

BEST PRACTICES

Bleeder System Evaluation

Bleeder System Evaluation

Effective bleeder systems control the air passing through the area and continuously dilute and move methane-air mixtures and other gases, dusts, and fumes from the worked-out area away from active workings, in an effective manner, preventing hazardous accumulations.

Bleeder System Evaluation

Examinations provide the means of collecting the information needed to evaluate the bleeder system effectiveness.

Bleeder System Evaluation

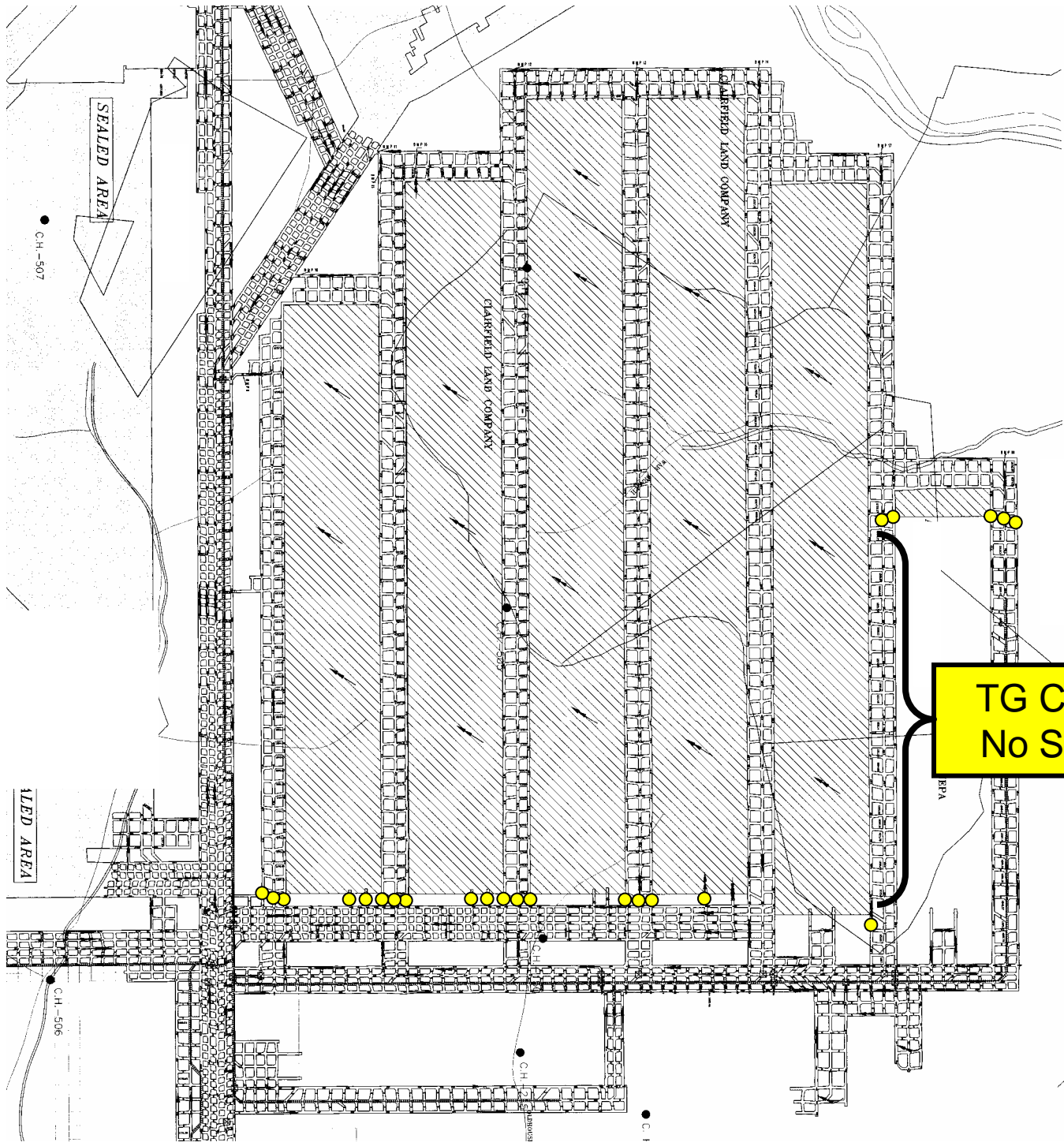
Measurements of methane and oxygen concentrations, air quantity, and a test to determine if the air is moving in its proper direction are made at all the locations specified in 30CFR 75.364(a)(2)(i) and 75.364(a)(2)(ii) and as required in the approved ventilation plan per 30CFR 75.364(a)(2)(iii).

