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Abstract

Bristol Myers Squibb's (BMS) Manatí facility, a key site for producing medications in oncology, immunology, cardiology, and hematology, faced a compliance issue with the installation of fire extinguishers. Out of 563 extinguishers, 263 were mounted at incorrect heights, violating safety regulations set by OSHA and the Puerto Rico Fire Department. The objective of the project was to reposition these extinguishers to meet regulatory standards and ensure safety in the event of an emergency. A comprehensive site assessment was conducted to identify non-compliant extinguishers, and the facility's blueprints were updated to reflect the correct placement and mounting heights. After the extinguishers were relocated according to regulations, a follow-up inspection confirmed full compliance. This effort significantly reduced safety risks, ensured accessibility, and avoided potential penalties. The project not only improved workplace safety but also demonstrated BMS's commitment to regulatory compliance and the well-being of its employees.

Introduction

Bristol Myers Squibb (BMS) is a global biopharmaceutical company that is dedicated to discovering, developing and delivering innovative medicines for patients with serious diseases. BMS has many sites around the world, including two in Puerto Rico: Guayabo and Manatí. The site in Guayabo is only for administrative purposes and the plant on Manatí plays a key role in the production of high-quality medications, particularly in areas such as oncology, cardiology, immunology, and hematology. The Manatí facility is crucial for the manufacturing and distribution of innovative products, contributing to the development of treatments that improve patients' lives. Additionally, BMS has maintained a commitment to innovation and social well-being, being an economic and employment driver in the region.

At Bristol Myers Squibb's Manatí facility, there had been a significant compliance issue regarding the installation of fire extinguishers. Approximately 263 fire extinguishers across the plant were mounted at heights that did not align with the regulations set by the Puerto Rico Fire Department and OSHA. These regulations specified that fire extinguishers weighing 40 pounds or less should not have been mounted higher than 5 ft, while those weighing more than 40 pounds should not have exceeded a mounting height of 3.5 ft. A visual representation of this data can be found in Figure 1.

