

# Recommendations for Overfill Protection Systems

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# BSTG Report

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- WG5 Control and Safety Systems
- Immediate Actions agreed for overflow protection to ensure safety
- High Integrity, independent protection to BS EN 61511
- SIL STUDIES (LOPA etc)
- SMS TO 61511  
(maintenance, testing, records, competence)
- Improvements to achieve SIL

# BSTG Report

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- Immediate Actions agreed
- Check switches
- Shut down in control of site
- SIL Assessments-LOPA
- SMS TO 61511
- Comply with BS EN 61511,
- Proof testing and test records
- Improvements to achieve required SIL

# MIIB RATIONAL for AUTOMATIC

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- **BSTG REPORT -LOPA GUIDANCE**
  - Consider common cause failures
  - Justify Operator reliability data
  - Justify ATG Data
  - Ensure Independence of Protection Layers
  - Auditable Procedures
  - Consider all Initiating Events
  - Justify Conditional Modifiers

# MIIB Concerns on LOPA/SIL

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- Wide variations in standards
- Overoptimistic claims for operator reliability
- Overoptimistic claims for ATG reliability
- Maintenance of ATG'S
- Testing of switches in tank
- Competence of contractors
- Texas City (Level Control)

# MIIB Report on Design & Operation

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- Risk assessment-agreed methodology to determine appropriate integrity (SIL)
- High Integrity, Automatic Protection
- To BS EN61511 (min SIL1)
- Management systems to maintain SIL
- Proof testing, maintenance, best practice
- Improved components (ATG's & Devices)
- Gas Detection ?