

QUALITY CONTROL INSPECTION 5 Q SCORE

5-Q Quality Control Inspection Performance Measurement

Outline:

A time-based quality control performance measurement process which:

Supports 'Right First Time' approach for delivery

Encourages continuous improvement

Identifies opportunities for improvement

Model design:

Collection of data - based on inspection of key quality attributes

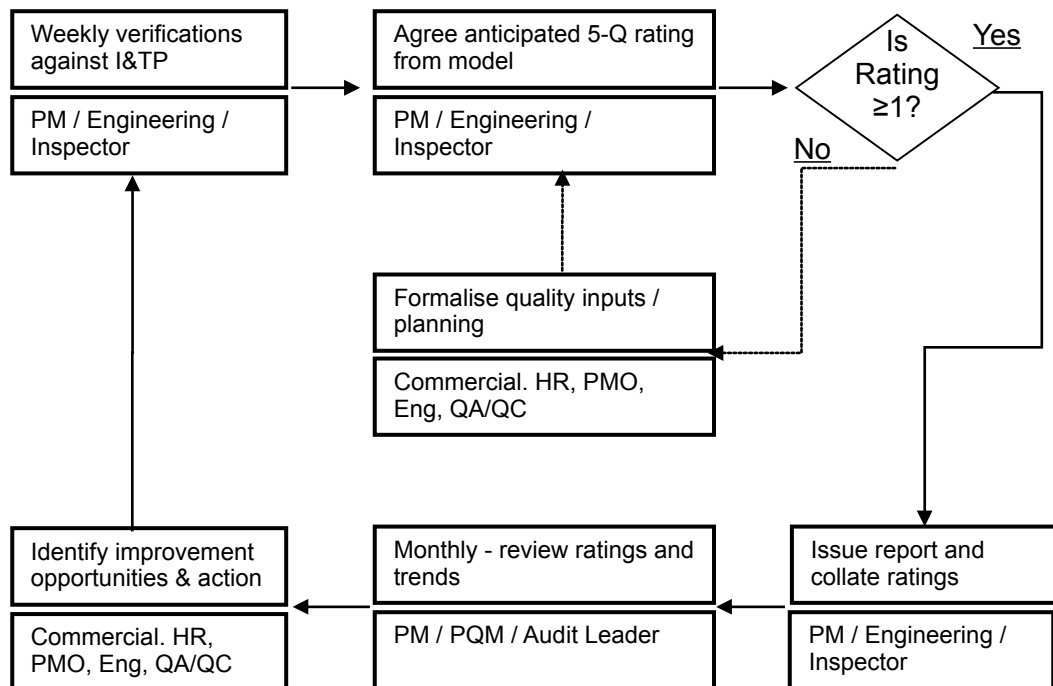
No re-inventing the wheel - using information which should already be available

Driven by existing systems and processes

Assigns a Q rating (1 - 5) against a generic model which is identifiable in ISO 9004

Collated data enables trend analysis to be conducted and can feed into Corrective and Preventative Action processes and Avoidable Cost reporting

System Deployment



5-Q Quality Control [Inspection] Performance Measurement

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Traffic Light Inspection and Scoring

5-Q Scores

Rating	Results of Inspection & Plan: Hold, Witness & Review Activities	Rational / Guidance
5-Q5	<p>1) Output is fully compliant with all specified and implied requirements including: URS's, legal, regulatory, product specifications and design information - typically drawings and technical specifications and standards</p> <p>2) Output matches appropriate Samples, Benchmarks and Prototypes etc.</p> <p>3) Output represents exceptional performance / redefines the norm</p>	Stakeholders will be delighted - output represents outstanding value-for-money with product 'fit-for-purpose' by a margin
5-Q4	<p>1) Output is fully compliant with all specified and implied requirements including: URS's, legal, regulatory, product specifications and design information - typically drawings and technical specifications and standards</p> <p>2) Output matches appropriate Samples, Benchmarks and Prototypes etc</p>	Stakeholders will be satisfied - output is 'fit-for-purpose'
5-Q3	Output requires minor re-work, (these works are to the agreed and authorised plans, drawings etc, and are a reflection of workmanship only	Output requires repair, modification, amendment - which can be corrected - without reference to engineering
5-Q2	<p>1) Output is non-compliant - rectification shall require re-inspection following re-work (repair / modification etc.,) subject to change control / concession process</p> <p>2) Product 'NCR' raised by Project Team (anticipated re-work value likely to be <£xx,xxx,00)</p>	Output is unacceptable - non-conformance should have previously been identified and corrected by supplier (prior to offering for independent verification
5-Q1	<p>1) Output is non-compliant - rectification shall require re-inspection following re-work (repair / modification etc.,) subject to change control / concession process</p> <p>2) Product 'NCR' raised by Project Team (anticipated re-work value likely to be >£xx,xxx,00)</p>	Output is unacceptable - non-conformance should have previously been identified and corrected by supplier (prior to offering for independent verification
5-Q0	<p>Specified and/or implied requirements are not formalised and/ or effective quality planning not implemented - therefore team out-of-process with no basis (criteria) for quality assessments -</p> <p>NO INSPECTION TO OCCUR for 5-Q0</p>	No basis (quality criteria) for undertaking quality assessments - potential for significant quality failure is high.

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Benefits and Opportunities

Improves effectiveness of I&TP deployment

Formalises role of Engineering during Implementation

Promotes team working between all departments / divisions and functions

Assists Engineering and Implementation understanding of quality criteria

Facilitates continuous improvement

Use collated data as a Quality measure (takes time)

Can be used as a training tool

Flags issues before costs escalate

Supports Risk Management

Supports Lessons Learnt

Algorithm, Formula and Lookup data etc,

DO NOT REMOVE THE FOLLOWING INFORMATION - YOU HAVE BEEN WARNED!

