Design Group

Process Safety Management Program (OSHA's 29 CFR 1910.119)
Risk Management Plan (EPA's 40 CFR Part 68)

The primary objective of Process Safety Management (PSM) and Risk Management Plan (RMP) is to prevent unwanted releases of highly hazardous chemicals (regulated substances), especially into the location that could expose employees, community and/or environment to serious hazards. The PSM program aims to protect the employees and workplace, while the RMP program aims to protect the community and environment.

Many small and large businesses currently do not have the knowledge base or time necessary to create and implement effective PSM and RMP programs. Although many companies establish safety as their highest priority, there can still be a gap in implementation which can result in fines, asset damages, or injuries.

Design Group professionals bring industry expertise to assist our clients in developing the necessary elements of these programs. We support our clients in the areas where we have an extensive experience and can engage and manage additional specialists to provide a comprehensive solution.

Our Industries

- Midstream Oil and Gas
- Upstream Oil and Gas (Onshore and Offshore)
- Downstream Oil and Gas (Refining and Petrochemical)
- Chemical and Specialty Products
- Technology (Semiconductor)
- Food and Beverage
- Pulp & Paper

bwdesigngroup.com

info@bwdesigngroup.com

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Design Group | Overview

PSM and RMP Program

Process Safety Management (PSM)

PSM applies to companies that deal with any of more than 130 specific toxic and reactive chemicals over the listed threshold quantities; it also includes flammable chemicals in quantities of 10,000 pounds (4,535.9 Kg) or more.

Risk Management Plan (RMP)

RMP applies to companies holding more than a threshold quantity of a regulated substance in a process. The regulations require owners or operators of covered facilities to implement a risk management program and to submit an RMP to EPA at least every five years. These regulated substances are also subject to the requirements of the general duty clause.

Process Safety Management	
1. Process Safety Information	8. Compliance Audits*
2. Process Hazard Analysis	9. Incident Investigation
3. Operating Procedure	10. Employee Participation
4. Employee Training	11. Hot Work Permit
5. Mechanical Integrity*	12. Contractors Management
6. Management of Change	13. Emergency Planning & Response
7. Pre-Startup Safety Review	14. Trade Secrets

*Design Group will involve a third party for these elements

Risk Management Plan	Level 1	Level 2	Level 3
Worst-Case Release Analysis	✓	✓	✓
Alternative Release Analysis		✓	✓
5-year Accident History	✓	✓	✓
Management System		✓	✓
Prevention Program		✓ *	✓ **
Emergency Response Program - Coordinate	✓	✓	✓
Emergency Response Program - Develop Plan & Program		✓	✓

*See PSM #2-5, 8-9 **See PSM #1-13

OSHA's PSM vs EPA's RMP

- Different chemical list and Threshold Quantities (TQ) for some chemicals
- RMP contents dictated by three level program structure
- RMP requires off-site consequence analysis
- PHAs for RMP must consider off-site impacts
- RMP Emergency Response Plan must be integrated with community response plan

DID YOU KNOW?

'A FACILITY IN COMPLIANCE WITH THE PSM PROGRAM IS NOT NECESSARILY IN COMPLIANCE WITH THE RMP PROGRAM.'

OSHA - Occupational Safety and Health Administration | EPA - Environmental Protection Agency

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Design Group | Support

PSM and RMP Program

Let Design Group Help You

Design Group has a staff of experienced PSM/RMP specialists to provide industry expertise, program management, and facilitation services. We have helped clients achieve control over their PSM/RMP program and comply with regulatory requirements by providing unbiased and pragmatic advice and expertise. We focus on conducting and developing the necessary PSM/RMP elements to operate safer plants, optimize the process and save cost. We can also customize the scope to deliver comprehensive and efficient solutions based on the facility's need.

Design Group PSM/RMP Program Support

1. Study the chemical inventory, and process to analyze the PSM/RMP applicability	
2. Analyze current standing of all applicable elements and sections in accordance with the PSM/RMP standard	
3. Develop all necessary Process Safety Information documents	
• Block flow/process flow diagrams • Process chemistry • Maximum intended inventory • Safe upper and lower operational limits • Piping and instrumentation diagrams	• Electrical area classification drawings • Relief system design and design basis • Material and energy balances • Ventilation system design • Safety systems - interlocks, detection, or suppression systems
4. Review and develop Operating Procedure	
• Initial startup • Normal startup • Temporary operations	• Emergency shutdown • Normal shutdown • Startup post-turnaround or emergency shutdown
5. Organize Process Hazards Analysis (third party to facilitate) and track all action items post PHA to completion	
6. Review five year accident history	
7. Develop incident investigation program to track and record all incidents	
8. Develop management of change program and document all changes	
9. Organize periodic employee training	
10. Involve third party for Mechanical Integrity program	
11. Develop Pre-startup Safety Review (PSSR) process	
12. Develop hot work permit and process	
13. Develop contractor management program	
14. Develop emergency planning and response	
15. Worst case/alternate release analysis	
16. Management system	
17. Co-ordinate third-party for the compliance audit	

Note: Design Group will involve client employees as required (Employee Participation) throughout the process.

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