

VENTILATION SUMMIT

National Mine Health and Safety Academy
February 21 and 22, 2007

Program Policy Letter P06-V-3

Part 75.323(e)

- ❖ Bleeders and other return air courses
- ❖ The concentration of methane in a bleeder split of air immediately before the air in the split joins another split of air shall not exceed 2.0 percent
- ❖ Return air split (section), 1.0 percent
- ❖ Return air split alternative, 1.5 percent
- ❖ Return air course, 2.0 percent

75.323(e)

- ❖ The 2.0 percent limit provides for dilution of methane within the bleeder system
- ❖ The 2.0 percent limit impacts the dilution of methane throughout the bleeder system
- ❖ The air course downstream of the 2.0 percent point is a return air course

75.323(e) Leakage

- ❖ Leakage is air that passes through a ventilation control that is intended to be reasonably air tight
- ❖ Leakage may impact the effectiveness and/or evaluation of the bleeder system
- ❖ Leakage can decrease the dilution capacity of the bleeder system and impact the dilution of methane quantified by Section 75.323(e)

75.323(e) Leakage

- ❖ The effect of the total leakage air must be considered when evaluating the significance of leakage
- ❖ Consider what effect the leakage has on the quantity and quality of the air within the bleeder
- ❖ If the leakage exceeds 15 percent of the air quantity in the affected bleeder, a determination will be made as to the significance of the leakage

75.323(e) Leakage

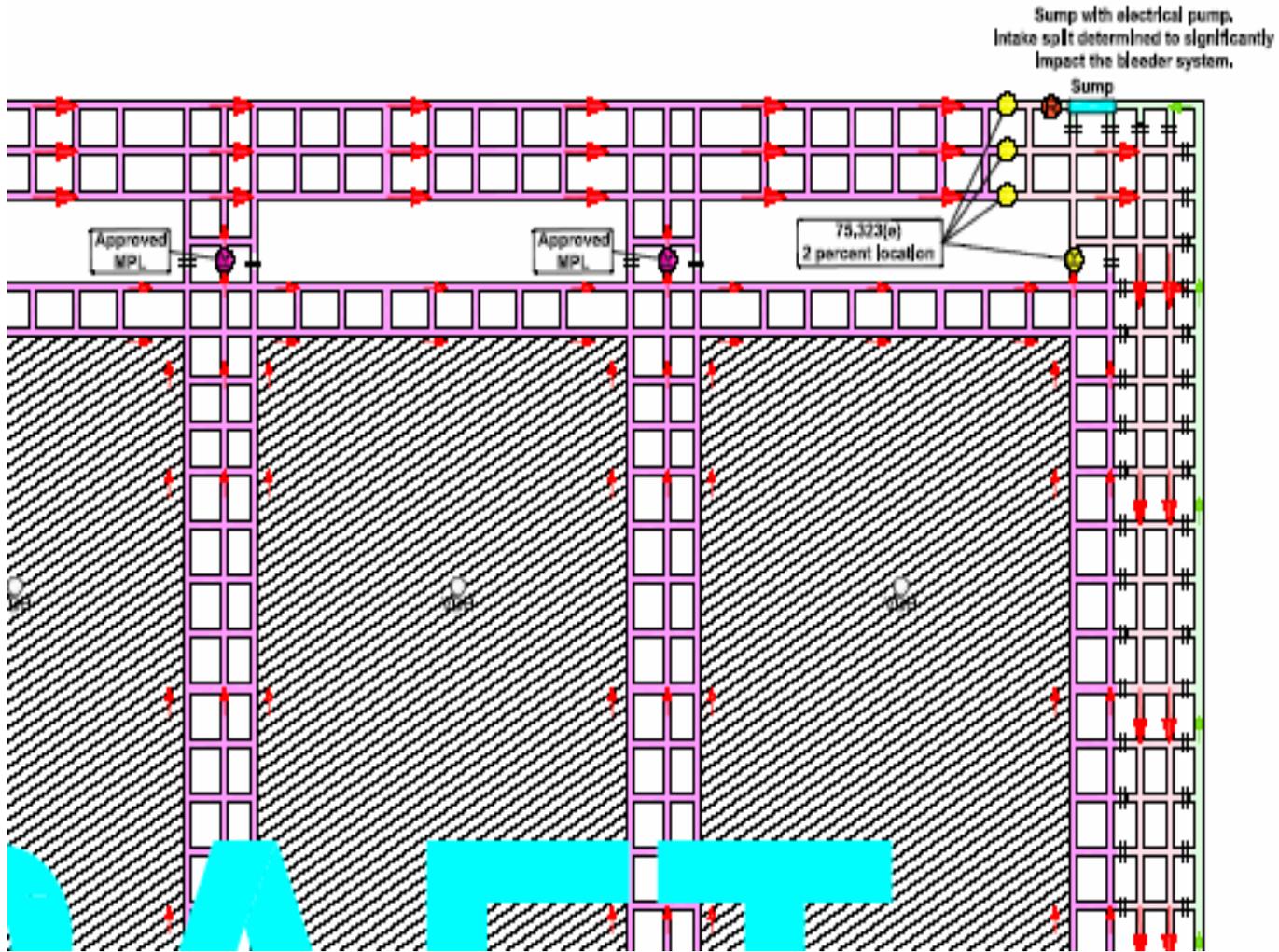
- ❖ The leakage may have an effect on the methane concentration in the bleeder that is equivalent to another split of air joining the bleeder split.
- ❖ If the leakage is determined to be significant, the District Manager may require methane limits at additional locations be included in the ventilation plan, Section 75.371(z)