IF function data

5
4
3
2
1
0

Algorithm for cell J24 [=IF(("Data Sheet2 (D.1)!P2=('Instruction1 (I.1)!C130))","Q5","")]

Algorithm for cell J25 [=IF(("Data Sheet2 (D.1)!P2=('Instruction1 (I.1)!C131))","Q4","")]

Algorithm for cell J26 [=IF(("Data Sheet2 (D.1)!P2=('Instruction1 (I.1)!C132))","Q3","")]

Algorithm for cell J27 [=IF(("Data Sheet2 (D.1)!P2=('Instruction1 (I.1)!C133))","Q2","")]

Algorithm for cell J28 [=IF(("Data Sheet2 (D.1)!P2=('Instruction1 (I.1)!C134))","Q1","")]

Algorithm for cell J29 [=IF(("Data Sheet2 (D.1)!P2=('Instruction1 (I.1)!C135))","Q0","")]

Drop Menu 1 - 5Q_Scores

5
4
3
2
1
0

Health and Safety Scoring

QUALITY CONTROL INSPECTION 5 Q SCORE

Results of Health and Safety checks

The scoring system for Health and Safety is a modified version of the inspection system described above. The table below (extracted) from the [QC ScoreForm3 (F.1)], requires the scores for own employees to be separate from those of sub-contractors

For each type of PPE there are two scores given, one is whether the PPE is being worn/used at the time of the Inspection (and not if it is available), the other is for the condition of the PPE

Where a specified type of PPE is not used or applicable give the corresponding cells a score of zero "0"

The Project Manager shall identify on [Data Sheet5 (D.2)] what PPE is applicable to the particular activity being inspected. This will show up as grey text in [QC ScoreForm3 (F.1)]

When scores are added - the link to [Data Sheet5 (D.2)] is broken and only the scores are visible. Deleting the scores does not re-make the link

Rating

Rational / Guidance

5-Q5	1) WORN - Score 5 if PPE is being worn by all personnel on site 2) CONDITION - Score 5 if PPE is in good serviceable condition	Stakeholders will be delighted - output represents excellent management and understanding of safety requirements
5-Q3	1) WORN - Score 3 if PPE is being worn by more than 50% of personnel and less than 100% personnel on site 2) CONDITION - Score 3 if PPE is showing signs of wear but continues to provide the appropriate level of protection	Immediate action must be taken to ensure that personnel without PPE are protected from harm or injury whilst the appropriate PPE is acquired
5-Q1	1) WORN - Score 1 if PPE is being worn by less than 50% of personnel on site 2) CONDITION - Score 1 if PPE is worn out, damaged and or fails to provide the appropriate level of protection	ALL WORK SHALL STOP. Only personnel with PPE can continue on site. All damaged PPE to be replaced immediately

This column to be used for checking own personnel

checking sub-contractor personnel

PPE Checklist - Personnel

PPE Checklist - Sub-contractor

QUALITY CONTROL INSPECTION 5 Q SCORE

All Company personnel on site shall at all times wear the appropriate PPE for the work undertaken.

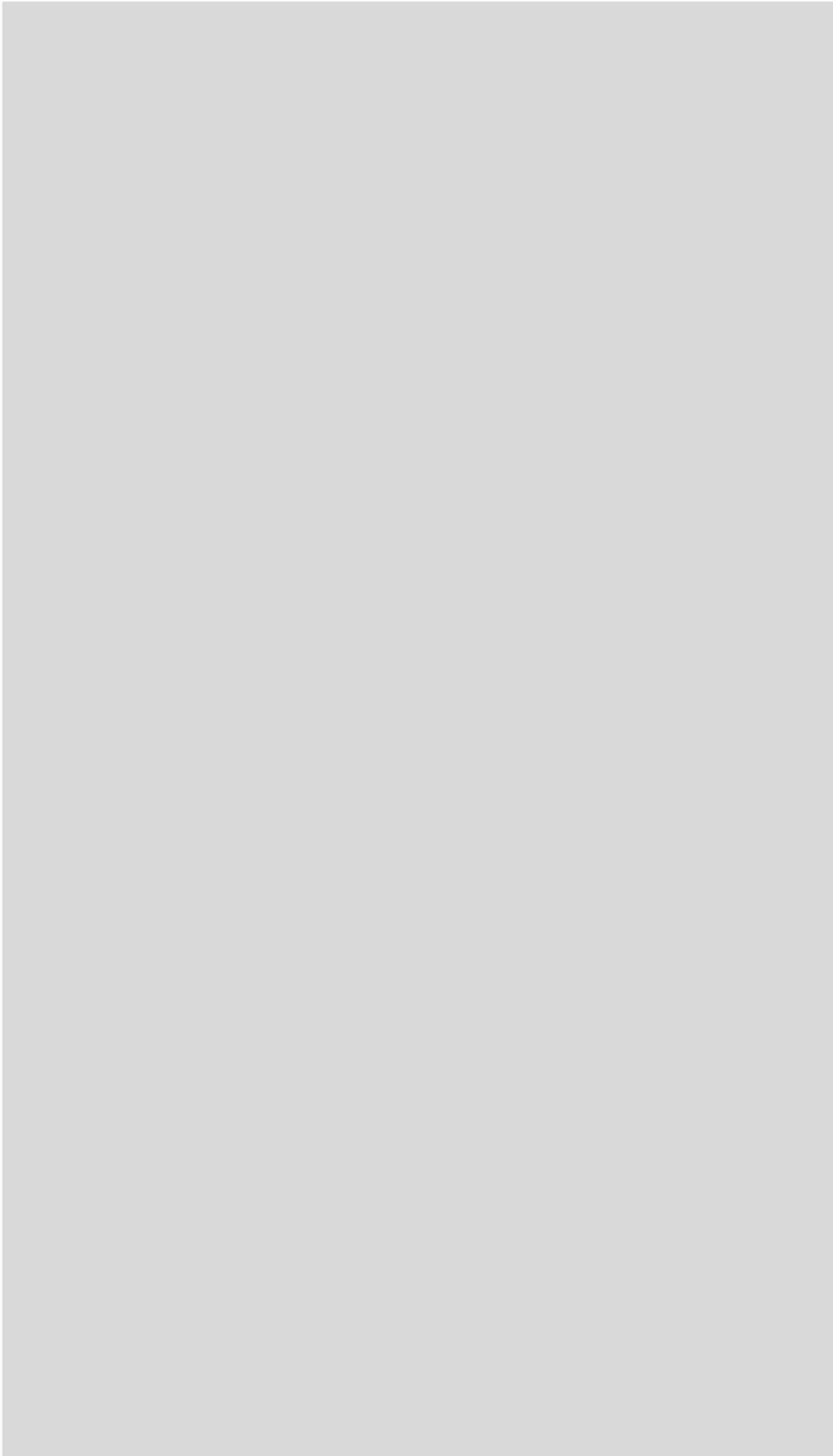
PPE Type	Worn	Condition
Footwear	F	
Hard hat	HH	
Eyewear	E	
Hi Vis	HV	
Hearing	H	
Gloves	G	
Other Clothing	O	
Face mask	FM	
BA set	BA	
Fall Arrest	FA	
Harness	HN	
Gas Monitor	GM	
First Aid Kit and Fire Extinguisher	FAK	FE
Totals		0

All Sub-contractor personnel on site shall at all times wear the appropriate PPE for the work undertaken.