Typical Indicators

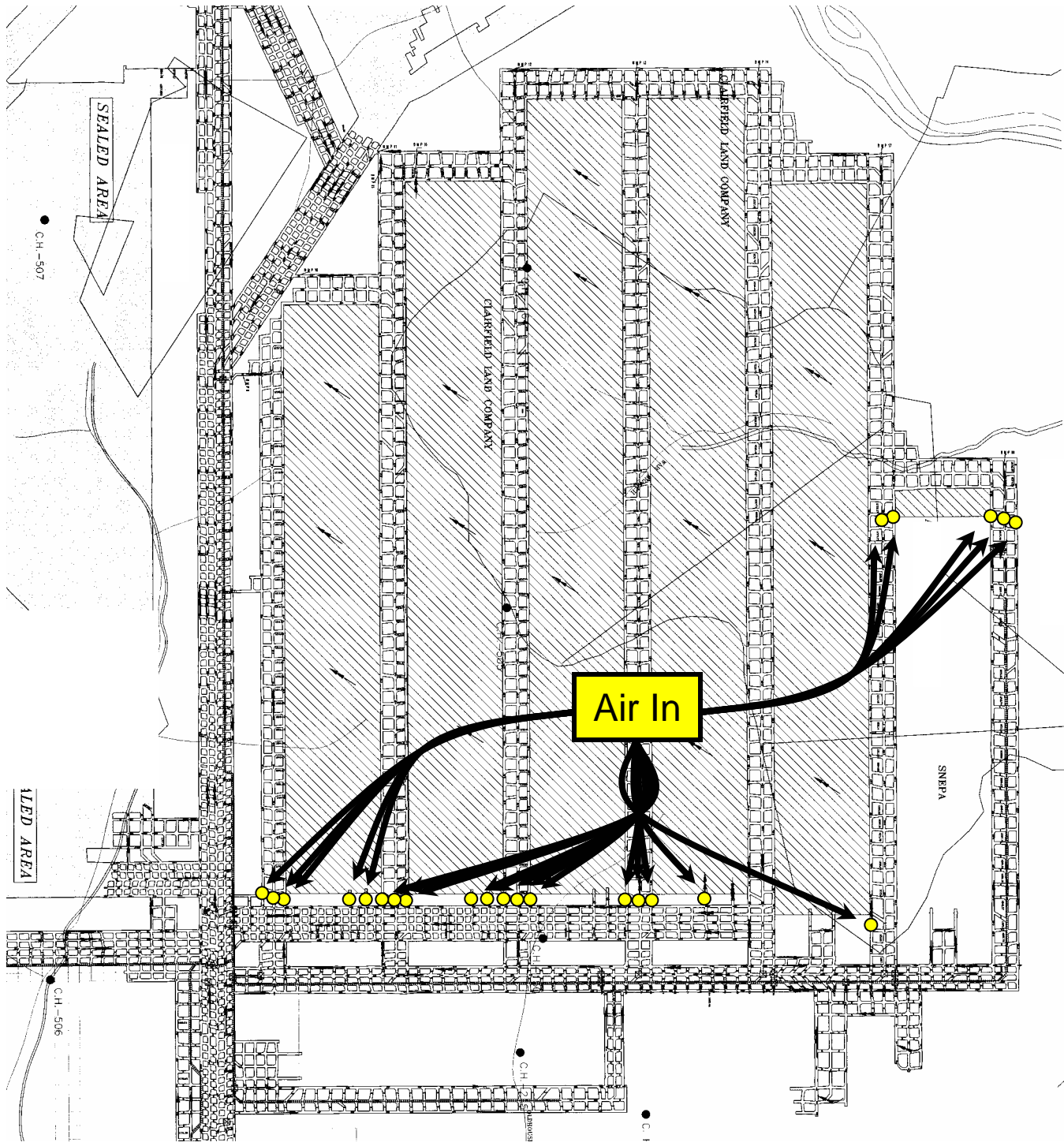
- Quality Examinations Enable Quality Evaluations

- Required Examinations

- Are all the Inlets examined? - Why Not?



TG Connectors
No Stoppings?

