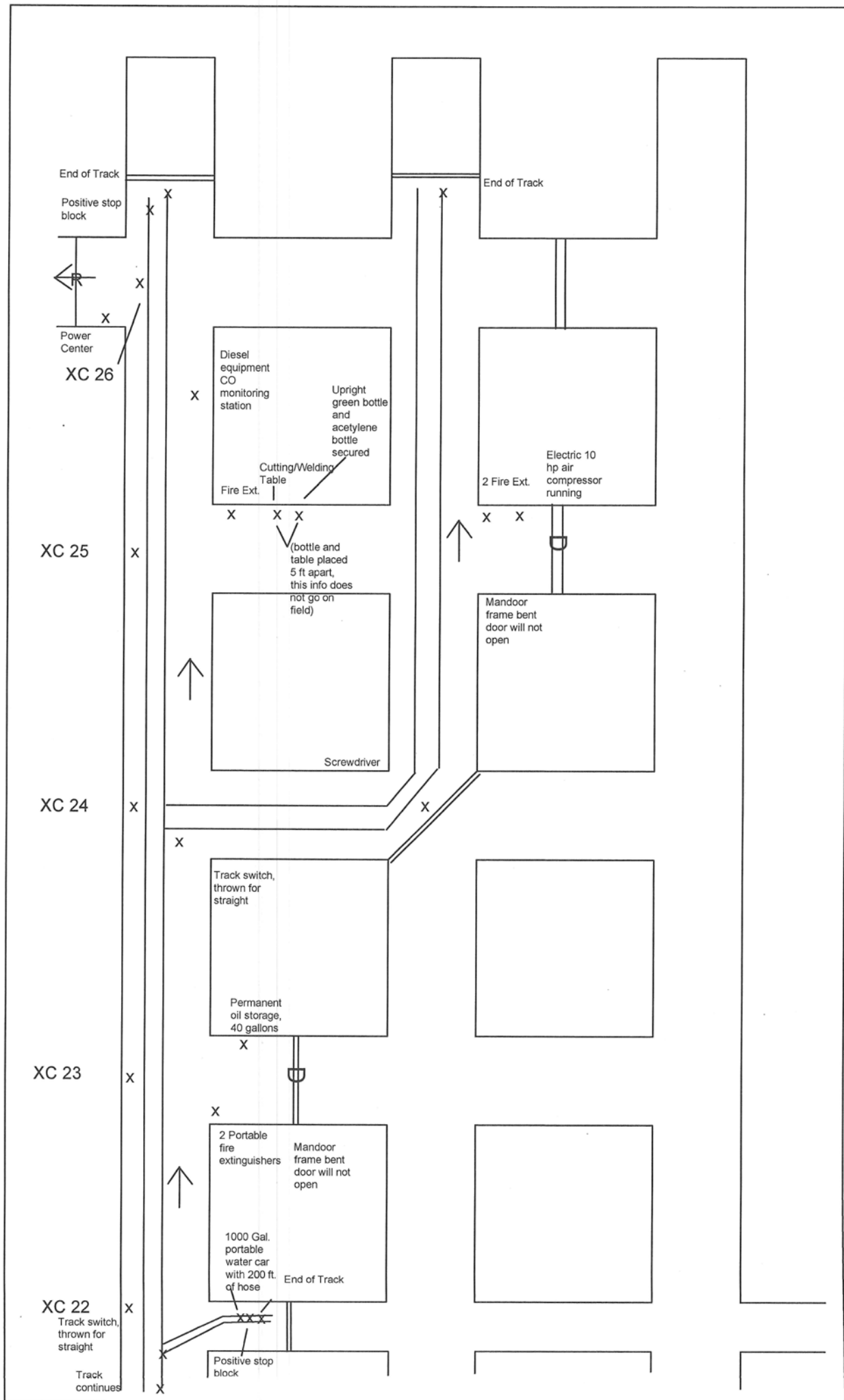


Alabama

Preshift

Problem

2016



Judges Info

The field is cut in half on a sort of diagonal.

Make sure Crosscut number placards are in place.

Ensure the cutting table and the gas bottles are 5 feet apart.

The power center should only have pumps and the 10 HP air compressor. Only the Air compressor should be de-energized.

Air reading required to be taken at the CO monitoring station.

Area – 20 x 7

Velocity 200 (as long as no ventilation changes were made.)

If a contestant removes a stopping, discount under rule 17.