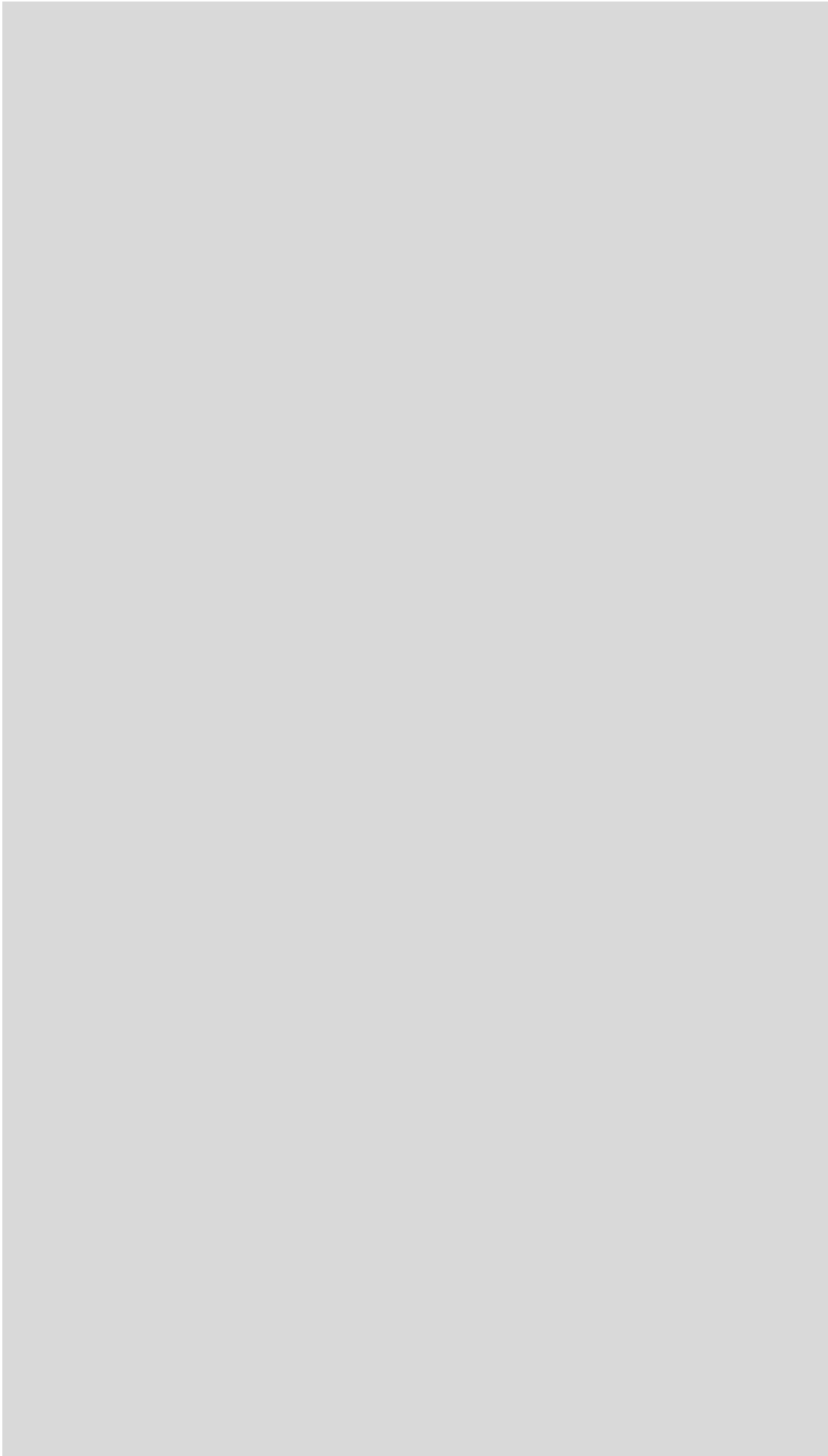
PPE Type	Worn	Condition
Footwear	SCF	
Hard hat	SCHH	
Eyewear	SCE	
Hi Vis	SCHV	
Hearing	SCH	
Gloves	SCG	
Other Clothing	SCO	
Face mask	SCFM	
BA set	SCBA	
Fall Arrest	SCFA	
Harness	SCHN	
Gas Monitor	SCGM	
First Aid Kit and Fire Extinguisher	SCFAK	SCFE
Totals		0