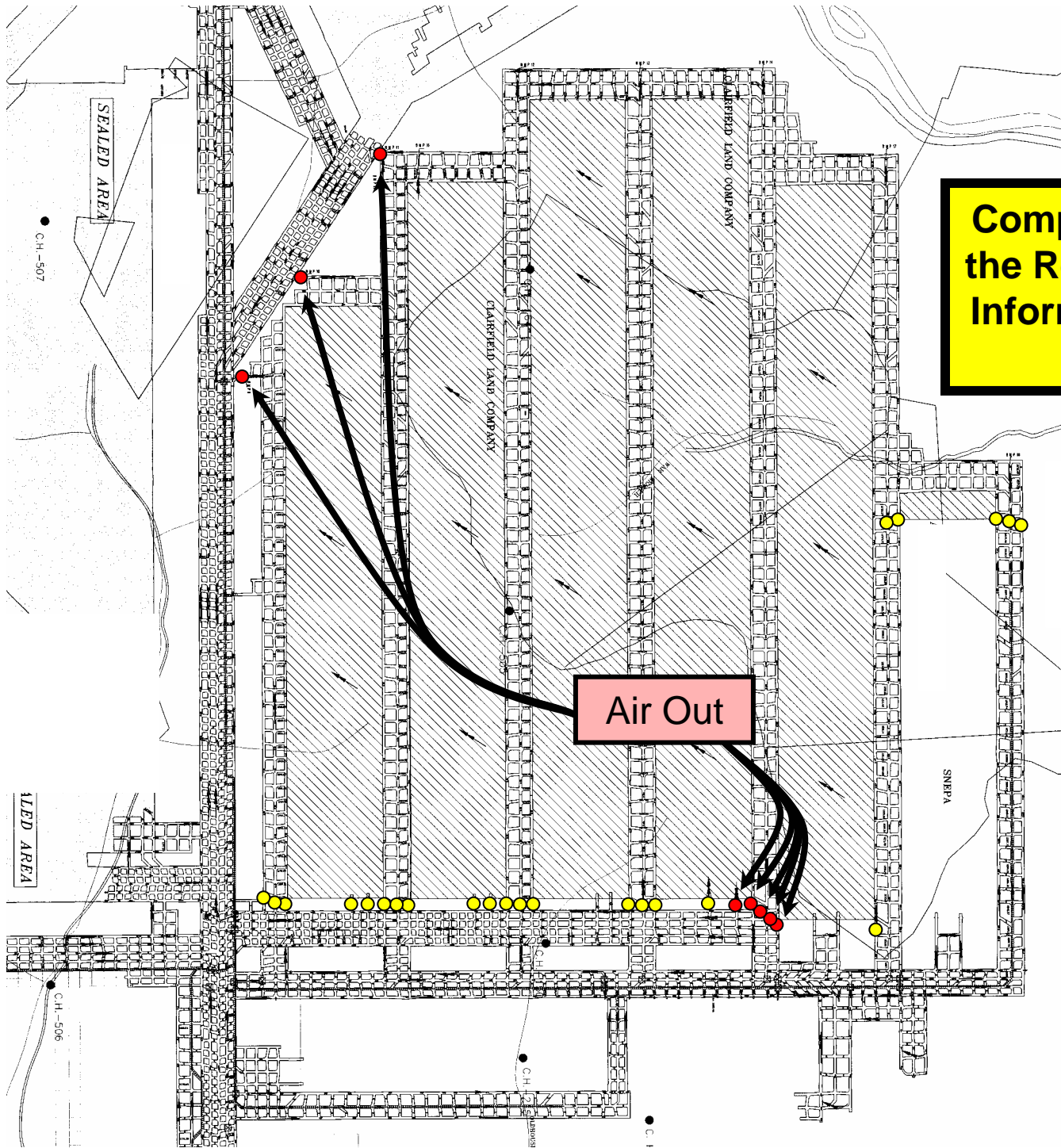


Typical Indicators

- Quality Examinations Enable Quality Evaluations

- Required Examinations

- Are all the Inlets examined? - Why Not?
- Are all the Outlets examined?



Compare the Locations in the Record Books with the Information Shown on the Mine Map !!

?