75.323(e) Small Splits

- ❖ Small splits such as electrical installation ventilation splits may be insignificant if they do not impact the quantity and quality of the ventilation air in the bleeder
- ❖ Multiple small splits of air may have a cumulative impact on the bleeder system that is significant
- ❖ If the small splits reduce the available ventilating pressure or airflow they may be significant

75.323(e) Small Splits

- ❖ A small split that ventilates a longwall set-up face that is directed into a bleeder split must be evaluated to determine if this split significantly impacts the bleeder
- ❖ Approved ventilation plans sometimes set limits restricting the quantity of set-up face air that is directed into the bleeder



75.323(e) Surface

- ❖ When air from a bleeder split is directed to the surface, the bleeder split ends at the surface
- ❖ The 2.0 percent point is immediately before the air in the bleeder split reaches the surface
- ❖ When the bleeder split air exits through an exhaust fan, consideration must be given to leakage from the fan housing

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**75.334(b)(1) Effectiveness of Bleeder
Systems**

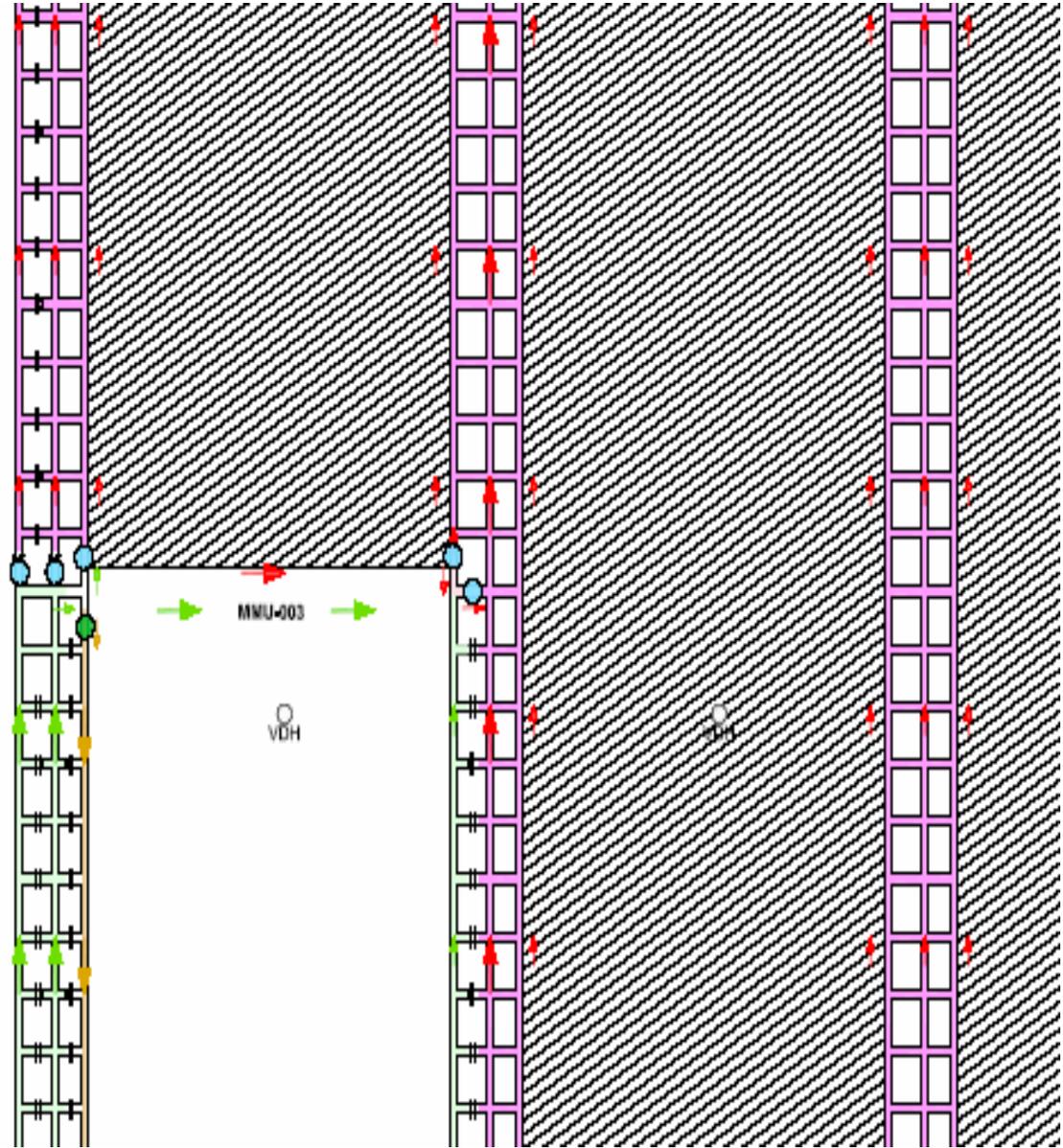
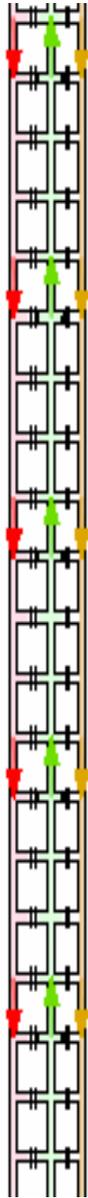
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75.334(b)(1)

- ❖ During pillar recovery a bleeder system shall be used to control the air passing through the worked out area and to continuously dilute and move methane air mixtures and other gases, dusts, and fumes away from active workings into a return or to the surface

Draft 75.334(b)(1)

- ❖ Effective bleeder systems control the air and continuously dilute and move methane and other gases away from the active workings and prevent hazardous accumulations

