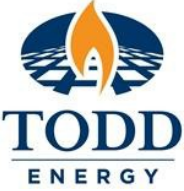


|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

|                      |                           |
|----------------------|---------------------------|
| <b>Owner</b>         | Production Superintendent |
| <b>Frequency</b>     |                           |
| <b>Review Period</b> | 5 years                   |
| <b>Status</b>        | Approved for Use (AFU)    |
| <b>Location</b>      | Todd Energy Policy Centre |

## 1 Introduction and Purpose

The purpose of this Standard Operating Procedure (SOP) is to familiarise personnel on the pre checks and use of available breathing apparatus sets/equipment used on Todd Energy sites.

This SOP is subservient and must comply with the requirements as outlined in AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment.

## 2 Scope

Operating, Maintenance and Management of the use of all types of Breathing Apparatus equipment used within Todd Energy.

## 3 References, Definitions and Abbreviations

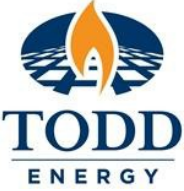
- ASOV Automatic Switch Over Valve
- BA Breathing Apparatus
- CSE Confined Space Entry
- EBD Emergency Breathing Device
- IDLH Immediately Dangerous to Life and Health (as defined in AS/NZS 1715:2009)
- PTW Permit to Work
- SCBA Self Contained Breathing Apparatus
- SO Safety Observer
- SOP Standard Operating Procedure

This SOP supports and shall be used in conjunction with PTW Checklist 45.

## 4 Risks and Controls

As Breathing Apparatus equipment may be required at any time in the event of an emergency, it is essential that the equipment is always maintained and ready for use.

All users of these various Breathing Apparatus units and all BA Controllers are to have had BA training and must hold Unit Standard 3272

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

## 5 Roles and Responsibilities

All Breathing Apparatus wearers and BA Controllers are required to be familiar with and comply with this SOP and all other SOP's and PTW Checklists referenced within this SOP and must have been assessed as competent and hold Unit Standard 3272.

### 5.1 BA Controller

The BA Controller is required to oversee any use of Long Line or SCBA, be it in a safe atmosphere or not.

Where routine work is to be undertaken in an atmosphere which may reach IDLH 's levels, an EBD should be carried for movement within the work area or to facilitate escape. The system should provide a short term back up to the main air hose or airline respirator.

Todd Energy BA equipment is not fitted with ASOV & Escape units. Should ASOV & Escape units be required then an external contracting company should be used to carry out this work with the appropriate EBD equipment used.

When using Long Line BA's, they should be used in conjunction with an EBD escape unit unless the BA is being worn for comfort purposes only, i.e., in a warm or hot CSE where the wearer would prefer to wear BA.

The BA Controller assists the wearer to don and check their equipment, including all function checks.

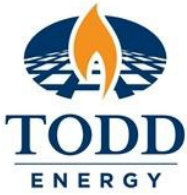
The BA Controller is not to place the BA wearer in any life-threatening situation.

### 5.2 BA Controller Duties

- Assemble and prepare a BA Team. (Minimum of two required).
- Liaise with person in charge of the situation, i.e., if it is an emergency, the On-Scene-Commander or if it is routine, i.e., Confined Space Entry (CSE) the PICWS (usually the SO).
- Proceed with team to the scene.
- Assess situation at the scene having due regard for the nature and risk involved at the incident.
- After assessing the incident, BA wearers must decide themselves if they wish to proceed with the task (they must not be ordered to carry out tasks which they are uncomfortable with)

If the decision to proceed is taken, the BA Controller:

- a) Records on the Tally Board
  - i Name of BA wearer
  - ii BA wearers cylinder pressure
  - iii Time of start (or entry) of use of the BA cylinder

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

- b) Ensures the BA wearer has a tag line or rope attached if there is little or no visibility. The BA Controller and Wearer must establish and use easily recognisable signals to maintain contact.
- c) Notifies control centre of the situation and number of people at the incident. More than likely the control centre will be the CCR.
- d) Accounts for his people – ensuring all have returned safely from the incident.