Air Out

SEALED AREA

C.H. - 507

LEED AREA

C.H. - 506

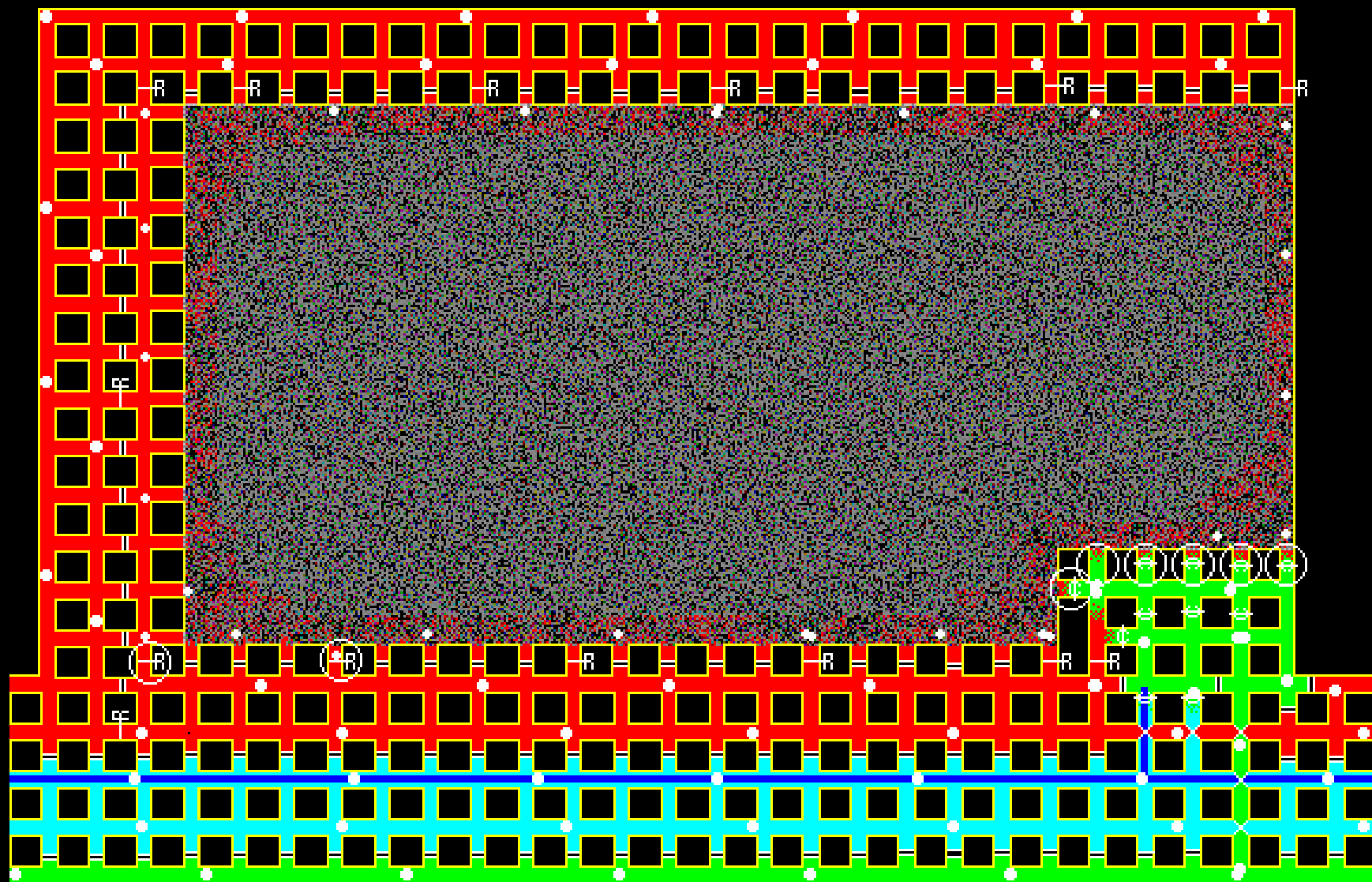
CLEARFIELD LAND COMPANY