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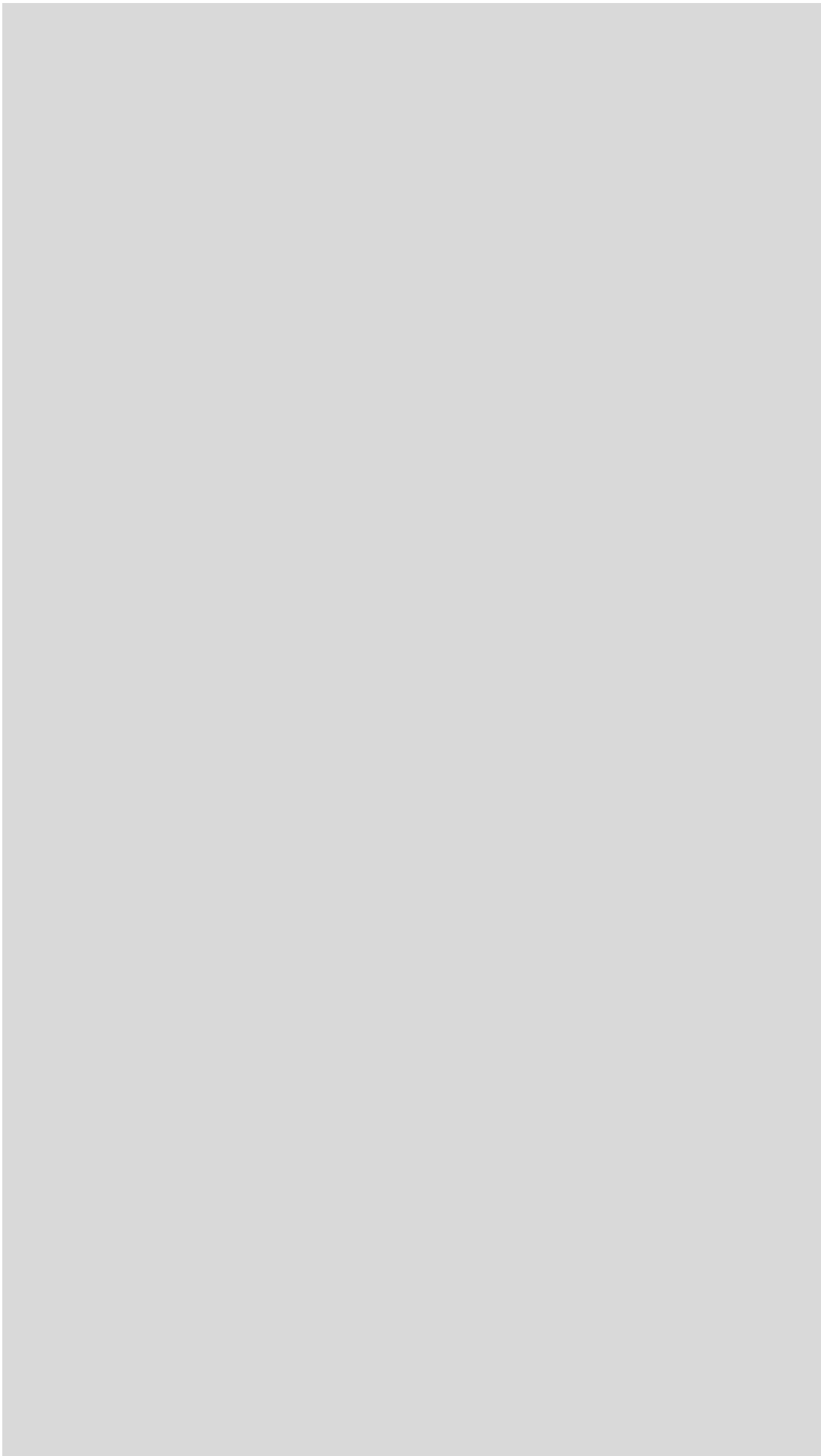
QUALITY CONTROL INSPECTION 5 Q SCORE



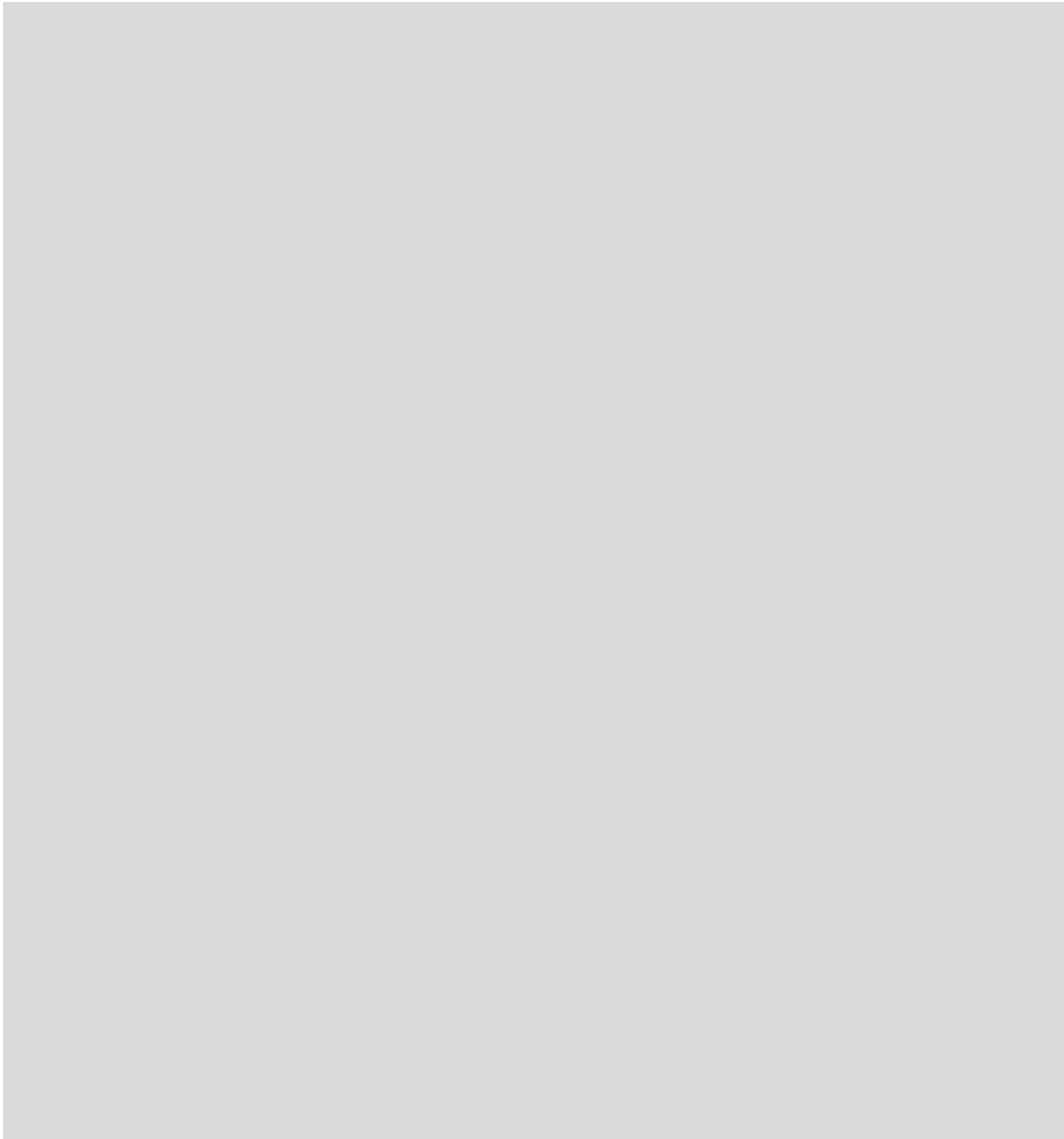
QUALITY CONTROL INSPECTION 5 Q SCORE



QUALITY CONTROL INSPECTION 5 Q SCORE



QUALITY CONTROL INSPECTION 5 Q SCORE



QUALITY CONTROL INSPECTION 5 Q SCORE

Data Sheet2 (D.1) Project information for auto-fill of QC ScoreForm3 (F.1) - do not delete or c