Passes on updated information to the CCR (Central Control Room).

## 6 Activities / Procedure

### 6.1 Use of Breathing Apparatus Trolley Unit / Long Line Sets

These units are designed to provide a portable supply of compressed air to a face mask when remote from the supply. It consists of a tubular frame fitted with rubber wheels and a carrying handle. A hose reel capable of holding 90 metres of 8mm reinforced PCV hose line is fitted to the top of the frame.

Two air cylinders are toggle clamped side by side in the tubular frame, with two high pressure air hoses connecting them to a regulator secured to the frame. Both air hoses are connected to the cylinders by standard hand tight couplings and incorporate non-return and bleed valves to enable a cylinder to be changed while the other is in use. A high-pressure gauge on the regulator indicates the pressure of the cylinder in use. A low-pressure gauge indicates the pressure being supplied to the mask. A relief valve is also fitted which safeguards the low-pressure airline should the regulator fail. A whistle fitted above the regulator provides an audible warning that the cylinder's working duration has expired.

Or it may be similar to what is described above but instead of the air supplied from the cylinders on a trolley, the air is supplied into the long lines from a portable air compressor designed for this purpose, as used by some contractors on Todd Energy sites. The operation of both systems is very similar.

These systems are used for 'non-Conforming' confined space entries, or to increase the comfort level while working in conforming confined spaces.

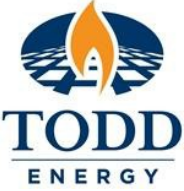
Also, as part of the kit for emergency teams undertaking confined space rescue.

### 6.2 Pre-use Checks of Trolley Unit / Long Line sets

Pre-use checks are required to be done before using any BA equipment. These checks are detailed below for each equipment item and have been combined in the appendices to enable easy use.

The cylinder unit or compressor SHALL remain in the control of a BA controller throughout the duration of the operation. It is his responsibility to maintain a supply of air to the breathing apparatus wearer, to monitor his progress and to order his withdrawal, as necessary.

Before the operation commences, the BA controller SHALL ensure that a sufficient number of fully charged cylinders (207 Bar) are on hand or that the compressor is fully fuelled and operational.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

The BA controller is then responsible for carrying out the following checks on the unit: Refer to BA Controller Duties in section 6.2 above.

1. Check that each high-pressure cylinder coupling is secure.  
  
Open valve on No. 1 cylinder and check high pressure gauge. This SHALL correspond with charging pressure on label of cylinder in use. If the cylinder pressure is less than 160 Bar it SHALL be replaced. (Note: When cylinder is turned on, hose reel fills also).
2. Check that the low-pressure gauge reads between 6-7 Ba. If it is outside of these limits return to approved contractor for maintenance.
3. Check hose and reel joints for any audible leaks. The unit should not be used if any audible leak is detected or if the pressure loss is rapid.
4. Turn off the cylinder and slowly bleed off pressure between the cylinder and regulator. The high-pressure gauge will gradually drop to zero; check the warning whistle operates at 55 Bar. (+/- 5 bar).

Once the breathing apparatus controller has completed his checks, he should turn off the number two cylinder and then turn on the number one cylinder and advise the breathing apparatus wearer to check his equipment as follows.

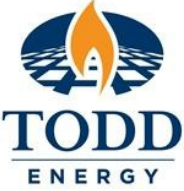
### 6.2.1 Breathing Apparatus Face Mask

The 'Dräger' face mask supplied for attachment to the above life saver sets and longline unit is a positive pressure/demand flow model with a waist belt, personal supply line and 'pigtail' with 'instant air' connections.

