



# FIRE PROTECTION ENGINEERING SERVICES

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At APTIM, we understand the importance of protecting your people, assets, and business continuity from fire. Protection from fire and its effects often begins with regulation, but we know economics, the environment, and business disruption must all be considered. Whether you are managing an established facility, constructing a new one, or assessing existing fire protection, engineering is critical to preventing interruption and unexpected costs.

## SERVICES PROVIDED

- ▶ Fire protection system assessment, design, and engineering services
- ▶ Construction oversight, system acceptance, and commissioning
- ▶ Fire protection condition assessments/due diligence
- ▶ Fire hazard analysis and hazardous materials plans
- ▶ Aqueous film forming foam (AFFF) transition to fluorine free alternatives
- ▶ Assessment, testing, and remediation of per- and polyfluoroalkyl substances (PFAS)
- ▶ Fire code consulting
- ▶ Third-party peer review services

## SYSTEMS

- ▶ Water-based fire suppression systems
- ▶ Clean agent suppression systems
- ▶ Fire foam systems (high, medium, and low expansion)
- ▶ Fire detection, alarm, mass notification, and signaling systems
- ▶ Smoke control and management systems
- ▶ Passive fire protection systems
- ▶ Life safety and egress systems

## MARKETS

- ▶ U.S. Department of Defense
- ▶ Oil and gas industry
- ▶ Industrial
- ▶ Commercial
- ▶ Storage and distribution
- ▶ Gaming and entertainment

## EVALUATIONS AND ASSESSMENTS

Even fire protections systems that are in perfect working order may still age out of compliance or adequacy to protect as intended. This may happen due to changes in use, process, or changes in regulations. APTIM can assess the compliance and adequacy of your fire suppression, fire alarm, mass notification, or life safety systems to respond as needed in an emergency. For example, changes in material handling and storage aids in warehousing may lead to inadequate suppression systems jeopardizing millions of dollars' worth of material. APTIM has broad experience in high challenge fire environments and can help our clients protect their people and property.

## AQUEOUS FILM FORMING FOAM

AFFF is a firefighting foam used to combat liquid fuel fires (class B) since the 1960s. It has been proven very effective in the role of suppressing these fires. Unfortunately, AFFF contains PFAS which are under increasing restrictions and bans due to toxicity concerns. APTIM has worked in the transition from the longer chain eight carbon chain AFFF to the shorter six carbon chain AFFF in the first step for many away from conventional AFFF. APTIM is a leader in the detection, removal, and destruction of these substances in the environment and in the transition away from AFFF to fluorine free foam (F3) alternatives. While there currently are no drop-in replacements for AFFF, we can work with our clients to determine how to transition to F3 in an environmentally compliant manner while maintaining fire safety.

## FIRE CODE CONSULTING AND PEER REVIEW

APTIM provides consulting services related to fire code requirements; we are experts in reading, applying, and interpreting National Fire Protection Agency and International Code Council Fire Codes. Misapplication of fire codes by designers or enforcing authorities can be costly to your project with potential delays and redesigns. APTIM engineers are also experienced in third-party peer reviews, so when the complexity of the design approach or the plan review team is understaffed, we can help provide assurance the design complies with the intent of the code.

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## QUALIFIED FIRE PROTECTION ENGINEERING SERVICE

Most U.S. Department of Defense projects require a qualified fire protection engineer to be active in the design process and certify the design is compliant with the statement of work and the Unified Facilities Criteria (UFC) before submission of the final design, as well as on completion of construction. APTIM has fire protection engineers as required by the UFC to certify compliance.

## CONSTRUCTION SUPPORT

Management of the construction process requires comprehensive capability, an outstanding team, and experienced managers that are focused and tuned into the needs of the client. Our focus is to manage all fire protection and life safety aspects of the construction work, ensuring project execution meets specifications, design, and client requirements.