Bournemo	Simon Wo	Gigler Mair	Basem Al-C	Saqib Khan	Duct Work	100-99A	2013-01-29	A	BH8 Engine	Eunice San	zzx-0891-2	2013-01-30	2
<i>Project Name</i>	<i>Project Manager</i>	<i>Location</i>	<i>Site Supervisor</i>	<i>QC Inspector</i>	<i>Element of Inspection Activity</i>	<i>Drawing No</i>	<i>Drawing date</i>	<i>Drawing Issue / Version</i>	<i>Sub-Contractors' Name</i>	<i>Sub-contractors' Agent</i>	<i>Sub-contractors' Drawing No</i>	<i>Sub-contractors' Drawing date</i>	<i>Sub-contractors' Drawing Issue / Version</i>
Bournemo	Simon Wo	Gigler Mair	Basem Al-C	Saqib Khan	Duct Work	100-99A	2013-01-29	A	BH8 Engine	Eunice San	zzx-0891-2	2013-01-30	2

QUALITY CONTROL INSPECTION 5 Q SCORE

edit row 2 (the next row)

3		BFC-Gig-87-065				
<i>Anticipated 5-Q Rating</i>	<i>Actual 5-Q Rating</i>	<i>I&TP Reference</i>	<i>Notes</i>	<i>Sample photograph (Acceptable)</i>	<i>Sample photograph (Not Acceptable)</i>	<i>Other Notes as Necessary</i>
3		BFC-Gig-87-065				

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QUALITY CONTROL INSPECTION 5 Q SCORE

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QUALITY CONTROL INSPECTION 5 Q SCORE

CORE ELEMENT INSPECTED	Sub-contractor INSPECTION	NOTES
Project Name Bournemouth FibreCity	Sub-contractors' Name BH8 Engineering	Nothing to report
Project Manager Simon Woodley	Sub-contractors' Agent Eunice Sangster	
Location Gigler Main Office	Sub-Cont' Drawing No zzx-0891-2	
Site Supervisor Basem Al-Quihidan	Sub-Cont' Drawing Date 30/01/2013	
QC Inspector Saqib Khan	Sub-Cont' Drawing Issue 2	
Element for Inspection Duct Work	<p>Is the above information the same as the site file / records? If Yes continue with inspection (Initial and date BOX B), if no stop and check with engineering only</p> <p>BOX B</p> <p>Have you been authorised by engineering to continue Inspection. If Yes Initial and date BOX B. If No, Initial and date BOX C</p> <p>BOX C</p> <p>In the space below, give brief summary of Engineering information for reason NOT to proceed with inspection</p>	
Drawing No 100-99A		
Drawing Date 29/01/2013		
Drawing Issue A		
<p>Is the above information the same as the site file / records? If Yes continue with inspection (Initial and date BOX A), if no stop and check with engineering only</p> <p>BOX A</p> <p>Have you been authorised by engineering to continue Inspection, if Yes Initial and date BOX A, If No, Initial and date BOX C, then give reason in box provided</p>		
<p>Engineering anticipated 5 Q rating ↓</p> <p>Q3</p> <p>3</p> <p>Actual rating identified by ↑ inspector</p>		<p>Enter above photo, sketch, schematic etc of good workmanship, what is expected</p> <p>Enter above photo, sketch, schematic etc of poor workmanship, what is not accepted</p>
<div> <div>Details</div> <div>Sub-contractor Details</div> <div>Other Notes as Necessary</div> </div>		

QUALITY CONTROL INSPECTION 5 Q SCORE

Project Name		Project Manager		Sub-contractors' Name	
<div>Bournemouth FibreCity</div>		<div>Simon Woodley</div>		<div>BH8 Engineering</div>	
Location		Site Supervisor		Sub-contractors' Agent	
<div>Gigler Main Office</div>		<div>Basem Al-Quihidan</div>		<div>Eunice Sangster</div>	
Inspectors Comments / Review				Agent's Comments	
Inspectors Signature		Date		Sign	

QUALITY CONTROL INSPECTION 5 Q SCORE

Details			Sub-contractor Details		PPE basic definitions / examples
Project Name	Project Manager		Sub-contractors' Name		<p>Footwear - shall be appropriate for the work undertaken. For electrical work, a Class S3 boot or shoe shall be worn, pouring concrete - Safety Wellingtons shall be worn</p> <p>Hard hats or where appropriate bump caps shall be worn at all times</p> <p>The appropriate eye protection shall be worn at all times, for welding the appropriate goggles or flip mask shall be worn and the area screened</p> <p>Hi-Visibility jackets / vests shall be worn at all times</p> <p>For noisy environments the appropriate hearing protection shall be worn at all times, ear plugs (disposable type) are for short term use only - not to exceed 1 hour</p> <p>Gloves / gauntlets shall be worn for specific tasks, such as handling chemicals, oils, solvents, paints and adhesive; also when welding and climbing scaffold or towers</p> <p>Face masks shall be worn when and where appropriate</p> <p>BA sets, Fall Arrest, Harnesses and Gas Monitoring equipment shall only be used by trained personnel for specific tasks</p> <p>Appropriate and contractual First Aid and Fire Fighting equipment shall be available and in good working order at times</p>
Bournemouth FibreCity	Simon Woodley		BH8 Engineering		
Location	Site Supervisor		Sub-contractors' Agent		
Gigler Main Office	Basem Al-Quihidan		Eunice Sangster		
SITE HEALTH AND SAFETY INSPECTION					
PPE Checklist - Personnel		PPE Checklist - Sub-contractor		Site Inspector's Notes	
All Company personnel on site shall at all times wear the appropriate PPE for the work undertaken.		All Sub-contractor personnel on site shall at all times wear the appropriate PPE for the work undertaken.			
PPE Type	Worn	Condition	PPE Type	Worn	Condition
Footwear	F		Footwear	SCF	
Hard hat	HH		Hard hat	SCHH	
Eyewear	E		Eyewear	SCE	
Hi Vis	HV		Hi Vis	SCHV	
Hearing	H		Hearing	SCH	
Gloves	G		Gloves	SCG	
Other Clothing			Other Clothing		
	O			SCO	
Face mask	FM		Face mask	SCFM	
BA set	BA		BA set	SCBA	
Fall Arrest	FA		Fall Arrest	SCFA	
Harness	HN		Harness	SCHN	
Gas Monitor			Gas Monitor		
	GM			SCGM	
First Aid Kit and Fire Extinguisher			First Aid Kit and Fire Extinguisher		
	FAK	FE		SCFAK	SCFE
Totals		0	Totals		0
			Sub-contractors acknowledgement		
			Print Name		
			Signature		