### 6.2.2 Breathing Apparatus Check and Donning of Set

The Dräger demand valves have a red button to disengage the positive air supply to the mask, and a black button to enable the positive air supply. User to don the set as follows:

1. Push the positive pressure demand valve knob to the OFF position (negative pressure).
2. Hang the face mask strap around the neck and buckle on the waist belt.
3. Connect personal length of airline to hose reel and pigtail from waist belt.
4. Check that the demand valve is securely fitted to the face mask.
5. Ensure head straps on face mask are extended to full length then put chin into mask first and pull straps overhead. Position mask so that chin fits snugly into chin cup and gently tighten the head harness ensuring a comfortable fit.
6. Position the demand valve supply hose to lie correctly across the chest.
7. Check for positive pressure by pushing the demand valve to ON position. Insert finger into mask and gently lift mask seal off the cheek and ensure that air flows out of the mask, proving that the mask is positive.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

8. Check for face mask leakage. There SHALL be no leakage from the exhale valve or mask seal as denoted by the noise of a constant flow of air from the demand valve or seal leak.
9. See, LP and HP BA set checks by User at section [6.2.1 Pre-Use Check of SCBA](#) prior to entry.

When BA wearer has indicated that they are ready to proceed, the BA controller shall check:

1. All instant air connections between hose reel, personal airline and pigtail are connected properly.
2. The demand valve SHALL be in the ON position (positive pressure).

The control board SHALL now be filled out and tally attached. The controller may then allow the wearer to proceed and start winding out the airline as the wearer moves off. Care should be taken to ensure the line is kept clear of obstacles.

### 6.2.3 Changing Over of Long Line Cylinders

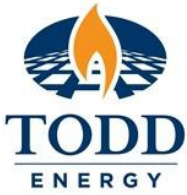
The controller must keep a careful watch on both pressure gauges. If the low-pressure gauge falls below 5.85 Bar, the wearer MUST BE RECALLED IMMEDIATELY.

When the high-pressure gauge falls below 60 bars, slowly turn on the Number 2 cylinder.

This cylinder will now take over the supply of air. Check that the gauge reads full, and the cylinder is supplying air. Should a replacement cylinder be turned on and found to be empty or below the minimum 160bar, revert to original cylinder and IMMEDIATELY RECALL WEARER.

#### Replacement of Cylinder Procedure

1. Turn off used cylinder.
2. Press the black button on the demand valve to de-pressure the long line.
3. Remove used cylinders and label clearly as MT (empty).
4. Release air between cylinder and regulator by opening bleed valve on cylinder connector.
5. Disconnect cylinder.
6. undo clamp.
7. Remove and store cylinder away from the replacement ones.
8. Fit replacement cylinder.
9. Reconnect HP hose finger tight.
10. Re-clamp cylinder.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

#### 6.2.4 Removal of BA Mask

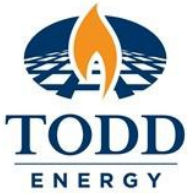
Breathing apparatus SHALL only be removed when the wearer is in a safe area.

1. Press the red button to disengage the positive air supply to the mask. Slacken off head straps and remove face mask.
2. Remove waist belt.
3. Turn off cylinder valve.

#### After Use

**Note:** When this equipment is being used multiple times during a work period, it shall be thoroughly checked and cleaned between uses to minimise damage from hydrocarbons or other contaminants. This includes cleaning of hoses, backpacks, masks, and regulators.

1. Remove the face mask for washing, replace used cylinders.
2. Thoroughly clean the BA hose and associated equipment.
3. The face mask is to be thoroughly washed with BA cleaner (Dräger Safety Wash) or normal soap. Rinse in clean warm water and hang to dry out of direct heat or sunlight.
4. When dry, polish visor with a clean lint free cloth and place mask in protective bag. Return set ready for use.
5. Carry out function / leak test on reinstated unit as per 7.2.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

## 6.2.5 Bottle working duration and checks

### Working Duration Chart Guide

| Bar     | 300 | 280 | 260 | 240 | 220 | 200 | 180 | 160 | 140             |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|
| Minutes | 36  | 33  | 30  | 27  | 24  | 21  | 18  | 15  | change cylinder |

**Note 1:** Chart is based on consumption at the rate of 60 l/min of air.

**Note 2:** Due to the number of various conditions that can affect the quantity of air used by different individuals for different activities while wearing BA, the above chart must only be used as a general guide.

**Note 3:** Check all cylinders for current Hydro date within last 5-years.

**Note 4:** Lifecycle life varies among manufacturers. The Testing authority will approve the bottle for use as part of each 5-year hydro test.

