Refinery and plant accidents, and the paperwork that came before them

What is different about a refinery or chemical plant injury?

The employer was required, in advance and in writing, to study how the process could release what it holds, to maintain the vessels, piping and relief systems, and to start investigating any incident or near miss within 48 hours. Those documents exist already, and they are what a claim is built from.

What a covered process obliged the operator to do

The chemical list in the standard's appendix, or a large enough quantity of flammables.

29 C.F.R. § 1910.119(a)(1)

A written study of how the process could fail and what would be released if it did.

29 C.F.R. § 1910.119(e)(1)

Redone by a qualified team for as long as the process operates, not filed once.

29 C.F.R. § 1910.119(e)(6)

Covers the equipment whose failure is what actually releases the contents.

29 C.F.R. § 1910.119(j)(2)

Owed for a near miss as well as a release, which is why a prior one is often on record.

29 C.F.R. § 1910.119(m)(1)-(2)

OSHA process safety management, checked 2026-09-11 by second-pass check agent, independent of the author.

Who answers on a site where four companies work

A plant fire is rarely an accident in the ordinary sense. Where a process sits above the threshold quantity of a listed hazardous chemical, the operator owed a written set of duties before anything happened, and the question becomes which of them was met.

Large sites run on contractors. The operator, the maintenance contractor, the turnaround crew and the equipment supplier can be four businesses on one unit, and the standard applies to the PROCESS rather than to the job title, so a contractor injured on a covered process is inside it.

That distinction matters because it separates the employer question from the liability question. Someone whose own employer is one company may still have a claim against the site operator or another contractor on the unit, and that claim is not a compensation claim.

The documents a covered process generates by law

The process hazard analysis is the center of it: a written study of how the process could fail and what would be released if it did, revalidated by a qualified team every five years for as long as

the unit operates. It says what the operator knew was possible.

Mechanical integrity records run alongside it, covering the pressure vessels, piping and relief systems whose failure is what actually releases the contents. So there is usually a written history of the specific piece of equipment involved.

Incident investigations are owed for near misses as well as releases, and must be started within 48 hours. That is why a serious event is so often preceded by a file describing something very like it, and why obtaining those files early is the difference between a claim and a story.

Why a contractor is not automatically stuck with comp

Most people hurt at a plant are employees of somebody, and their own employer is usually behind a compensation system. The claim that matters is frequently against a different company on the same site, which is an ordinary negligence claim against a commercial policy.

Those policies are large, and the sites carry layers of them. Which entity owned the unit, which held the contract and who was supervising the work on the day are the questions that decide which tower responds.

Texas adds a further possibility, and it exists nowhere else: coverage is elective for a private employer under Tex. Lab. Code § 406.002, which turns an on-the-job injury into an ordinary negligence suit against the employer itself. An employer that has opted out also gives up the defenses the system normally hands it, under Tex. Lab. Code § 406.033.

What to keep while the site writes its own account

A plant does not wait for anybody. Within days the unit is isolated, the area is cleaned and put back to work, and the operator’s own investigation team has already interviewed the people who were standing there. That investigation is required of them, it is written down, and it belongs to the operator rather than to the person who was hurt by what it describes.

What an injured contractor usually holds instead is smaller and more portable: a site badge, the job safety analysis signed that morning, the permit for the work being done, and the name of the supervisor who signed it. Those four place you on that unit, on that day, doing what somebody instructed. They are also the ones that go back in a folder at the gate and are hard to get again. Photograph them before you hand anything over.

Give no statement at the gate. An account taken in the hour after a release is taken while you are still deciding whether you are hurt, and it will be read back to you two years later as though you had known.

What a turnaround changes, and why the injuries cluster there

A refinery runs continuously for years and then stops on purpose. A turnaround is that planned shutdown: units emptied, purged and opened so vessels can be entered, catalyst changed, exchangers pulled and corroded pipework cut out and replaced. It is the only window in which much of the equipment is reachable at all, and it is when a disproportionate share of the serious injuries on these sites happen.

The reason is arithmetic rather than bad luck. A turnaround multiplies the headcount on site several times over for a few weeks, and most of the arrivals are traveling craft who landed days earlier.

They work long shifts on equipment they have not seen before, alongside crews from other employers doing different jobs on the same structure, under a permit system running at a volume it never sees the rest of the year. Hot work beside a line somebody believed was blinded, an entry into a vessel another crew was still purging: those are coordination failures between employers, and they are what a turnaround produces.

The consequence for a claim is direct. Whoever requested the permit, whoever issued it, whoever certified that a line was isolated and whoever supervised the crew can be four separate companies, and the paperwork recording which was which is generated on the day and retained. Somebody hurt during a turnaround, whose own employer was a labor contractor, is frequently looking at a claim against parties they never signed anything with. The permit file is where those parties are named.

The units, and why the name of the one you were on matters

A refinery is a collection of process units with distinct hazards, and an incident report that names the unit has already told an engineer most of what they need. A fluid catalytic cracker runs a circulating inventory of hot catalyst and fails differently from a hydrocracker running hydrogen at high pressure, which fails differently again from an alkylation unit holding hydrofluoric or sulfuric acid, where the hazard to everybody downwind is the acid rather than the fire. Coker units, hydrotreaters, amine and sulfur recovery trains each have their own characteristic failure and their own history of it across the industry.

That specificity carries into the defenses. A relief valve lifting to the flare, a deluge system actuating, a fixed gas detector alarming and the control room’s own trend data are each designed to leave a trace, and whether they performed is answerable from the distributed control system’s historian rather than from anybody’s recollection. So is whether the alarm that should have brought an operator running was one of dozens already standing, which is the condition the industry calls alarm flooding and which has featured in more than one investigation of a major release.

What is recorded after a plant incident, and who is holding it

A covered process generates its own record by law, and most of it predates the day of the incident: the written analysis of how the process could fail, the mechanical integrity file for the equipment involved, and the investigation the operator has to begin within 48 hours. All of it sits with the operator until somebody with standing asks for it.

Outside the fence, the Occupational Safety and Health Administration publishes its inspection and citation history for the site, and the Chemical Safety Board publishes a full investigation report on the incidents it takes up. This site holds no export of either, so this block names them rather than restating numbers it cannot show you the file for.

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Sources

Tex. Lab. Code §§ 406.002, 406.033:
https://statutes.capitol.texas.gov/Docs/LA/htm/LA.406.htm#406.002
29 C.F.R. § 1910.119:
https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.119
29 C.F.R. § 1910.119(e):
https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.119
29 C.F.R. § 1910.119(j):
https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.119
29 C.F.R. § 1910.119(m):
https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910/subpart-H/section-1910.119