All gas readings are 0% CH₄, 20.8% methane

List of hazards

XC 22, #1, water car is missing 100ft. of water hose.	75.1100-1(b)
XC 23, #1, oil storage is missing 240 lbs of rock dust	75.1100-2(f) "and" statement
XC 23, #1, man door won't open	75.333(c)
XC 25, #1, cutting table too close to bottles	75.1106-4(g) 5 ft apart, not >10ft
XC 25, #1, oxygen bottle not labeled	75.1106-3(a)(1) o2 not labeled
XC 25, #2, man door won't open	75.333(c)
XC 25, #2, air compressor running non	75.344(a)(1) or (a)(2) not manned, or monitored and vented
XC 26, #2, missing stop at end of track	75.1403-10(e) end of track with no stop

Scorecard Items

Start Clock	Y	N	Rule #1 Field
Check In	Y	N	Rule #1 Field
Check Out	Y	N	Rule #1 Field
Stop Clock	Y	N	Rule #1 Field
Equipment List	Y	N	Rule #2 Field
Examine SCSR	Y	N	Rule #3 Field
Gas Detector Per Rules	Y	N	Rule # 25 General

#1 Entry

Visual Roof and Rib	Y	N	Rule #10 Field
Gas Test In Entry (Other gas tests in #1 will count)	Y	N	Rule #5 Field
Gas Test CO Station Air Reading	Y	N	Rule #5 Field
DTI Gas Test	Y	N	Rule #4 Field
DTI Entry (hazard DTI can count)	Y	N	Rule #4 Field
Danger Off Missing Hose water car	Y	N	Rule #11 Field
Danger off Missing rock dust oil station	Y	N	Rule #11 Field
Danger off mandoor	Y	N	Rule #11 Field
ID Table/Bottles Too close	Y	N	Rule #11 Field
Correct Table/Bottles too close	Y	N	Rule #12 Field
Gas Test Power Center	Y	N	Rule #5 Field

DTI Power Center	Y	N	Rule #4 Field
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Verbalize Regulator	Y	N	Rule #7 Field
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Entry #2

Visual Roof and Rib	Y	N	Rule #10 Field
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Gas Test In Entry (Other gas tests in #2 will count)	Y	N	Rule #5 Field
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Danger off missing stop block	Y	N	Rule #11 Field
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ID Running Air Compressor	Y	N	Rule #11 Field
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Gas Test Air Compressor	Y	N	Rule #5 Field
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Correct Air Compressor	Y	N	Rule #12 Field
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Danger off mandoor	Y	N	Rule #11 Field
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Date of Exam _____ Time of Exam _____ AM/PM to _____ AM/PM

Section/Area _____ Reported Outside YES _____ No _____

Reported By: _____ Received By: _____

Location	O2 %	CH4%	Hazard or Violation	Action Taken
XC 22 #1 entry	20.8	0	water car missing hose	danger
XC 23 #1 entry	20.8	0	oil storage missing rock dust	danger
XC 23 #1 entry	20.8	0	man door won't open	danger
XC 25 #1 entry	20.8	0	cutting table too close to oxygen bottles	moved dolly 10 ft away
XC 25 #1 entry	20.8	0	"green bottle" not labeled	danger (does not know contents cannot label)
XC 25 #2 entry	20.8	0	man door won't open	danger
XC 25 #2 entry	20.8	0	air compressor running	de-energized at power center
XC 26 #2 entry	20.8	0	end of track missing positive stop	danger

Air Readings / Gas Tests

Location	CFM		O2%	CH4%	Direction
CO station	28,000 CFM		20.8	0	north/proper
Power Center			20.8	0	
Air Compressor			20.8	0	

Signed by Preshift Examiner

Date

Cert. Number

Thank you for pre-shifting our motor pit area. No one has been working in the area since it was pre-shifted for last shift. We need you to pre-shift crosscuts 22-26, intake entries only. You are pre-shifting for the oncoming maintenance crew that will be performing CO exhaust readings on several pieces of equipment including 2 lo-tracs and 3 locomotives. Please take an air reading at the CO station, ensuring enough air for one piece of equipment at a time. This mine utilizes 2 portable water cars for firefighting protection. Someone else is pre-shifting the return entries. The power center must remain energized to run the pumps in the return, unless a hazard dictates knocking all the power. For the purpose of this problem, all electrical cables have been removed, but any equipment that would normally have a cable we will assume it has a cable. Placards will indicate if equipment is running or not. Permanent stoppings cannot be removed. Only man doors can be used for travel between entries. You must start your examine in the #1 entry.

Ventilation Plan

CM Sections

Faces using line curtain to ventilate

- 17,500 CFM required to ventilate face where mining is occurring.
- 12,500 CFM required to ventilate faces where roof bolts are being installed
- 17,500 CFM required to ventilate idle, un bolted places
- 5,000 CFM required to idle faces bolted within 5 feet.