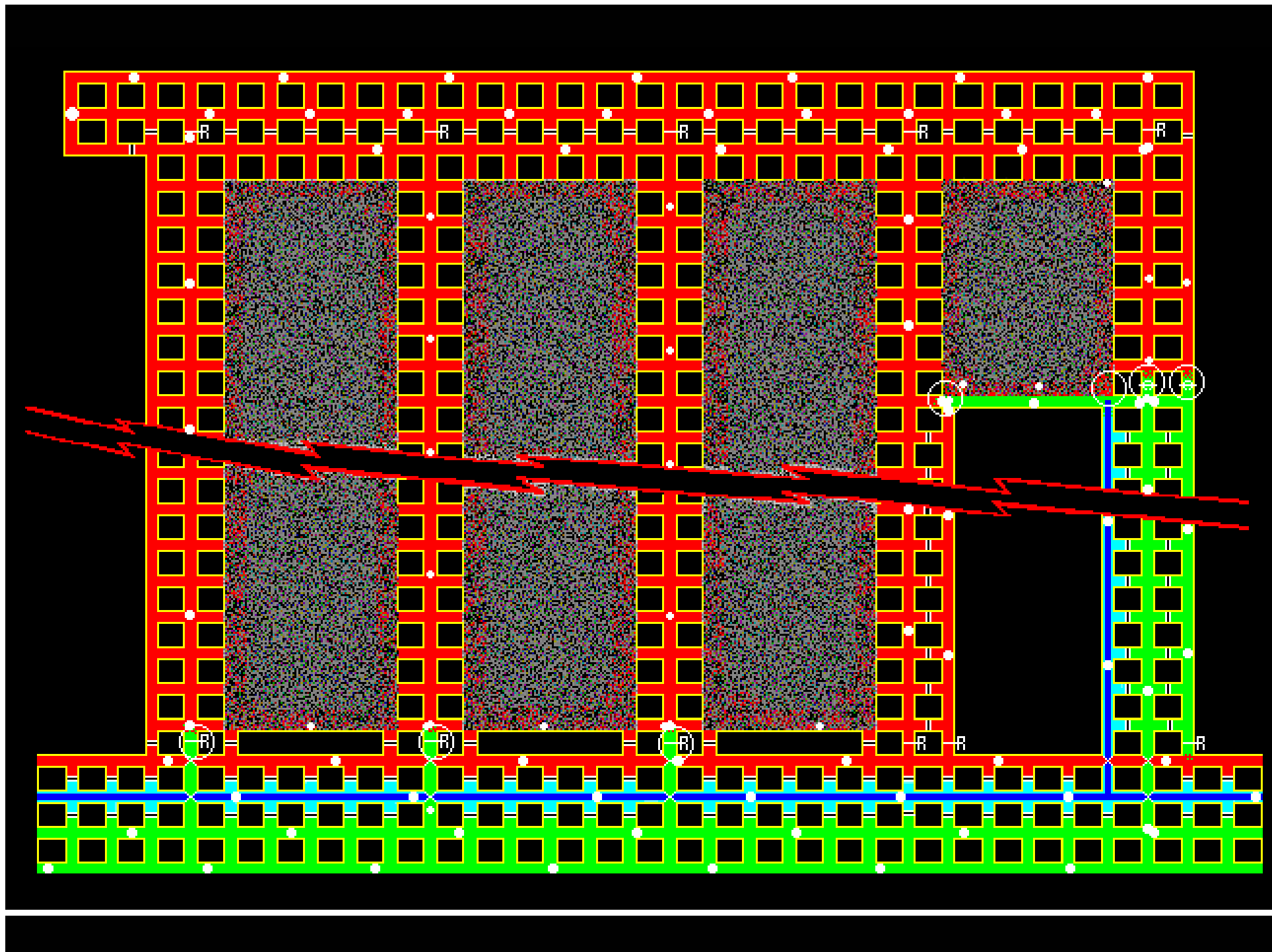
CLEARFIELD LAND COMPANY

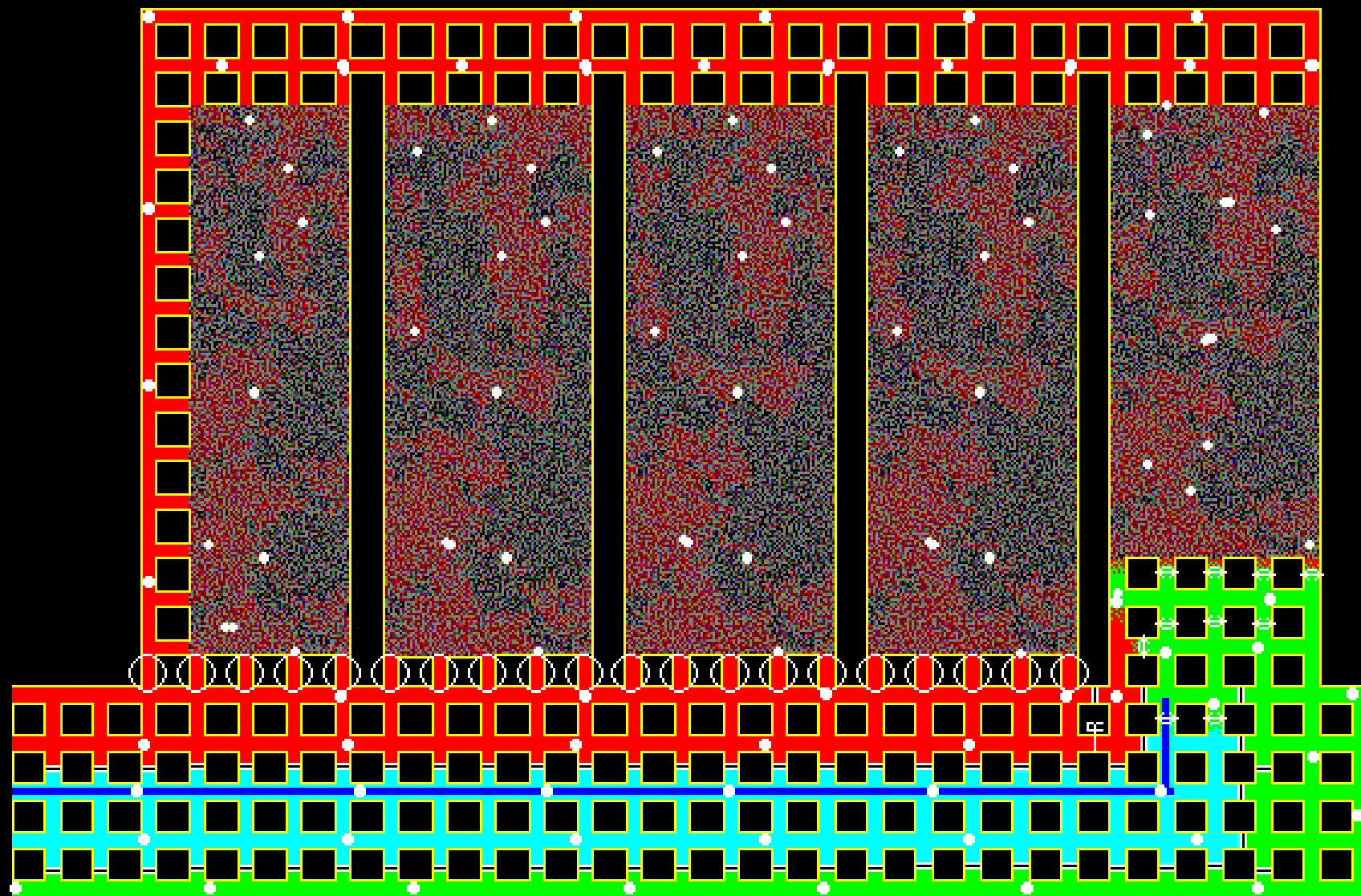
SMEPA

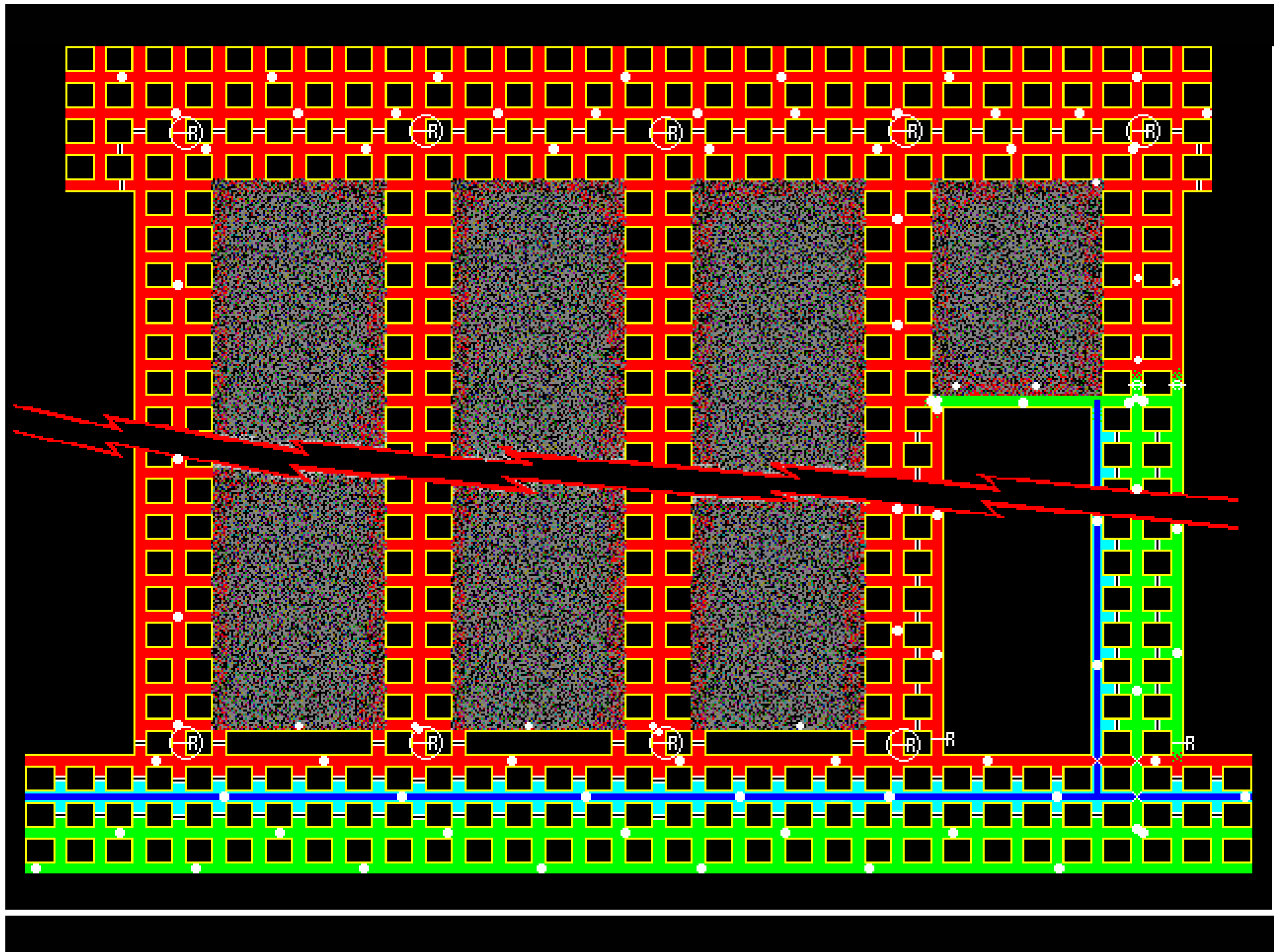
