

Systematic Cause Analysis Technique (SCAT)

DC - DIRECT CAUSE/TYPE OF EVENT

1. Struck Against (Running or Bumping into)	4. Fall on Same Level (Slip and Fall, Trip Over)	7. Caught Between or Under (Crushed or Amputated)	9. Overstress; Overexertion; Overload	12. Equipment Failure
2. Struck By (Hit by moving object)	5. Caught In (Pinch and Nip Points)	8. Contact With (Electricity, Heat, Cold, Radiation, Caustics, Toxic Substances, Noise)	10. Abnormal Operation	13. Environmental Release
3. Fall to Lower Level	6. Caught On (Snagged, Hung)		11. Product Contamination	

IC – IMMEDIATE/DIRECT CAUSES

1. Operating Equipment Without Authority	9. Improper Placement	17. Inadequate Guards or Barriers	25. Radiation Exposure	33. Failure to Communicate/Coordinate
2. Failure to Warn	10. Improper Lifting	18. Inadequate or Improper Protective Equipment	26. Temperature Extremes	34. Inadequate Instructions/Procedures
3. Failure to Secure	11. Improper Position for Task	19. Defective Tools, Equipment or Materials	27. Inadequate or Excess Illumination	35. Inadequate Information/Data
4. Operating at Improper Speed	12. Servicing Equipment in Operation	20. Congestion or Restricted Action	28. Inadequate Ventilation	36. Inadequate Preparation/Planning
5. Making Safety Devices Inoperative	13. Horseplay	21. Inadequate Warning System	29. Presence of Harmful Materials	37. Inadequate Support/Assistance
6. Using Defective Equipment	14. Under Influence of Alcohol and/or Other Drugs)	22. Fire & Explosion Hazards	30. Failure to Identify Hazard/Risks	38. Inadequate Communications, Hardware/Software/Process
7. Failing to Use PPE Properly	15. Using Equipment Improperly	23. Poor Housekeeping/Disorder	31. Failure to Check/Monitor	39. Road Conditions
8. Improper Loading	16. Failure to Follow Procedure	24. Noise Exposure	32. Failure to React/Coordinate	40. Weather Conditions