Longwall Sections

- Last open crosscut must maintain 50,000 immediately outby stageloader
- 725 ft/min shield 10
- 675 ft/min midface
- 563 ft/min shield 178

Outby

Minimum Air requirements for outby diesel equipment

- Track bolter when tramming only – 10,000 CFM
- Track bolter when bolting when installing roof bolts – 17,500 CFM
- Lo-trac – 15,000 CFM
- 5 man personnel carriers – 10,000 CFM
- 10 man personnel carriers – 15,000 CFM
- 16 man personnel carriers – 20,000 CFM
- Locomotives – 17,500 CFM

Hot work

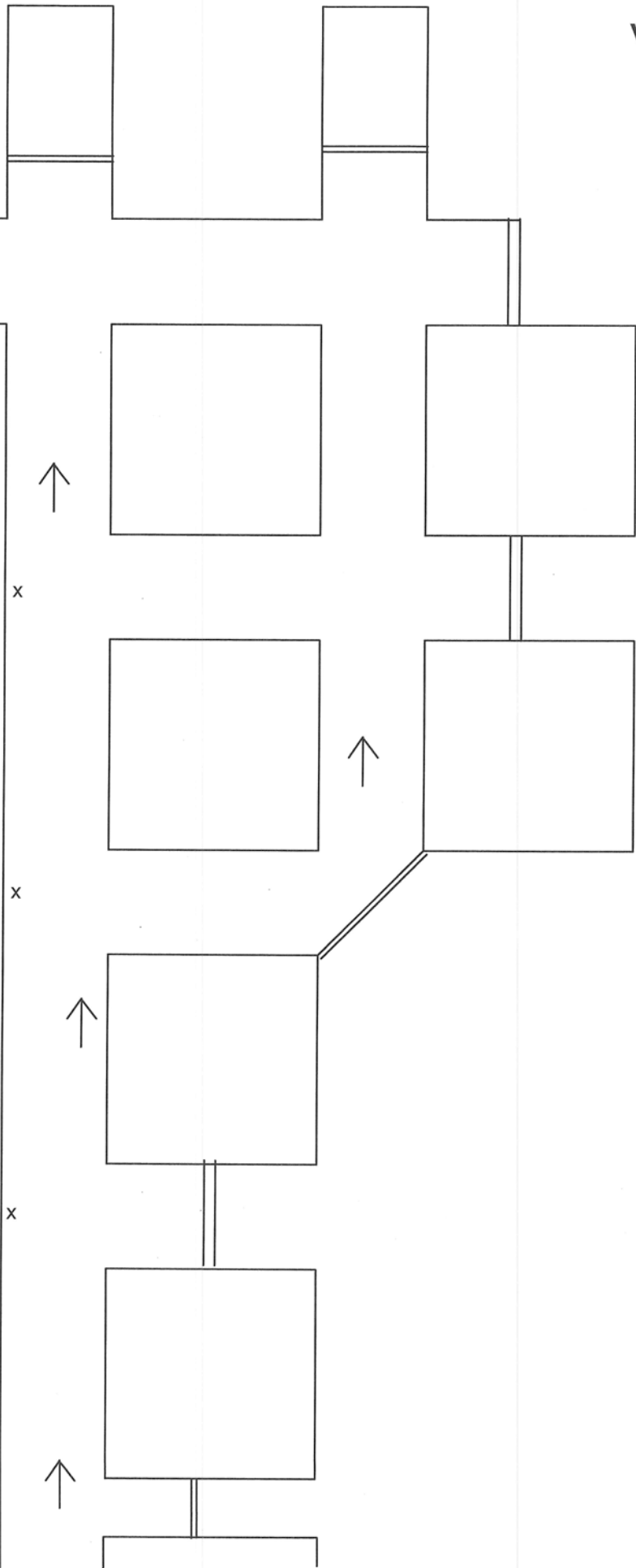
Anytime anyone will be actively cutting, burning or welding underground, a burn permit must be requested by the working crew to at least the assistant mine foreman or higher. Burn permits also require the area to be adequately rock dusted prior to work being performed. Once finished, the area must be adequately wet down and a fire watch performed for 10 minutes after the last hot work action.

Typical
Vent. Map

The diagram illustrates a typical ventilation map for a building. It shows a vertical stack of rooms, labeled XC 22 through XC 26, connected by a central vertical duct system. The rooms are represented by rectangular boxes. Arrows indicate the direction of air flow, generally upwards from the bottom rooms towards the top. A return air symbol (a circle with an arrow pointing out) is located at the top left, indicating air being drawn back into the system. The duct system is shown as a series of vertical lines connecting the rooms. The rooms are arranged in a staggered fashion, with some rooms having a smaller, secondary box above them, suggesting a multi-level or complex room layout. The overall flow is from bottom to top, with a return path at the top.