C.H. - 505

1\"/>

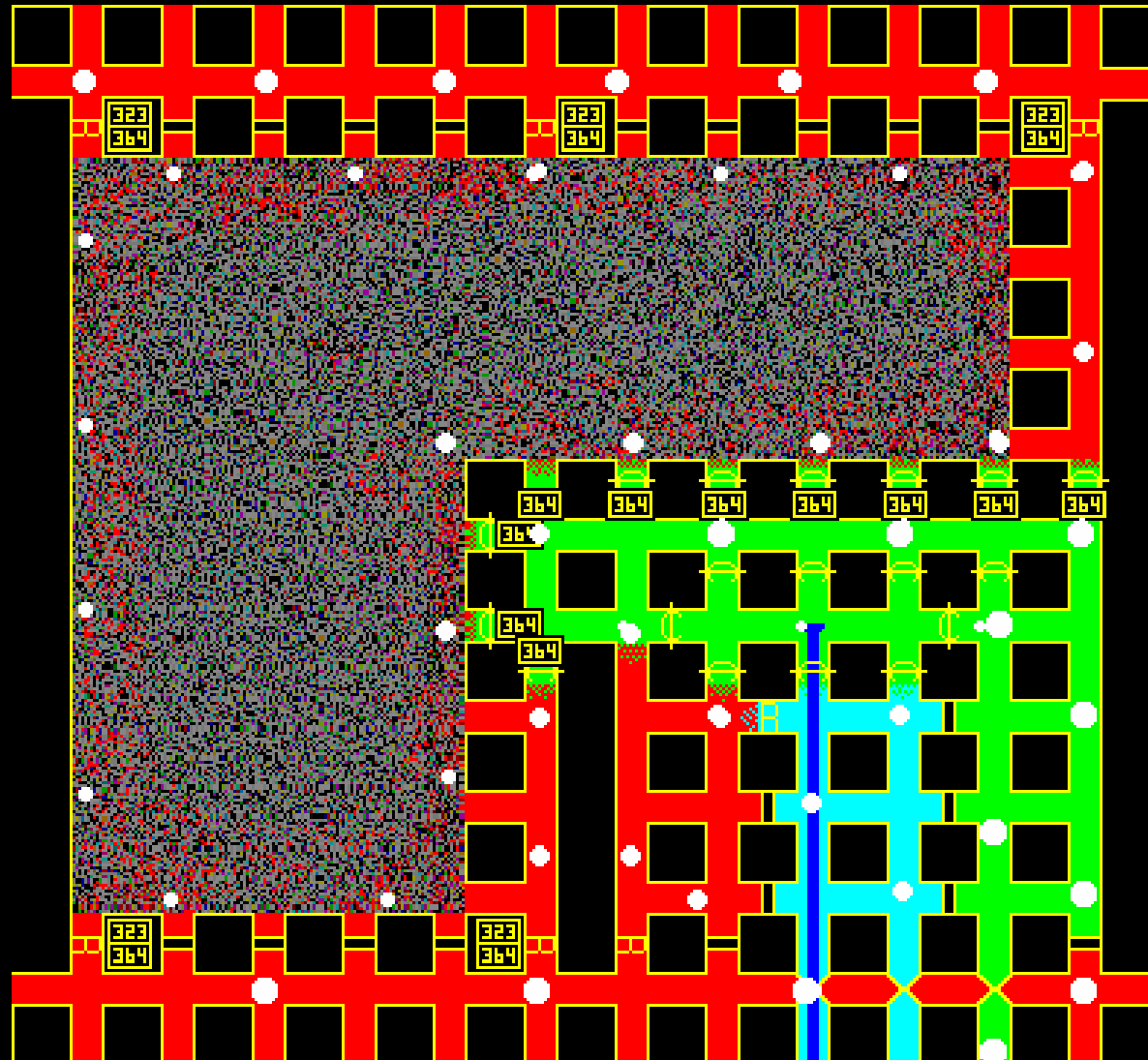








Room-and-Pillar Flow-Through Main-to-Main



75.364(a)(2)(iii)

travel at least one entry of each set of bleeder entries, and make measurements and tests at measuring point locations specified in the ventilation plan