## 6.3 Self-Contained Breathing Apparatus (SCBA)

Self-contained breathing apparatus consists of a compressed air cylinder carried on the wearer's back; air is supplied to the full-face mask via a flexible hose through a pressure reduction and positive pressure demand valve. Self-contained breathing apparatus gives the wearer a high degree of mobility, limited by the air capacity of the cylinder, maximum 207 bar for steel cylinders and 307 bar for composite bottles. Verify actual maximum pressure from Bottle stamping.

A pressure gauge calibrated in Bar, and a low-pressure alarm whistle set to operate at approximately 44 bar is part of the standard equipment.

SCBA is used in emergency situations where the atmosphere could be hazardous but not explosive and in potential H<sub>2</sub>S environments.

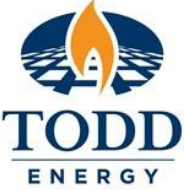
**Note:** At no time does the use of a SCBA set replace the standard gas freeing procedure already established.

### 6.3.1 Pre-Use Check of SCBA

The Dräger demand valves have a red button to disengage the positive air supply to the mask, and a black button to enable the positive air supply. Push the red button on the demand valve (Positive Pressure OFF). The demand valve must be switched OFF before turning on the air; otherwise, damage to the reducing valve may result.

#### 6.3.1.1 HP Test

Open cylinder valve and check gauge against pressure stated on cylinder and enter on tally tag. When opening cylinder valve, the first turn of the valve knob should be quick so that the positive pressure/demand valve is set.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

Leak test the apparatus by closing the cylinder valve. The gauge reading SHALL not fall by more than 10 bars in one minute.

### 6.3.1.2 LP Test

To check whistle setting, gradually reduce the pressure in the system by covering the demand valve outlet with the ball of your hand and then press the back button to set it positive pressure. Slowly release the air across the ball of the hand. The whistle should sound at approximately 55 bar (+ - 5 bar).

### 6.3.2 Donning of SCBA Backpack Unit

1. With the shoulder straps and waist belt fully slackened, put on apparatus.
2. Adjust the shoulder straps until the back plate is held snugly on the back.
3. Hang face mask around neck.
4. Fit waist belt and adjust as required.
5. Check the demand valve is in the OFF position, then fully open cylinder valve.
6. Put chin into mask first and pull straps over the head. Position mask so that chin fits snugly into chin cup and then gently tighten head harness, lower straps first. Ensure comfortable fit.
7. Position the demand valve supply hose to lie correctly across the chest. This may be altered by loosening the demand valve connection on the face mask, rotating the demand valve body, and retightening the connection when an acceptable hose position has been achieved.

### 6.3.3 Check Positive Pressure

Push the demand valve to the ON positive position. Insert finger into mask and gently lift mask off the cheek and ensure air flows out of the mask, proving that the pressure within the mask is positive. Allow mask to reseal and hold breath. There SHALL be no leakage from the exhale valve as denoted by the noise of a constant flow of air from the demand valve.

### 6.3.4 Recheck pressure of cylinder

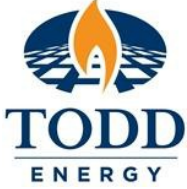
With cylinder valve turned fully ON and demand valve pushed to the ON position, check cylinder is full, breathe normally and proceed to controller and hand over tally.

**Note:** If any of the above pre use tests fail in [6.2.1](#), [6.2.2](#), [6.2.3](#), [6.2.4](#), return the apparatus for servicing and complete an 'Out of Order' card for the fault and attach to apparatus. All BA repairs and maintenance are carried out by an approved contractor. Ensure the Team Leader is informed, and a 'MEX' notification is raised and clearly describes the fault condition. These same requirements apply to any general maintenance requirements for all BA equipment.

### 6.3.5 Removal of Set and after use Cleaning and Checks

The breathing apparatus SHALL only be removed when the wearer is in a safe area.



|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

### 6.3.6 After Use Check

**Note:** When this equipment is being used multiple times during a work period, it shall be thoroughly checked and cleaned between uses to minimise damage from hydrocarbons or other contaminants. This includes cleaning of hoses, backpacks, masks, and regulators.