An isolated single breach of not wearing PPE shall result in immediate rectification. More than an isolated event the Inspector is authorised to stop all work

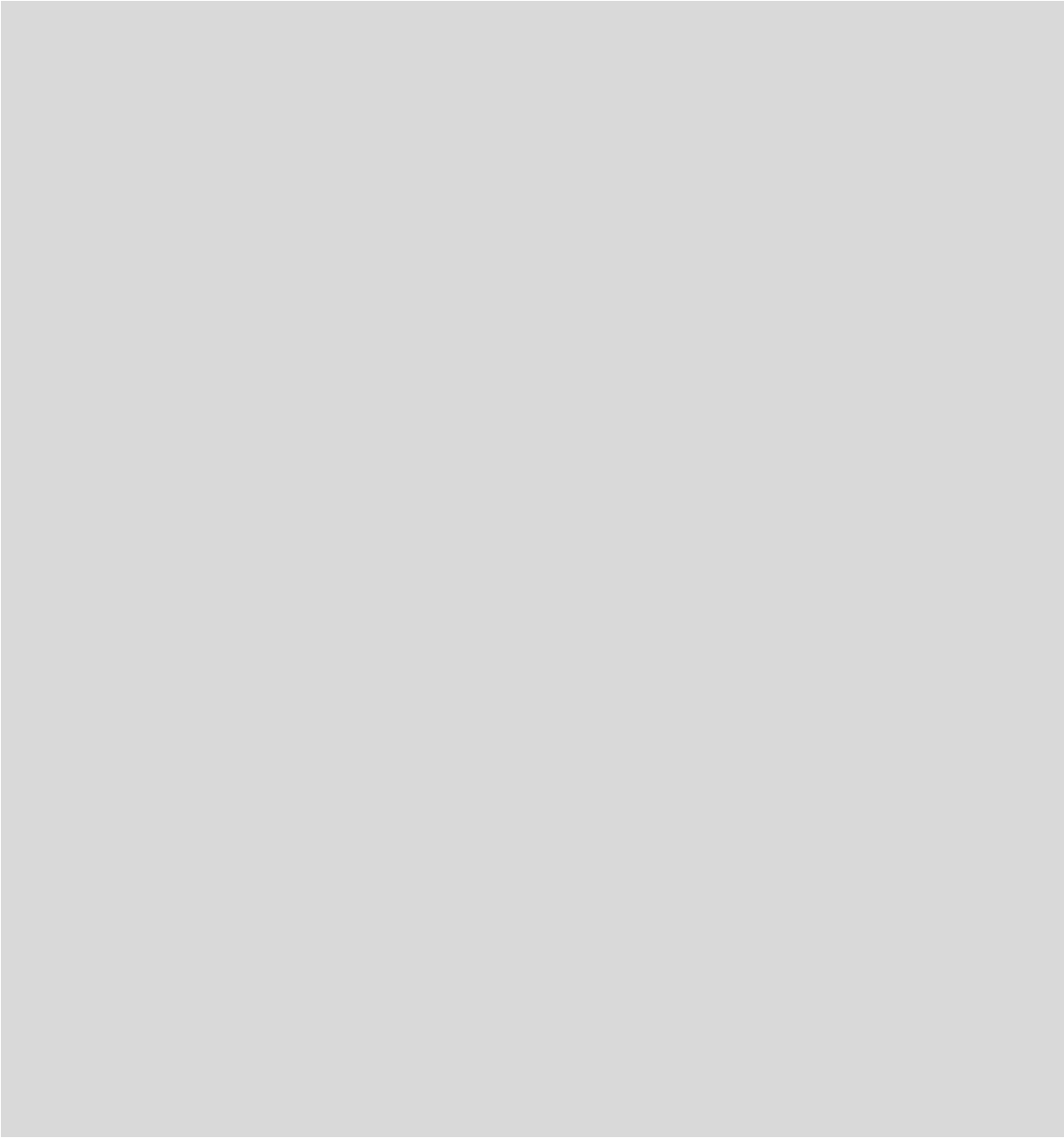
All PPE shall be provided Free Of Charge to the employee, by the employer. This includes replacement of worn-out or damaged items of kit

