in 30 minutes.
6400	Headache and dizziness in 1 to 2 minutes. Unconsciousness and danger of death in 10 to 15 minutes.
12,800	Immediate effects – unconsciousness. Danger of death in 1 to 3 minutes.
Source:	American Industrial Hygiene Association

- 4.3.3 Sulfur Dioxide (SO²) Levels
 - 4.3.3.1 SO² is colorless gas with a characteristic, irritating, pungent odor. SO² is released when compounds containing sulfur, such as fossil fuels (Lignite Coal) are burned SO² is heavier than air.
 - 4.3.3.2 SO² is a highly toxic gas which poisons its victims via inhalation through the lungs. SO² combines with water to form sulfuric acid (H²SO⁴). It is for this reason sulfur dioxide can burn the respiratory tract upon inhalation. High doses of sulfur dioxide can cause death guite rapidly.

SO2 Levels in PPM	Resulting Conditions/Effects On Humans
0.3 – 1.0	Sulfur Dioxide initially detected by taste.
2	Permissible Exposure Level (OSHA, ACGIH)
3	Odor becomes easily detected.
6 – 12	Irritation of the nose and throat.
20	Irritation of the eyes.
50 – 100	Maximum exposure for a 30 minute period
400 - 500	Dangerous concentration can cause edema of the lungs
	and glottis and death from prolonged exposure.
Source:	Dangerous Properties of Industrial Materials (Sixth Edition)
	by N. Irving Sax



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4.3.4 Hydrogen Sulfide (H²S) Levels

- 4.3.4.1 H²S is a colorless gas that is known by its characteristic rotten egg like odor. It appears naturally as byproduct of decomposition. H²S is heavier than air. One of the drawbacks to trusting the senses (olfactory) for protection against H²S is that prolonged exposure to the gas renders the sense of smell inoperative.
- 4.3.4.2 H²S is a highly toxic gas. It reacts with the enzymes in the blood stream which inhibit cell respiration. In other words, high concentrations of hydrogen sulfide can shut off the lungs. Low concentration exposure to the gas can burn the respiratory tract and cause swelling around the eyes.

H2S Levels in PPM	Resulting Conditions/Effects On Humans
0.13	Minimal perceptible odor.
4.60	Easily detected, moderate odor.
10	Beginning eye irritation. Permissible Exposure Level, 8 hours (OSHA, ACGIH)
27	Strong, unpleasant odor, but not intolerable.
100	Coughing, eye irritation, loss of sense of smell after 2 to 5 minutes.
200 - 300	Marked conjunctivitis (eye inflammation) and respiratory tract irritation after one hour of exposure.
500 - 700	Loss of consciousness, cessation (stopping or pausing) of respiration, and death.
1000 - 2000	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.
Source:	ANSI Standard No. Z37.2 - 1972

- 4.3.5 Anhydrous Ammonia (NH³) Levels
 - 4.3.5.1 NH³ is a colorless gas with a bitter taste and sharp, intensely irritating, characteristic odor. Its odor is detectable at 17 ppm. Ammonia resembles water as a liquid and is easily liquefiable.
 - 4.3.5.2 Since ammonia boils at minus 28 degrees F., it must be kept under pressure to be stored as a liquid above this temperature unless the storage temperature is maintained at this temperature.
 - 4.3.5.3 Ammonia in unrefrigerated storage tanks expands and increases the vapor pressure in the tank as the outside temperature increases. For example, at 60 degrees F. the pressure is 93 psi and at 100 degrees F. the pressure is nearly 200 psi. If a hose ruptures or a valve is unintentionally opened, the high pressure from a tank can cause ammonia to spray out possibly into eyes, face or other parts of the body before one could react.
 - 4.3.5.4 When pressure is released, liquid ammonia quickly converts to a gas.



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4.3.5.5 Half Mask Respirator is to be utilized if concentrations are above 50 PPM. A Full-Face Respirator is required at concentrations of 100 PPM or more. An SCBA shall be used for concentrations above 300 PPM.

NH3 Levels in PPM	Resulting Conditions/Effects on Humans
25-50 PPM	Detectable odor; unlike to experience adverse
	effects
50-100 PPM	Mild eye, nose and throat irritation
140 PPM	Moderate eye irritation
400 PPM	Moderate throat irritation
500 PPM	Immediately Dangerous to Life and Health (IDLH)
700 PPM	Immediate eye injury
1000 PPM	Directly caustic to airway
1700 PPM	Laryngospasm
2500 PPM	Fatality after ½ hour of exposure
2500-6500	Sloughing and necrosis of airway mucosa, chest
PPM	pain, acute lung injury
5000 PPM	Rapidly Fatal Exposure

- 4.3.6 Hydrogen Cyanide
 - 4.3.6.1 Colorless or pale blue liquid below 78°F, colorless gas above 78°F.
 - 4.3.6.2 Systemic chemical asphyxiant that interferes with the normal use of oxygen by nearly every organ of the body.
 - 4.3.6.3 Exposure can be rapidly fatal.
 - 4.3.6.4 Has a distinctive bitter almond odor, but a large proportion of people cannot detect it.

HCN Levels in PPM	Resulting Conditions/Effects On Humans
10	Permissible (OSHA)
10-50	Headache, Dizzy, Unsteady
50-100	Feeling of suffocation, nausea
100-200	Death in 30-60 minutes
Source:	National Institute for Occupation Safety and Health (NIOSH)

5.0 ATTACHMENTS

- 5.1 Operating Manual ALTAIR 5x PID Multigas Detector <u>https://altien.bepc.net/AdmX/docIndex.aspx?id=Library.B06B3C86-0000-C21C-AACE-9E9D2C7DABBD</u>
- 5.2 Operating Manual ALTAIR 4XR Multigas Detector https://altien.bepc.net/AdmX/docIndex.aspx?id=Library.706C3C86-0000-C61A-86AD-CDB4C8DA2F55



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5.3 Operating Manual ALTAIR PRO Single Gas Detector Hydrogen Cyanide https://altien.bepc.net/AdmX/docIndex.aspx?id=Library.40E09487-0000-C213-9F19-1E81910E3DD0

6.0 REFERENCES

- 6.1 OSHA Regulations
 - 6.1.1 1910.1000 Air Contaminants
 - 6.1.2 1910.146 Permit-Required Confined Spaces
 - 6.1.3 1910.111 Storage and Handling of Anhydrous Ammonia
 - 6.1.4 1910 Subpart I Personal Protective Equipment
 - 6.1.5 1910 Subpart Q Welding, Cutting and Brazing
 - 6.1.6 1910 Subpart Z Toxic and Hazardous Substances
- 6.2 DFS Confined Space Program
- 6.3 DFS Hot Work Program
- 6.4 DFS Risk Management Plan
- 6.5 ANSI Standards
 - 6.5.1 Z37.2 Acceptable Concentrations of Hydrogen Sulfide

00-SP-038 Portable Gas Monitors Procedure

Final Audit Report

(D)

2023-07-11

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