1. Push the red button to switch off the positive supply.
2. Slacken mask harness and take off (take the straps back the full travel). Close cylinder valve.
3. Slacken harness and take set off (take the straps back the full travel). Release trapped air by operating the demand valve.
4. Remove mask from demand valve for washing (see 7.2.5 below). Remove used cylinder.
5. Clean the set (straps, hoses etc.) Replace cylinder.
6. Carry out HP leak test as per [6.2.1.1 HP test](#)
  - Turn on cylinder valve.
  - Turn off cylinder valve.
  - Note gauge reading. Reading shall not fall by more than 10 Bar per minute.
7. Check warning whistle setting by carrying out LP test: as per [6.2.1.2 LP Test](#)
  - Gently release pressure by pushing demand valve (black button) on and control the air release across the ball of the hand.
  - As pressure falls slowly, the whistle should sound at approximately 55 Bar.
8. Connect clean dry face mask to demand valve.

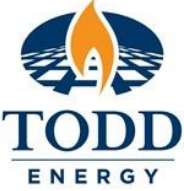
### 6.3.7 Mask Washing Procedure

The face mask is to be thoroughly washed using BA cleaning solution (Dräger Safety Wash) or normal toilet soap.

Rinse in clean warm water.

Hang to dry out of direct heat or sunlight.

When dry, polish visor with clean lint free cloth, place mask in protective bag and connect it back onto demand valve.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

### 6.3.8 Working Duration Chart

The working duration chart is the same as the chart for the breathing apparatus trolley unit.

**Note:**

When used cylinders have been changed out NEVER leave the cylinder valve open, as this will depressure the cylinder completely and allow atmospheric pressure to enter. This air may contain contaminants which will cause damage/corrosion to the internal surface of the cylinder. Used cylinders shall be labelled and sent to the approved supplier for recharging.

### 6.3.9 Use of Emergency Escape Breathing Apparatus (Saver CF or similar)

These Emergency Escape Units shall only be used when entering a respirable atmosphere, but it is considered necessary to have a back-up Breathing Apparatus should the need arise i.e., going onto the roof of a floating roof storage tank.

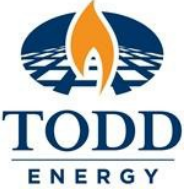
In emergency situations, conditions can deteriorate rapidly. The air is suddenly filled with smoke or toxic fumes and rapid escape is the only available option. The Dräger Saver CF is suitable even for people with spectacles or facial hair.

When opened, the Dräger Saver CF is automatically activated and begins feeding a continuous supply of breathing air for up to 10 minutes. The Saver CF gives the wearer the precious additional time needed to exit the area safely.

**Note:**

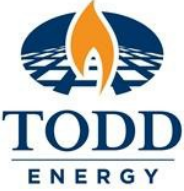
These Emergency Escape Units must not be used as a back-up to a longline BA unit in a non-respirable atmosphere as described in 6.1.2 above.



|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32-38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

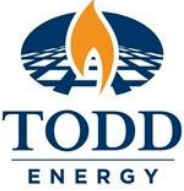
## APPENDIX A – BA Longline – Pre-use Checks Long Line