QUALITY CONTROL INSPECTION 5 Q SCORE

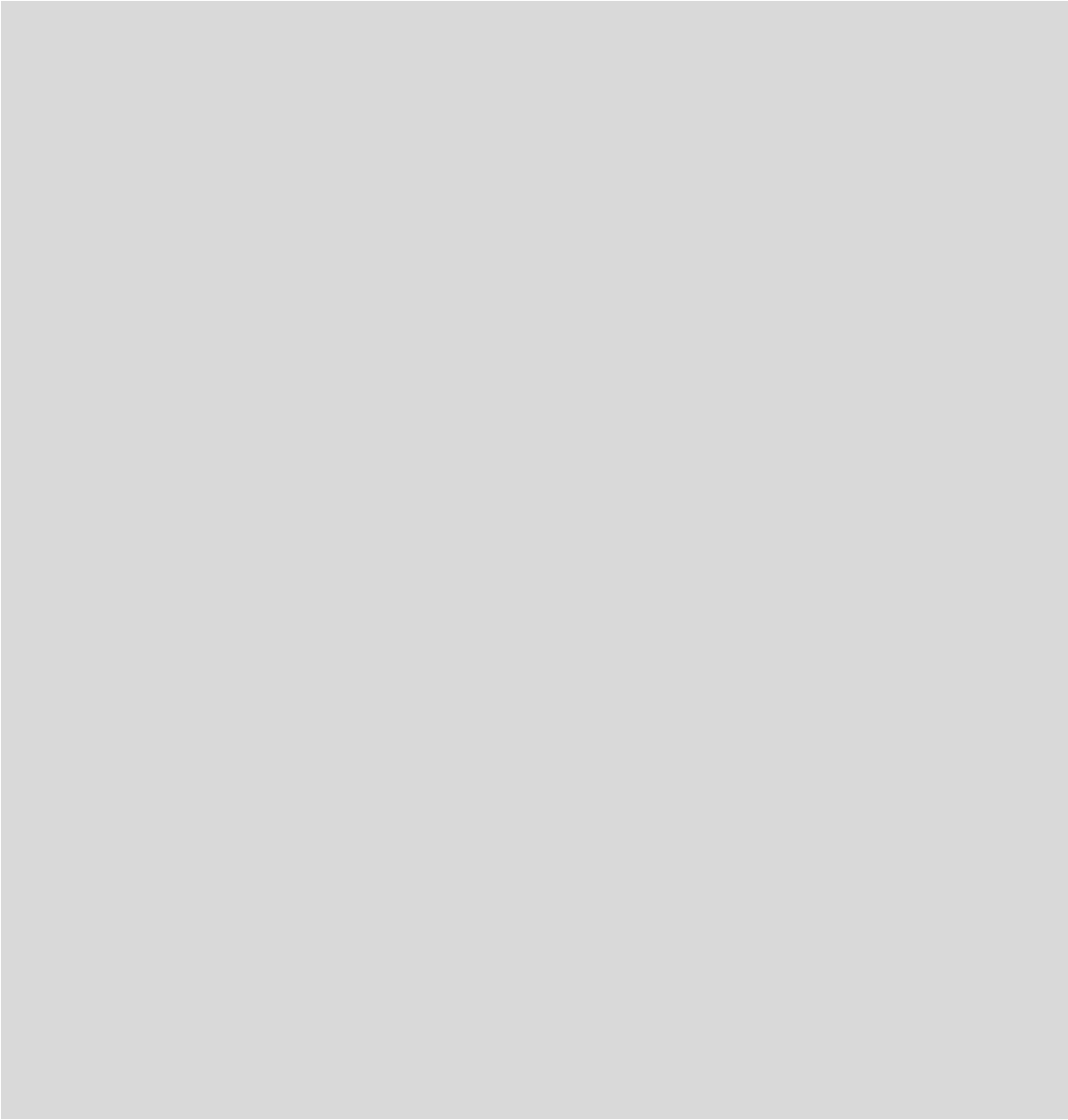
[illegible]

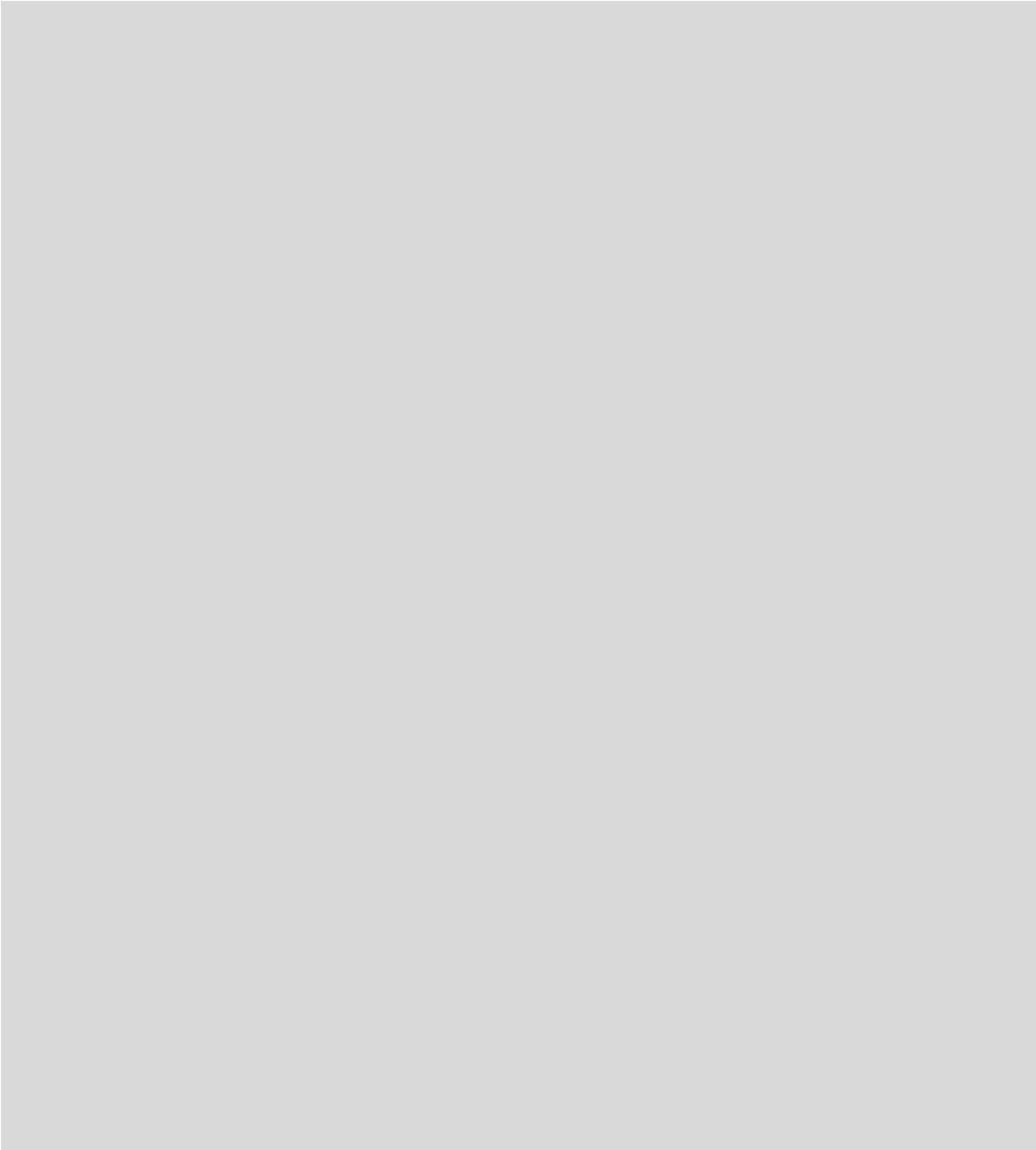
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QUALITY CONTROL INSPECTION 5 Q SCORE





QUALITY CONTROL INSPECTION 5 Q SCORE

			5-Q Quality Control [Inspection]								
			<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>
W/E	Date	No of Insp.	1								
		Rating	1								
	Expected Rating		1								
W/E	Date	No of Insp.	3								
		Rating	10								
	Expected Rating		1								
W/E	Date	No of Insp.	1								
		Rating	1								
	Expected Rating		1								
W/E	Date	No of Insp.	1								
		Rating	1								
	Expected Rating		1								
W/E	Date	No of Insp.	1								
		Rating	1								
	Expected Rating		1								