UC – ROOT/INDIRECT CAUSES

1. Inadequate Physical/Physiological Capability 1.1 Inappropriate height, weight, size, strength, reach, etc. 1.2 Restricted range of body movement 1.3 Limited ability to sustain body positions 1.4 Substance sensitivities or allergies 1.5 Sensitivities to sensory extremes (temperature, sound, etc.) 1.6 Vision deficiency 1.7 Hearing deficiency 1.8 Other sensory deficiency (touch, taste, smell, balance) 1.9 Respiratory incapacity 1.10 Other permanent physical capabilities 1.11 Temporary disabilities	4. Mental or Psychological Stress 4.1 Emotional overload 4.2 Fatigue due to mental task load or speed 4.3 Extreme judgement/decision demands 4.4 Routine, monotony, demand for uneventful vigilance 4.5 Extreme concentration/perception demands 4.6 “Meaningless” or “degrading” activities 4.7 Confusing directions/demands 4.8 Conflicting demands/directions 4.9 Preoccupation with problems 4.10 Frustration 4.11 Mental illness	8. Inadequate Leadership and/or Supervision 8.1 Unclear or conflicting reporting relationships 8.2 Unclear or conflicting assignment of responsibility 8.3 Improper or insufficient delegation 8.4 Giving inadequate policy, procedure, practices or guidelines 8.5 Giving objectives, goals or standards that conflict 8.6 Inadequate work planning or programming 8.7 Inadequate instructions, orientation and/or training 8.8 Providing inadequate reference documents, directives and guidance publications 8.9 Inadequate identification and evaluation of loss exposures 8.10 Lack of supervisory/management job knowledge 8.11 Inadequate matching of individual qualifications and job/task requirements 8.12 Inadequate performance measurement and evaluation 8.13 Inadequate or incorrect performance feedback	10.7 Improper handling of materials 10.8 Improper storage of materials 10.9 Improper transporting of materials 10.10 Inadequate identification of hazardous items 10.11 Improper salvage and/or waste disposal 10.12 Inadequate contractor selection	13.3 Inadequate maintenance of standards for: 13.3.1 Tracking of work flow 13.3.2 Updating 13.3.3 Monitoring use of procedures/ practices/ rules 13.4 Inadequate monitoring of compliance
2. Inadequate Mental/Psychological Capability 2.1 Fears and phobias 2.2 Emotional disturbance 2.3 Mental illness 2.4 Intelligence level 2.5 Inability to comprehend 2.6 Poor judgement 2.7 Poor coordination 2.8 Slow reaction time 2.9 Low mechanical aptitude 2.10 Low learning aptitude 2.11 Memory failure	5. Lack of Knowledge 5.1 Lack of experience 5.2 Inadequate orientation 5.3 Inadequate initial training 5.4 Inadequate update training 5.5 Misunderstood directions	9. Inadequate Engineering 9.1 Inadequate assessment of loss exposures 9.2 Inadequate consideration of human factors/ ergonomics 9.3 Inadequate standards, specifications and/or design criteria 9.4 Inadequate monitoring of construction 9.5 Inadequate assessment of operational readiness 9.6 Inadequate or improper controls 9.7 Inadequate monitoring of initial operation 9.8 Inadequate evaluation of charges	11. Inadequate Maintenance 11.1 Inadequate preventive 11.1.1 Assessment of needs 11.1.2 Lubrications and servicing 11.1.3 Adjustment/assembly 11.1.4 Cleaning or resurfacing 11.2 Inadequate reparative 11.2.1 Communication of needs 11.2.2 Scheduling of work 11.2.3 Examination of units 11.2.4 Part substitution	14. Excessive Wear and Tear 14.1 Inadequate planning or use 14.2 Improper extension of service life 14.3 Inadequate inspection and/or monitoring 14.4 Improper loading or rate of use 14.5 Inadequate maintenance 14.6 Use by unqualified or untrained people 14.7 Use for wrong purpose
3. Physical or Physiological Stress 3.1 Injury or illness 3.2 Fatigue due to task load or duration 3.3 Fatigue due to lack of rest 3.4 Fatigue due to sensory overload 3.5 Exposure to health hazards 3.6 Exposure to temperature extremes 3.7 Oxygen deficiency 3.8 Atmospheric pressure variation 3.9 Constrained movement 3.10 Blood sugar insufficiency 3.11 Drugs	6. Lack of Skill 6.1 Inadequate initial instruction 6.2 Inadequate practice 6.3 Infrequent performance 6.4 Lack of coaching 6.5 Inadequate review instruction	10. Inadequate Purchasing 10.1 Inadequate specifications on requisitions 10.2 Inadequate research on materials/equipment 10.3 Inadequate specifications to vendors 10.4 Inadequate mode or route of shipment 10.5 Inadequate receiving inspection and acceptance 10.6 Inadequate communication of safety and health data	12. Inadequate Tools and Equipment 12.1 Inadequate assessment of needs and risks 12.2 Inadequate human factors/ ergonomics considerations 12.3 Inadequate standards or specifications 12.4 Inadequate availability 12.5 Inadequate adjustment/repair/maintenance 12.6 Inadequate salvage and reclamation 12.7 Inadequate removal and replacement of unsuitable items	15. Abuse or Misuse 15.1. Inadequate planning or use 15.1.1 Intentional 15.1.2 Unintentional 15.2 Improper conduct that is not condoned 15.2.1 Intentional 15.2.2 Unintentional
	7. Improper Motivation 7.1 Improper performance is rewarding 7.2 Proper performance is punishing 7.3 Lack of incentive 7.4 Excessive frustration 7.5 Inappropriate aggression 7.6 Improper attempt to save time or effort 7.7 Improper attempt to avoid discomfort 7.8 Improper attempt to gain attention 7.9 Inadequate discipline 7.10 Inappropriate peer pressure 7.11 Improper supervisory example 7.12 Inadequate performance feedback 7.13 Inadequate reinforcement of proper behavior 7.14 Improper production incentives		13. Inadequate Work Standards 13.1 Inadequate development of standards for: 13.1.1 Inventory and evaluation of exposures and needs 13.1.2 Coordination with process design 13.1.3 Employee involvement 13.1.4 Procedures/practices/rules 13.2 Inadequate communication of standards for: 13.2.1 Publication 13.2.2 Distribution 13.2.3 Translation to appropriate languages 13.2.4 Training 13.2.5 Reinforcing with signs, colour codes and job aids	16. Inadequate Communications 16.1 Inadequate horizontal communication between peers 16.2 Inadequate vertical communication between Supervisor and person 16.3 Inadequate communication between different organizations/internal departments 16.4 Inadequate communication between work groups (same department) 16.5 Inadequate communication between shifts 16.6 Inadequate communication methods 16.7 No communication method available 16.8 Incorrect instructions 16.9 Inadequate communication due to job turnover 16.10 Inadequate communication of safety and health data, regulations or guidelines 16.11 Standard terminology not used 16.12 Verification/repeat feedback techniques no used 16.13 Message too long 16.14 Speech interference