| BA Controller |  |
|---------------|--|
| 1             | <p>Check that each high-pressure cylinder coupling is secure, then open valve on No. 1 cylinder and check high pressure gauge. This pressure SHALL correspond with charging pressure on label of cylinder in use. If the cylinder pressure is &lt;160 Bar it SHALL be replaced.</p> <p>(Note: When cylinder is turned on, hose reel fills also).</p> |
| 2             | <p>Check that the low-pressure gauge reads between 6-7 Bar. If it is outside of these limits return to approved contractor for maintenance.</p>  |
| 3             | <p>Check hose and reel joints for any audible leaks. The unit should not be used if any audible leak is detected or if the pressure loss is rapid.</p>   |
| 4             | <p>Turn off the cylinder and slowly bleed off pressure between the cylinder and regulator. The high-pressure gauge will gradually drop to zero; check the warning whistles on the BA unit and the Colt rescue unit, operates at 55 Bar. (+/- 5 bar)</p>  |
| 5             | <p>Repeat as above for number two cylinder fitted to unit.</p>   |
| 6             | <p>Once checks completed, turn off the number two cylinder and then turn on the number one cylinder and the Life Saver (small) cylinder and advise the BA wearer to check his equipment as follows;</p>  |
| BA Wearer     |  |
| 7             | <p>Open the cylinder valve and check the pressure gauge to ensure the cylinder is fully charged, - green on the gauge. (200 bar or 300 bar depending on cylinder type and maximum pressure).</p>   |
| 8             | <p>Close the cylinder and bleed the pressure off via the mask.</p>   |
| 9             | <p>Push the mask positive pressure demand valve knob to the OFF position (negative pressure).</p> <p>Note: The Dräger demand valves have a red button to disengage the positive air supply to the mask, and a black button to enable the positive air supply.</p>  |
| 10            | <p>Hang the face mask strap around the neck and buckle on the waist belt.</p>  |
| 11            | <p>Connect personal length of airline to hose reel and pigtail from waist belt.</p>  |
| 12            | <p>Check that the demand valve is securely fitted to the face mask.</p>  |
| 13            | <p>Ensure head straps on face mask are extended to full length then put chin into mask first and pull straps overhead. Position mask so that chin fits snugly into chin cup and gently tighten the head harness ensuring a comfortable fit.</p>  |
| 14            | <p>Position the demand valve supply hose to lie correctly across the chest.</p>  |

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32-38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

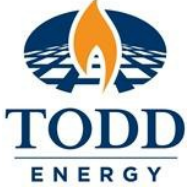
| BA Controller  |  |
|--|--|
| 15   | Check for positive pressure by pushing the demand valve to ON position. Insert finger into mask and gently lift mask seal off the cheek and ensure that air flows out of the mask  |
| 16   | Check for face mask leakage. There SHALL be no leakage from the exhale valve or mask seal as denoted by the noise of a constant flow of air from the demand valve or seal leak.  |
| BA Controller - When breathing apparatus wearer has indicated that they are ready to proceed, the BA controller shall check; |  |
| 17   | All connections between hose reel, personal airline and pigtail are connected properly.  |
| 18   | The demand valve is in the ON position (positive pressure).  |
| 19   | The control board SHALL now be filled out and tally attached after which the controller may allow the wearer to proceed. BA controller to start winding out the airline as the wearer moves off taking care to ensure the line is kept clear of obstacles. |

**Note:** When this equipment is being used multiple times during a work period, it shall be thoroughly checked and cleaned between uses to minimise damage from hydrocarbons or other contaminants. This includes cleaning of hoses, backpacks, masks, and regulators.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32–38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

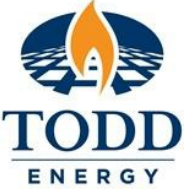
## APPENDIX B – Self-contained Breathing Apparatus – Pre-use Checks

