



<b>CHECKLIST: VISUAL DISPLAYS</b>				
<b>CRITERIA</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENTS</b>
1. Are visual displays used to provide the operator with a clear indication of equipment or system conditions under any eventuality?				
2. Does the alerting/warning display improve the probability of detecting the triggering condition?				
3. Is information displayed sufficient to allow performance and limited to information necessary to perform specific actions or decisions?				
4. Is information displayed within the limits and precision required for operator actions or decisions?				
5. Is information presented to the operator in a directly usable form?				
6. Is operator and maintainer information presented in separate displays?				
7. Do the panel faces display only functional or operational markings?				
8. Is the duration of a signal or alert long enough to enable the operator to detect it?				
9. Are displays requiring refreshed information updated in a synchronous manner (where possible) and refreshed in a timely manner?				
10. Do complex displays that present simultaneous and integrated information advise or alert operators to information that becomes critical within the display?				
11. Is information display redundancy avoided except to achieve specified safety or reliability?				
12. Is the operator immediately aware of the failure of a display or its circuit?				
13. Does the failure of a display circuit cause a failure in the equipment associated with the display?				
14. Is the display located so that it can be easily and accurately read?				
15. Are displays visually accessible for normal tasks without needing any aids?				
16. Are display faces not less than 45 degrees from the operator's normal line of sight?				
17. Is the display installed in a manner that prevents reflection of ambient illumination from display cover?				
18. Does the visual display vibrate to the level that task performance is degraded?				
19. Are all displays necessary to support an operator activity grouped together?				
20. Are displays arranged according to their sequence of use and arranged in sequence within functional groups?				
21. Are displays most frequently used, and the more critical displays, grouped together in the optimum visual zone?				
22. Are important or critical displays located in a privileged position in the optimum projected visual zone or otherwise highlighted?				



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23. Is the arrangement of displays within the system consistent in principle from application to application?				
24. Is the viewing distance from the seated operator eye reference point to displays located close to associated controls less than 635mm (25 in)?				
25. Is the display viewing distance (except CRTs and collimated displays) more than 330mm (13 in) and preferably more than 510mm (20 in)?				
26. Is low brightness white light used for panel display illumination when dark adaptation is not required and red or blue-green used when dark adaptation is required?				
27. Is maximum panel illumination provided when the dimming control is at maximum illumination position with a range of .03 f l near OFF and 1 f l at the 50% or halfway position?				
28. Is the lighting of multiple grouped displays balanced across the instrument panel such that the mean indicator luminance of any two differs by less than 33% across the range of full ON to full OFF?				
29. Is sufficient contrast (10:1 to 8:1) provided between all displayed information and the display background to ensure required information can be perceived by the operator under all expected lighting conditions?				
30. Are coding techniques used to discriminate between individual displays, identify functionally related displays, indicate relationship between displays, and identify critical information within displays?				
31. Are displays uniquely coded within coding type such as color, size, location, and shape?				
32. Is information coded in either an analog, digital, or combination form?				
33. Are digital displays used when precision is required and trend information is not needed?				
34. Are numeric digital displays used alone only when perception of pattern variation is not important and where rapid or slow digital display rate does not inhibit proper perception?				
35. Are analog displays used when values must be considered in relation to ranges, zones, or when trend information is required?				
36. Are alerting/warning displays present when they would provide the operator with a greater probability of detecting the triggering condition than normal observation provides in the absence of the display?				
37. Are the limits or set points for initiating alarms or warnings set to prevent false alarms and avoid being a nuisance while providing operators adequate time to respond?				
38. Are alarms that require auxiliary person(s) to go to a given plant location for specific information avoided, or if used do they allow sufficient time to collect/use the information?				
39. When multiple alarms are possible is a logical prioritization used so that operators can differentiate the most important or serious alarms?				



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40. Is alarm priority accomplished using a minimum number of priority levels (24) and are priorities based upon an importance continuum?				
41. Is a coding method used for prioritizing visual signals such as color, position, shape, alphanumeric, flashing, or symbolic coding?				
42. Is flashing red used only to denote emergency conditions that require operator action to be taken without delay to avert impending personnel injury or equipment damage?				
43. Is a flash rate of 3 to 5 flashes per second used with equal ON and OFF time and in the case of flasher failure does the light stay illuminated?				
44. When auditory signals accompany visual alarms are they priority coded using pulse codes, frequency modulation ratios and discrete frequencies while avoiding intensity as a coding type?				
45. When visual tiles are used to indicate function and/or scope are the tile legends unambiguous, singular, specific, consistent, and legible?				
46. Is an automatic cleared alarm feature provided to reset the system after the alarm condition has been remedied?				
47. Are cues for prompt recognition of an out-of-service alarm designed into the system?				
48. Is a control to test visual and associated audio alarms provided and is periodic testing of alarms/warnings required and controlled by administrative procedure?				