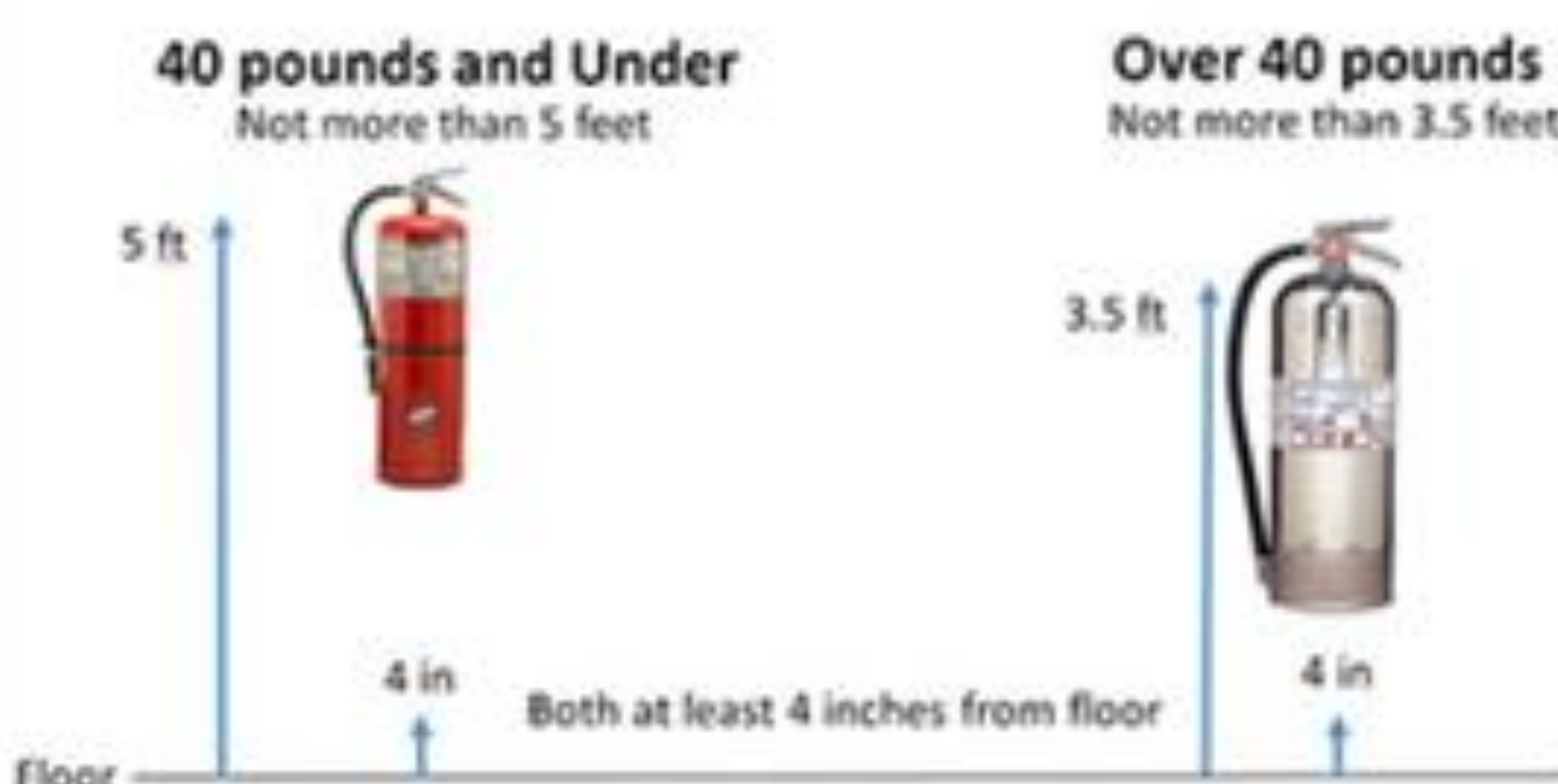


Figure 1
 Fire extinguisher mounting height

At the time, many fire extinguishers were mounted above the prescribed heights, which violated these crucial safety regulations. This non-compliance had led to safety hazards, as it had made fire extinguishers difficult to access in the event of an emergency, potentially putting employees and the facility at risk. Figure 2 shows an example of a fire extinguisher improperly mounted, highlighting the non-compliance with safety regulations. The facility's blueprints had not been updated to reflect current standards, and addressing these discrepancies was critical to ensure the safety and compliance of the entire site. Failure to bring the fire extinguishers into compliance had resulted in safety violations, penalties from OSHA, and increased risk during fire emergencies. It could also have led to reputational damage for Bristol Myers Squibb, as non-compliance with fire safety standards was perceived as negligence of worker safety.



Figure 2
 Non-Compliant Installation

Objectives

The project aimed to reposition all fire extinguishers at the BMS Manatí facility to comply with OSHA and Puerto Rico Fire Department height regulations. This involved assessing current placements, updating facility blueprints, and ensuring full compliance to enhance employee safety and meet fire safety standards.

Literature Review

OSHA's standard 1910.157 regulates the installation of portable fire extinguishers, specifying that they must be placed at an accessible height. Extinguishers weighing less than 40 pounds should be installed no higher than 5 feet from the ground, while larger models can be placed up to 3.5 feet. This regulation ensures that extinguishers are easily accessible during critical moments without requiring workers to make additional efforts to reach them. Additionally, OSHA mandates that extinguishers must be visible and located in areas where access is not obstructed [1].

Locally, the Puerto Rico Fire Department also has specific regulations regarding extinguisher installation, requiring that they be placed in accessible locations, in line with national and international standards.

Local regulations align with OSHA and NFPA guidelines, with some adaptations to the specific conditions in Puerto Rico. The regulations also mandate periodic inspections and maintenance to ensure the extinguishers function properly in case of an emergency [2].

On the other hand, NFPA 10, which sets standards for portable fire extinguishers, reinforces OSHA's recommendations on accessibility, emphasizing that extinguishers must be installed in visible and easily reachable areas. NFPA 10 also highlights the importance of maintaining the correct height for extinguishers to ensure they can be used by anyone without difficulty, and without needing extra tools like ladders. Furthermore, the standard stresses the need for regular inspections to verify that extinguishers remain in optimal working condition [3].

Analysis Approach

The analysis focused on evaluating and ensuring compliance with the proper installation standards for fire extinguishers within the organization's facilities. The primary goal was to guarantee that all fire extinguishers were positioned in accordance with the height specifications set by OSHA and the Puerto Rico Fire Department, ensuring their accessibility and visibility in case of emergency. Additionally, areas within the facility were identified as non-compliant, requiring adjustments to extinguisher placements. This process involved not only reviewing the current placements but also assessing the characteristics of each extinguisher, such as weight and type, to ensure that the installations were both safe and compliant.

The following methodology was followed to complete the project:

- Gathering data on the exact number of fire extinguishers per area. A walkthrough of the entire Bristol Myers Squibb Manatí facility was conducted to visually inspect and identify all fire extinguishers in place. The location and type of each fire extinguisher, along with the corresponding area, were documented. The specifications of each extinguisher, including its weight and size, were recorded, as this helped determine the appropriate mounting height. A detailed report/table was created to summarize the information.
- Releasing a new blueprint revision. Based on the data gathered in the previous step, the facility's existing blueprints were revised to include accurate fire extinguisher locations. The blueprints were ensured to clearly indicate the required mounting height for each type of fire extinguisher according to the regulations. The drafter worked with the team to verify that the new blueprint revision met all regulatory standards. The updated blueprints were distributed to relevant departments to ensure all teams were informed and had access to the revised plan.
- Relocating fire extinguishers to comply with height regulations. A request for proposal was prepared to bid the project to contractors. The bidding process was completed to select the contractor. A meeting was set with the facilities team and contractors to relocate the fire extinguishers and revise the compliance process for executing the job. The relocation process was ensured to adhere to safety protocols to avoid any accidents or damage during the adjustment. A follow-up inspection was conducted to verify that all extinguishers had been correctly repositioned and that their new placements complied with the regulatory requirements.

Results

A thorough walkthrough of the Bristol Myers Squibb Manatí facility identified 563 fire extinguishers, 263 of which were mounted at incorrect heights, violating OSHA and Puerto Rico Fire Department regulations. The remaining extinguishers were compliant. Table 1 provides a comparative analysis of extinguisher locations and the subset requiring relocation. The facility's blueprints were updated to reflect accurate extinguisher placements and heights. After repositioning the 263 non-compliant extinguishers, a final inspection confirmed all adjustments were made correctly. As a result, the facility now fully complies with fire safety regulations, reducing safety risks, avoiding penalties, and safeguarding BMS's reputation.

Table 1
 Comparison of Fire Extinguishers Installed vs. Relocated Due to Improper Mounting by Area

Area	Fire extinguishers per area	Fire extinguishers relocated
Administration	55	36
Production	75	18
Warehouse	93	65
Mechanical Rooms	168	89
Common Areas	172	55
Total	563	263

Conclusion

The project successfully addressed the fire extinguisher compliance issue at the BMS Manatí facility by repositioning 263 extinguishers to meet regulatory standards. This initiative ensured full adherence to OSHA and Puerto Rico Fire Department regulations, significantly improving workplace safety. By updating blueprints and conducting thorough inspections, the facility mitigated safety risks, avoided potential penalties, and reinforced BMS's commitment to employee well-being and regulatory compliance.

References

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