| BA Wearer  |  |
|--|--|
| 1  | <p>Push the mask positive pressure demand valve knob to the OFF position (negative pressure).</p> <p>Note: The Dräger demand valves have a red button to disengage the positive air supply to the mask, and a black button to enable the positive air supply.</p>  |
| 2  | <p>Open cylinder valve and check gauge against pressure stated on cylinder and enter on tally tag.</p> <p>Note; When opening cylinder valve, first turn of the valve knob should be quick to set the positive pressure/demand valve.</p>   |
| 3  | <p><b>6.2.1.1 HP Leak test</b> apparatus by closing the cylinder valve. The gauge reading SHALL not fall by more than 10 Bar in one minute.</p>  |
| 4  | <p><b>6.2.1.2 LP Leak test</b> to check the whistle setting. Gradually reduce the pressure in the system by covering the demand valve outlet with the ball of your hand and then press the back button to set it positive pressure. Slowly release the air across the ball of the hand. The whistle should sound at approximately 55 bar (+ - 5 bar).</p>  |
| 5  | <p><b>Donning Apparatus</b></p> <p>With the shoulder straps and waist belt fully slackened, put on apparatus, and adjust the shoulder straps until the back plate is held snugly on the back.</p>  |
| 6  | <p>Hang face mask around neck and fit waist belt. Adjust as required.</p>  |
| 7  | <p>Check the demand valve is in the OFF position, then fully open cylinder valve.</p>  |
| 8  | <p>Put chin into mask first and pull straps over the head. Position mask so that chin fits snugly into chin cup and then gently tighten head harness, lower straps first. Ensure comfortable fit. Position the demand valve supply hose to lie correctly across the chest. This may be altered by loosening the demand valve connection on the face mask, rotating the demand valve body and retightening the connection when an acceptable hose position has been achieved.</p> |
| 9  | <p><b>Check positive pressure</b></p> <p>Push the demand valve to the ON positive position. Insert finger into mask and gently lift mask off the cheek and ensure air flows out of the mask, proving that the pressure within the mask is positive. Allow mask to reseal and hold breath. There SHALL be no leakage from the exhale valve as denoted by the noise of a constant flow of air from the demand valve.</p>   |
| 10   | <p><b>Recheck pressure of cylinder</b></p> <p>With cylinder valve turned fully ON and demand valve pushed to the ON position, check cylinder is full, breathe normally and proceed to controller and hand over tally.</p>  |
| <p><b>NOTE:</b> If any of the above tests fail, return the apparatus for servicing, and complete an 'Out of Order'</p> |  |

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32-38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

| BA Wearer  |  |
|--|--|
| card for the fault and attach to apparatus   |  |
| BA Controller - When breathing apparatus wearer has indicated that they are ready to proceed, the BA controller shall check; |  |
| 11   | The demand valve is in the ON position (positive pressure).  |
| 12   | The control board SHALL now be filled out and tally attached after which the controller may allow the wearer to proceed. |

**Note:** When this equipment is being used multiple times during a work period, it shall be thoroughly checked and cleaned between uses to minimise damage from hydrocarbons or other contaminants. This includes cleaning of hoses, backpacks, masks, and regulators.

|   |                       |                              |
|---|-----------------------|------------------------------|
|  <p>Todd Energy Limited<br/>Level 2, Energy House<br/>32-38 Molesworth Street<br/>New Plymouth 4310<br/>Phone: +64 6 7595350<br/>Fax: +64 6 7578006</p> | <b>Document Title</b> | Use of Breathing Apparatus   |
|   | <b>Document No</b>    | Document Number Redacted     |
|   | <b>Document Type</b>  | Standard Operating Procedure |
|   | <b>Revision No</b>    | 2                            |

### Revision and Approval Details

| Revision | Published Date         | Reason for Issue | Author        | Reviewer   | Reviewed Date         | Approver       | Approved Date         | Document Initiated    |
|----------|------------------------|------------------|---------------|--|-----------------------|----------------|-----------------------|-----------------------|
| 2        | 24/10/2023 11:33:15 AM | Approved for Use | Brooke Gamlin | Darren Scott;Peter Martin;Mike Klenner;Cameron Murray;Dion West;Brendan O'Connor;Brooke Gamlin | 6/09/2023 12:00:00 AM | Caleb Robinson | 19/10/2023 7:55:52 AM | 28/06/2023 1:55:16 PM |
|          |                        |                  |               |  |                       |                |                       |                       |
|          |                        |                  |               |  |                       |                |                       |                       |
|          |                        |                  |               |  |                       |                |                       |                       |
|          |                        |                  |               |  |                       |                |                       |                       |

**Disclaimer:** The information provided in this document is the property of Todd Petroleum Mining Company Limited (including its subsidiaries, together referred to as Todd Energy or the Todd Energy Group of Companies) Wellington and New Plymouth. It must not be copied or used by any other person other than the intended recipient or for other purpose other than that to which it is provided without the express permission of Todd Energy. Todd Energy disclaims any responsibility or liability for any use of or misuse of this document by any person(s) and makes no warranty as to the accuracy or suitability of the information to any third party. Any misuse of the document is redressable by Todd Energy.