

20 –Hour Advanced Safety Training for
Workers Employed by Contractors in High Hazard Facilities
Summary Sheet to Curriculum

Health & Safety Code § 25536.7 states that refinery contractors must employ workers who have completed “in-person classroom and laboratory instruction for approved advanced safety training for workers at high hazard facilities.”

To work in refineries, all workers employed by contractors must have completed, in the previous two years, at least 20 hours of DAS-approved advanced safety training for workers at high hazard facilities.

Process Safety Management (PSM) regulations at California Code of Regulations, title 8, § 5189.1 (h)(3) states: “The contractor's training program shall be performed in accordance with the requirements of subsection (g).” Section 5189.1(g) states in part “The training shall include emphasis on the specific safety and health hazards, procedures, and safe practices applicable to the employee's job tasks.”

Fundamentals of Petroleum Refining (4.0 hours)

Fundamentals of Petroleum Refining will explore the critical role refining plays in unleashing the potential of a barrel of crude oil and turning it into the specially formulated products that we rely on every day. These products include gasoline, agricultural chemicals, heating oil, plastics, and even prescription medicines. The training will also cover basic refining streams and unit configurations. Also covered will be hazards inherent to high hazard facilities and common emergency response processes. A section of the training will explain refining culture as it may differ from other industry sectors. An introduction to common refining terminology will be covered. A major objective of this course is to address:

- ***Fundamentals of the petroleum refining industry***
- ***Crude oil and its properties***
- ***Classes of refinery processes and refinery configurations***
- ***Properties of the refinery-produced streams***
- ***Refinery hazards and emergency response procedures***

Refinery Safety Overview (RSO) - (8.0 hours)

Refinery Safety Overview addresses the basic safety principles associated with working in high hazard facilities. The RSO program provides an awareness level orientation of the following elements:

- ***Overview of Personal Requirements for Refineries***
- ***Hazard Communication***
- ***Emergency Action Plans***
- ***Toxicology***
- ***Personal Protective Equipment (PPE) for working in a refinery***
- ***Respiratory Protection***

- *Hearing Conservation*
- *Energy Control (Lockout/Tagout)*
- *Confined Space*
- *Prevention of Heat Stress*
- *Refinery Safe Work Practices*
- *Refinery Process Overview*
- *Process Safety Management*

Craft Specific Safety Training (8.0 hours)

Craft Specific Safety Training must cover individual craft hazards in a minimum of three categories:

Hard trades: Boilermaker, Pipefitting, Welders, Electricians, etc.

Soft Trades: Painting, Scaffold building, Insulation, Carpentry, etc.

Support Crafts: Cranes, Inspection, Hydroblasting, Vacuum, Safety Attendant etc.

Students will learn about examples of specific interdependencies and relationships of trades for work being performed in the field. Examples will include stacked work, dissimilar trades in direct proximity with each other, dissimilar risks associated with trade types (i.e. electrical energy, product energy, radiation, potential falling objects etc.) job sequencing, and barricading.