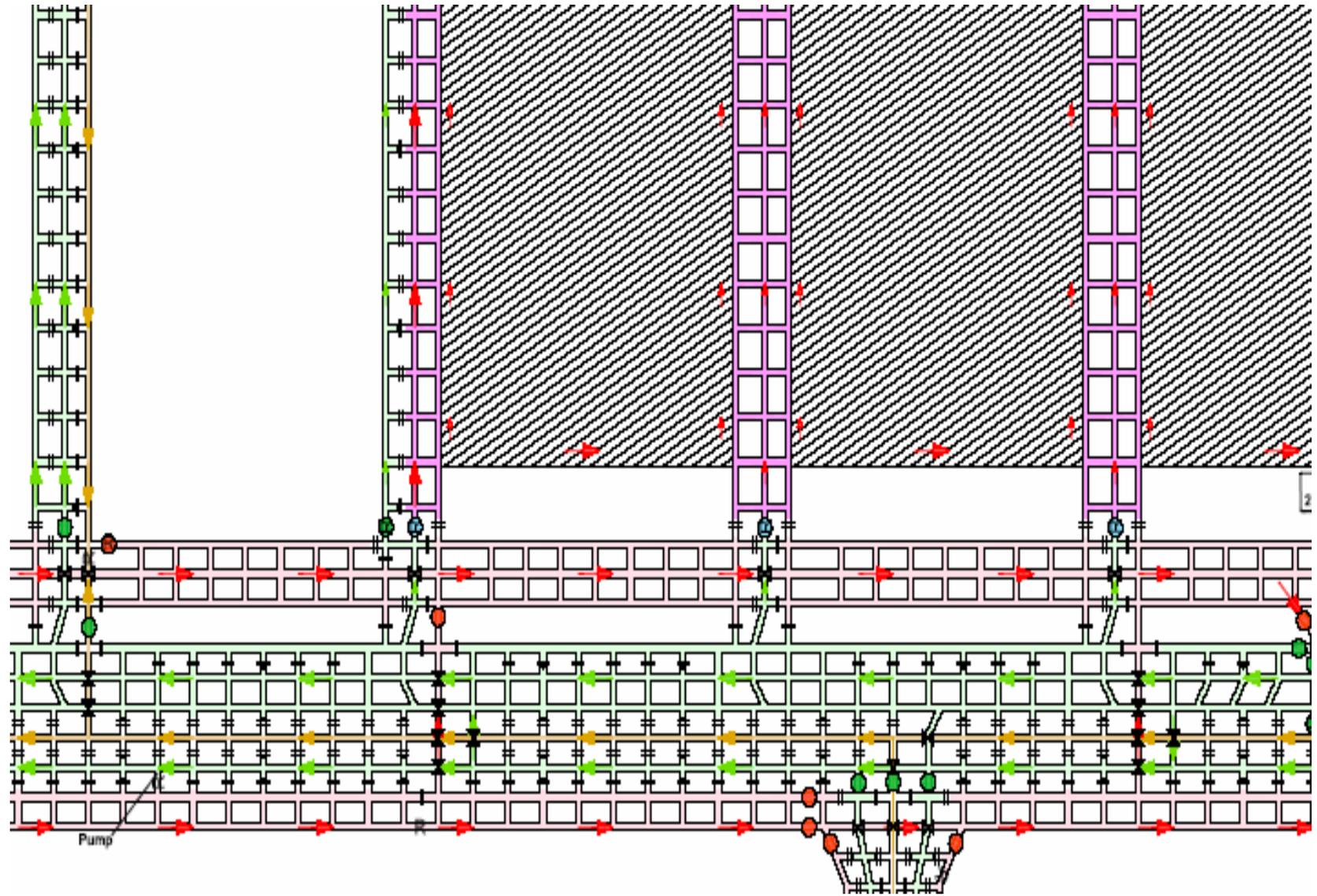


Draft - 75.334(b)(1)