XC 22

X



Roof Control Plan

Minimum required roof support is 5 ft. by 5 ft.

Roof support materials include

- 8 ft. resin bolts
- 4 ft. resin bolts
- Timbers
- Cribs
- Pilasters
- Pumpable cribs

Along trackways with adverse roof conditions, collars and timbers or screw jacks must be utilized.

Brows extending 18 inches past solid rib must be supported with timbers and then chain link fence installed.

Water must not be allowed to accumulate over the track rails.

All end of tracks must have a positive stop block.

All switches will be maintained in safe operating condition.

De-coupler devices must be maintained on both ends of all track mounted equipment.

Blank Map

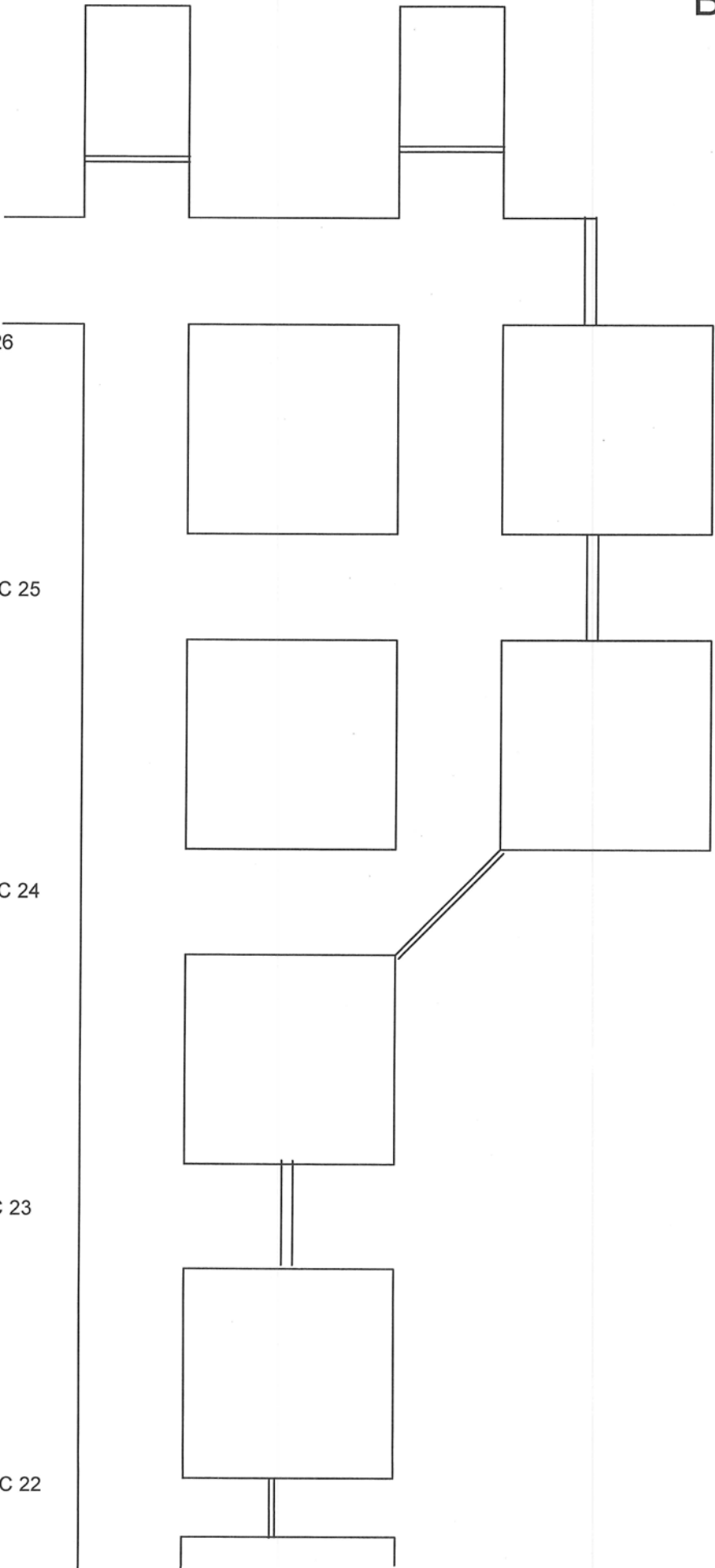
XC 26

XC 25

XC 24

XC 23

XC 22



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Location	O2 %	CH4%	Hazard or Violation	Action Taken

Air Readings

Location	CFM		O2%	CH4%	Direction

Signed by Preshift Examiner

Date

Cert. Number