QUALITY CONTROL INSPECTION 5 Q SCORE

	CUMULATIVE								
Total Inspections	7	0	0	0	0	0	0	0	0
Sum of ratings	14	0	0	0	0	0	0	0	0
Average rating	2								
Average of ratings	2.8	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

QUALITY CONTROL INSPECTION 5 Q SCORE

| Performance Measurement - VERIFICATION RATINGS By Project

<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>	<i>Project Inspection Element</i>
---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------	---------------------------------------

WEEKLY SCORES BY PROJECT

QUALITY CONTROL INSPECTION 5 Q SCORE

RELATIVE MONTHLY SCORES BY PROJECT

0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

QUALITY CONTROL INSPECTION 5 Q SCORE

Weekly Total	Weekly Rating (Average)	Monthly Total	Monthly Rating (Average)
1	1.00	7	1.47
1	1.00		
1	1.00		
3	3.33		
10	0.33		
1	1.00		
1	1.00		
1	1.00		
1	1.00		
1	1.00		
1	1.00		
1	1.00		
1	1.00		
1	1.00		

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QUALITY CONTROL INSPECTION 5 Q SCORE

Total Cumulative Scores

7	Total Number of Inspections
14	Sum of all ratings
2.00	Average of Averages

QUALITY CONTROL INSPECTION 5 Q SCORE

Data Sheet2 (D.2) Health and Safety PPE Requirements inform

		F	SCF	HH	SCHH	E	SCE	HV	SCHV	H	SCH	G	SCG
Project Name	Element of Inspection	Footwear	Sub-contractor Footwear	Hard hat	Sub-contractor Hard hat	Eye wear	Sub-contractor Eye wear	Hi Vis	Sub-contractor Hi Vis	Hearing	Sub-contractor Hearing	Gloves	Sub-contractor Glo
		F	SCF	HH	SCHH	E	SCE	HV	SCHV	H	SCH	G	SCG

QUALITY CONTROL INSPECTION 5 Q SCORE

Information for auto-fill of QC ScoreForm3 (F.1) - do not delete or edit row 2 (the next row)

O	SCO	FM	SCFM	BA	SCBA	FA	SCFA	HN	SCHN	GM	SCGM	FAK	SCFAK	FE
Other Clothing	Sub-contractor Other Clothing	Face mask	Sub-contractor Face mask	BA set	Sub-contractor BA set	Fall Arrest	Sub-contractor Fall Arrest	Harness	Sub-contractor Harness	Gas Monitor	Sub-contractor Gas Monitor	First Aid Kit	Sub-contractor First Aid Kit	Fire Extinguisher
O	SCO	FM	SCFM	BA	SCBA	FA	SCFA	HN	SCHN	GM	SCGM	FAK	SCFAK	FE

QUALITY CONTROL INSPECTION 5 Q SCORE

SCFE	
Sub-contractor Fire Extinguisher	
Other Notes as Necessary	
SCFE	

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QUALITY CONTROL INSPECTION 5 Q SCORE

5-Q Quality Control Inspection Performance Measurement

User Instructions

This workbook comprises of a number of sheets / tabs - the instructions for each follow, the tab names are in the font colour **VIOLET**. Do not delete, rename or alter the sheets / tabs in anyway, as this will have a negative impact on some of the automation built into this workbook

Instruction1 (I.1)

Gives an over view of the reasons for scoring inspection activities and the criteria for each score. A flow diagram is also included to aid the reader in understanding the process. This workbook contains example information which you can delete if required

Data Sheet2 (D.1)

This sheet / tab is used in two ways. (1) It acts as a record of planned inspections and (2) it ensures that core information required by Inspection personnel is made available for their Inspection form(s). Health and Safety requirements are specified in [Data Sheet5 (D.2)]

Row one (1) is a header for this sheet. Row two (2) [contains example data only] links to other sheets in the workbook, do not alter or delete row two. Row three (3) is the prompts for information required. Add your data to row four (4) and for each inspection, add to a subsequent row, for example row 5,6,7 etc. Do not delete or change data in row four (4) and onwards as this becomes part of your record for inspections

When you have added your data to row (4) [contains example data only] or subsequent row(s), to automate the completion of the Inspectors form [QC ScoreForm3 (F.1) do the following. Using shortcut keys or mouse etc highlight the row of data for which you need to print the inspection sheet for. Now use the copy command and then place the cursor at the beginning of row two (2) and use the paste command. If you have done this correctly your information should now be in the appropriate positions in the [QC ScoreForm3 (F.1)

QC ScoreForm3 (F.1)

If you have followed the instruction above, this form should now be complete on all pages with the core information required to conduct the inspection activity. If for any reason the auto-complete function has not worked, then complete the form manually either using a computer or pen. Now print this sheet / tab - or send an electronic copy of the file to the assigned inspector. The inspector completes the inspection(s) and records results on the form manually or electronically. Note Health and Safety information is added by completing [Data Sheet5 (D.2)]

QC AnalysisForm4 (F.2)

This sheet / tab is for analysis - it is currently incomplete, but is here for you to use / alter as you wish

Data Sheet5 (D.2)

QUALITY CONTROL INSPECTION 5 Q SCORE

This sheet / tab is used in two ways. (1) It acts as a record of planned inspections and (2) it ensures that core information required by Inspection personnel is made available for their Inspection form(s). This sheet contains only Health and Safety requirements

Row one (1) is a header for this sheet. Row two (2) links to other sheets in the workbook, do not alter or delete row two. Row three (3) is the prompts for information required. Add your data to row four (4) and for each inspection, add to a subsequent row, for example row 5,6,7 etc. Do not delete or change data in row four (4) and onwards as this becomes part of your record for inspections

When you have added your data to row (4) or subsequent row(s), to automate the completion of the Inspectors form [QC ScoreForm3 (F.1)] do the following. Using shortcut keys or mouse etc highlight the row of data for which you need to print the inspection sheet for. Now use the copy command and then place the cursor at the beginning of row two (2) and use the paste command. If you have done this correctly your information should now be in the appropriate positions in the [QC ScoreForm3 (F.1)]

Instruction6 (I.2)

This page. Will be updated as changes to the workbook are made

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