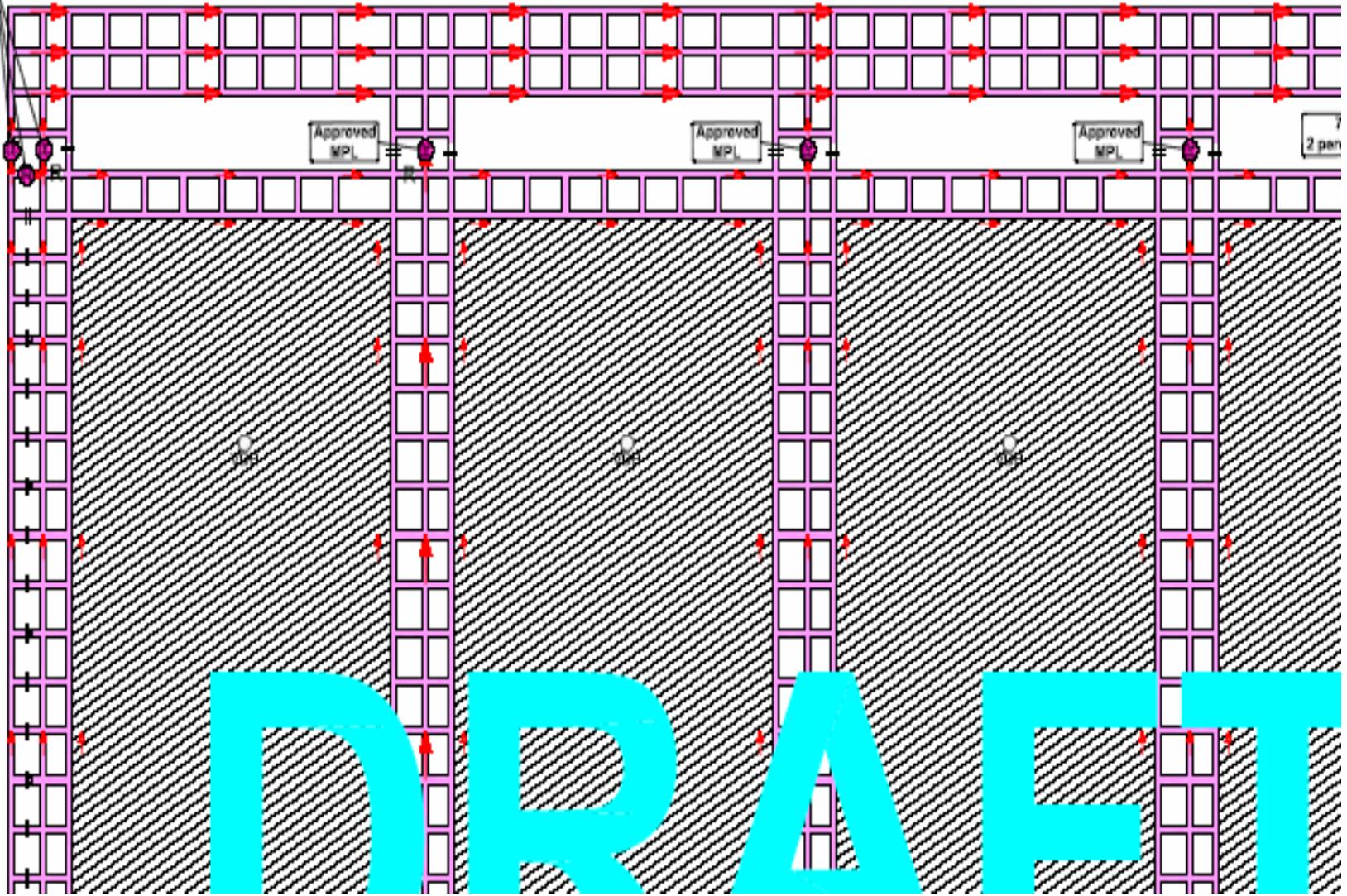
- ❖ Examinations provide the means of collecting the information needed to evaluate the bleeder system effectiveness
- ❖ Measurements of methane and oxygen, air quantity, and tests to determine if the air is moving in its proper direction are made at locations specified in 75.364

Draft - 75.334(b)(1)