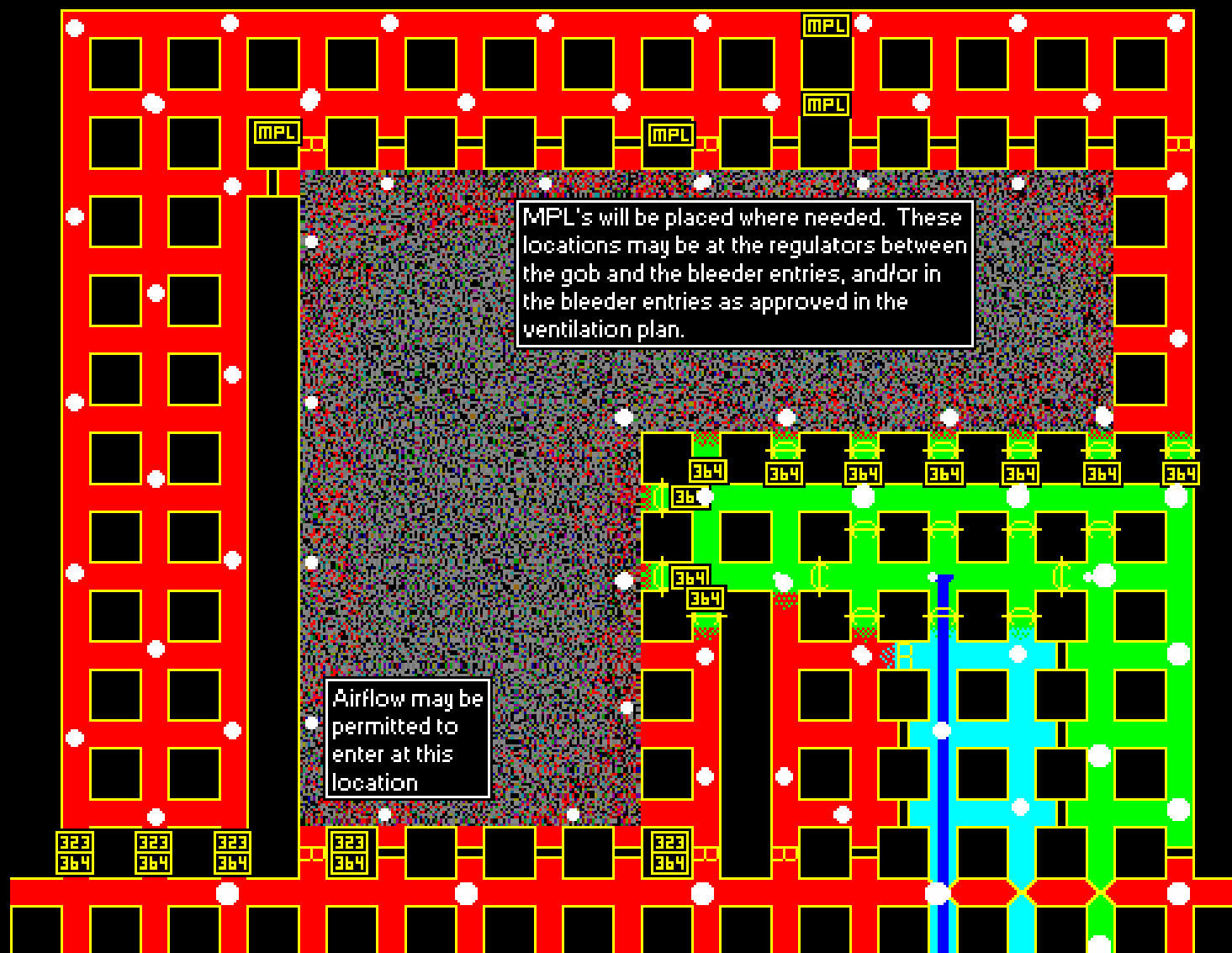
Typical Indicators

- Quality Examinations Enable Quality Evaluations

- Required Examinations

- Are all the Inlets examined? - Why Not?
- Are all the Outlets examined?
- What do the specified bleeder measurement point locations add to the mix?
- Are air quantity, methane and oxygen concentrations, and airflow direction all measured and properly recorded?

Room-and-Pillar Flow-Through With Bleeder Entries



Typical Indicators

- Quality Examinations Enable Quality Evaluations

- Other Information

- Are the stoppings separating the bleeder entries from the gob examined?
- Are the mine records conducive to reviewing the information?
- Does the airflow direction at a specific location change?
- Does the air quality change with the barometer?
- Pressure differentials across regulators
- Unusual designs may result in "unusual" examination locations - some "in the gob"

Bleeder System Evaluation

At inlets, outlets, through the primary internal airflow paths within the pillared area, and in the bleeder entries, airflow must be sufficient to be readily discernible and be in the direction specified in the approved ventilation plan.

A bleeder system that does not produce discernible airflow in these areas is ineffective.

Typical Indicators

- Quality Examinations Enable Quality Evaluations

- Other Information

- Changes, changes ... What do they mean?
- To fully grasp the significance of changes, you have to understand how the bleeder system functions
- ... close up and personal

Bleeder System Evaluation

Bleeder systems in which the direction of airflow changes or has been changed, or in which irregular redistribution of airflow has occurred, may no longer be effective.

Such bleeder systems should be scrutinized and a determination made if corrective action or plan revisions are necessary.

Bleeder System Evaluation

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 in controlling the air passing through the area and continuously diluting and moving methane-air mixtures and other gases, dusts, and fumes from the worked-out area away from active workings.

Bleeder System Evaluation

A bleeder system is no longer effective when methane concentrations in the bleeder split cannot be reduced to 2.0 percent before joining another split of air, or in the case when air from the bleeder split is directed to the surface, when the methane concentration in the bleeder split cannot be reduced to 2.0 percent before it reaches the surface.

Bleeder System Evaluation

Program Policy Letter No. P06-V-3 provides clarification concerning application of 30CFR 75.323(e) to bleeder systems.

Bleeder System Evaluation

Methane concentrations in areas of a bleeder system other than the locations described in Section 75.323(e) should also be considered and monitored when assessing bleeder system effectiveness under Section 75.334(b)(1).

Bleeder System Evaluation

Methane and oxygen concentrations, air quantity and direction of the airflow at bleeder connectors and within the primary internal airflow paths are important considerations relative to the adequacy of dilution of contaminant gases and overall system effectiveness.

Bleeder System Evaluation

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), indicate that changes to the bleeder system may be necessary.

Such accumulations may indicate the bleeder system is ineffective.

Bleeder System Evaluation

Effective bleeder systems prevent accumulations of high methane concentrations in the bleeder entries or in the primary internal airflow paths that provide a conduit to the active workings.

The location and extent of the methane accumulation should be considered when determining the effectiveness of the bleeder system.

Bleeder System Evaluation

Effective bleeder systems create airflow in the bleeder split sufficient 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, as required by Section 75.321(a)(1).

Bleeder System Evaluation

An effective bleeder system with adequate ventilation pressure differentials and airflow distribution will not be substantially affected by normal barometric pressure changes.

Bleeder System Evaluation

A correlation exists between the methane concentration at bleeder connectors and that which exists in the airflow of the primary internal airflow paths that lead to those connectors.

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

Bleeder System Evaluation

Elevated, or abnormal changes in, methane concentrations at approved measurement point locations, evaluation points, or in bleeder entries should prompt further investigation and/or changes in the system.

Bleeder System Evaluation