

Extraction Geometry Field Checklist

Pre-entry retrieval-feasibility check. Complete before the permit is signed.



Retrieval is the weakest part of most confined space plans. Use this to read the way out **before** anyone goes in. If the geometry defeats a standard vertical system, change access, equipment, or staffing now, while you still can.

SPACE / ID

DATE

ENTRY SUPERVISOR

STEP 1 — SKETCH AND MEASURE THE SPACE

- ☐ **Sketch the space in plan and section**
Include the portal, all runs, and the entrant's work position.
- ☐ **Measure horizontal drag distance**
Portal to the farthest work position, in feet.
- ☐ **Measure vertical clearance / headroom**
Can the entrant be kept upright, or is it a crawl-and-drag?

STEP 2 — ANALYZE THE EXTRACTION PATH

- ☐ **Count directional changes**
Every corner adds an edge, an efficiency loss, and a snag point.
- ☐ **Locate anchors relative to the entrant**
Anchor over the portal is not the same as over the entrant.
- ☐ **Identify atmospheric dead-zones**
Low corners and dead legs trap gas the portal monitor can miss.
- ☐ **Mark the extraction bottleneck**
The point where a standard vertical haul loses advantage or stops.

STEP 3 — MATCH THE METHOD TO THE GEOMETRY

- ☐ **Confirm the retrieval system fits the actual path**
Not just the opening. A tripod over the portal may not reach around the corner.
- ☐ **Verify retrieval meets 1910.146 provisions**
Retrieval line, full-body harness, and a system that will actually move the entrant out.

STOP if any of these are true: there is a directional change between the entrant and the exit, a long horizontal drag, low clearance that prevents a favorable line angle, or an anchor offset from the entrant. A standard vertical system alone is **not** adequate. Resolve it below before signing.

Change ACCESS

Enter through a closer or better-aligned opening to shorten the drag and straighten the pull.

Change EQUIPMENT

Add a horizontal haul / mechanical-advantage system, edge protection, or repositioned anchors.

Change STAFFING

Add rescuers or upgrade the rescue arrangement to match the real extraction load.