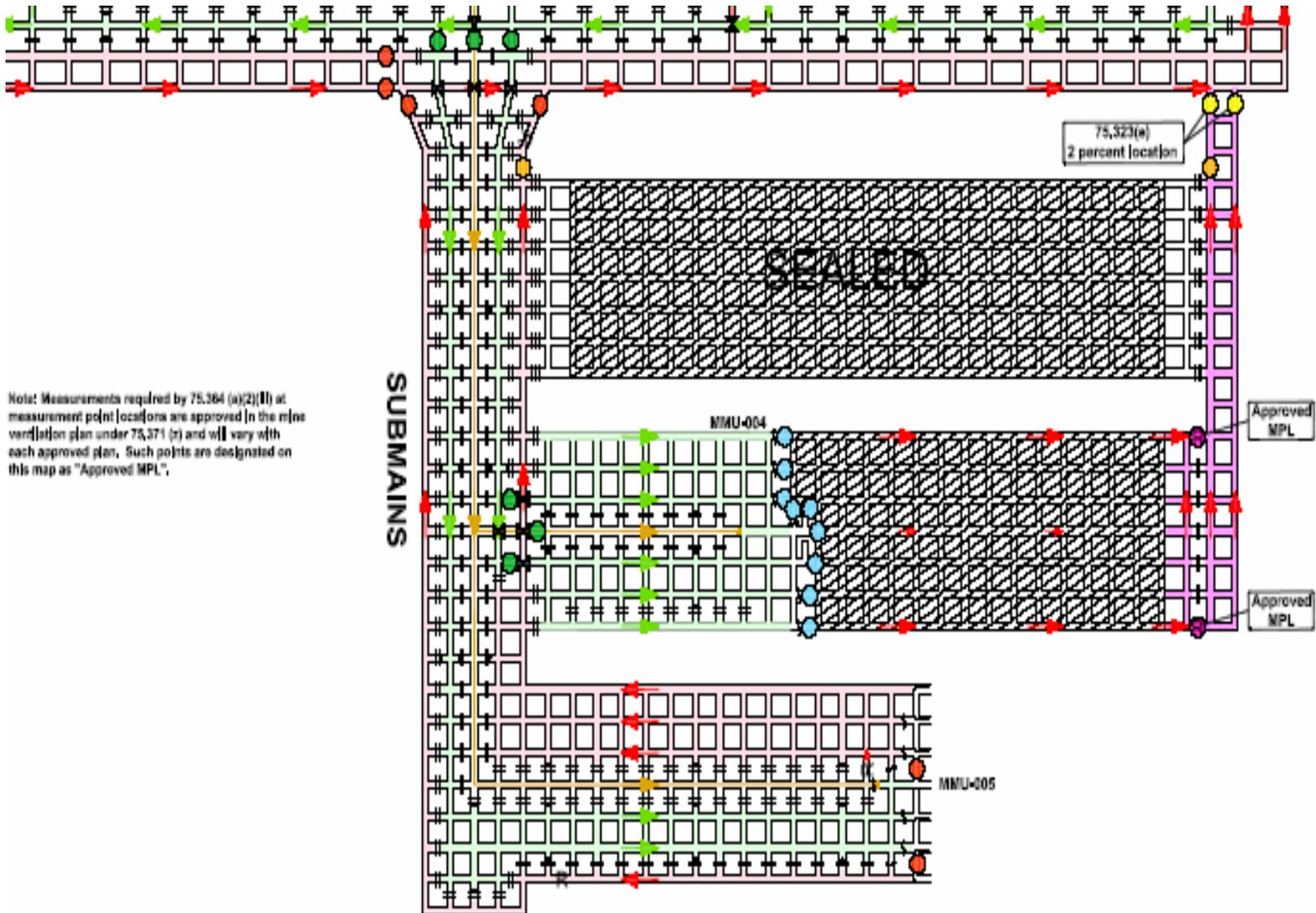
- ❖ Airflow must be readily discernible and be in the direction specified in the approved ventilation plan at inlets, outlets, through the primary internal airflow paths within the pillared area, and in the bleeder entries
- ❖ Bleeders where the direction of airflow changes or has changed, or in which irregular redistribution of airflow has occurred, may no longer be effective



Approved
MPI



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Note: Measurements required by 75.364 (a)(2)(B) at measurement point locations are approved in the mine ventilation plan under 75.371 (z) and will vary with each approved plan. Such points are designated on this map as "Approved MPL".

Draft - 75.334(b)(1)

- ❖ The methane concentration in the bleeder split immediately before the air joins another split of air is one of the key factors in determining whether the bleeder system is effective
- ❖ When methane in the bleeder split cannot be reduced to 2.0 percent before joining another split of air the bleeder system is no longer effective

Draft - 75.334(b)(1)

- ❖ Methane concentration, air quantity and direction of the airflow at bleeder connectors and within the primary internal airflow paths are important considerations for determining bleeder system effectiveness
- ❖ Accumulations of high methane concentrations in locations other than small pockets (such as in a corner, in the interstices of the rubble material, or in a small roof cavity), may indicate an ineffective bleeder system

Draft - 75.334(b)(1)

- ❖ Accumulations of high methane in the bleeder entries or the primary internal air flow paths that provide a conduit to the active workings are indicative of an ineffective bleeder system
- ❖ The location and extent of the methane accumulation should be considered when determining the effectiveness of the bleeder system

Draft - 75.334(b)(1)

- ❖ Bleeder systems in which the airflow is insufficient to provide oxygen concentrations of at least 19.5 percent and not more than 0.5 percent carbon dioxide, in areas where persons work or travel, are ineffective

Draft - 75.334(b)(1)

- ❖ The methane concentration that exists in the airflow of individual primary internal airflow paths that leads to bleeder connectors is often greater than the methane concentration at the bleeder connector

Draft - 75.334(b)(1)

- ❖ A methane concentration of 3.0 percent or more at approved measurement point locations (MPL's), evaluation points, or in bleeder entries may indicate an ineffective bleeder system and further investigation by MSHA may be conducted
- ❖ In certain situations, methane concentrations at these locations of less than 3.0 percent should prompt further investigation

Thank You

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