

CASE STUDY - 2 Writing/Illustrating**TASK TITLE: Writing/Illustrating**

Task Description:	<p>Writing and illustrating may involve the pen, pencil, or felt pen. The diameter of the pen/pencil/felt pen can vary in diameter from ¼” (.635 cm) to 1” (2.54 cm). The length of time writing or illustrating varies significantly as well as the type of work that is typically performed. Writing and illustrating can be performed on a flat surface or an angled/height-adjustable drafting table.</p> <p>Typical jobs in which writing and illustrating is performed include:</p> <ul style="list-style-type: none">• desktop publishing• customer service/record keeping contracts
Job Performance Measures Most often impacted by Writing/Illustrating:	Error rates, number of records/documents processed
Typical Employee Comments about Writing/Illustrating:	Employees typically complain about discomfort and/or stiffness in the hands/wrists, arms, and shoulders/neck.
Suggested Level II Analysis:	Postural analysis, light level analysis.

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
1. Arms held away from body	<ul style="list-style-type: none"> Holding up pages of a multi-page reference document  <p>Figure 2.1</p> <ul style="list-style-type: none"> Person reaches to write on document which is too far away on work surface Person does not rest the hand while writing 	57. Position document on document support: <ul style="list-style-type: none"> provide a mechanical holder for pages; separate pages in document so that pages can be viewed one at a time; investigate electronic storage of documents. 	✓		low to med.	low	med.
		35. Move item in work zone: <ul style="list-style-type: none"> move the document closer to the edge of the work surface; items which are used every few minutes or more should be placed close to the body. 	✓	✓	low	med.	med.
		18. Install palm rest: <ul style="list-style-type: none"> provide a place for the person to rest the hand while writing; encourage the person to rest the hand while writing. 	✓		low	low	low

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Chair positioned too far away Arms of chair interfere with moving chair closer  <p>Figure 2.2</p> <ul style="list-style-type: none"> Lack of leg clearance under desk Items used frequently not positioned close to the body 	<p>33. Move chair closer to surface edge.</p> <p>90. Remove or lower armrests:</p> <ul style="list-style-type: none"> remove or adjust armrests, pencil drawers or other obstructions if they prevent the person from moving close enough to the workstation. <p>78. Provide proper chair in which the armrests can be adjusted or removed.</p> <p>89. Remove clutter from under work surface.</p> <p>35. Move item in work zone:</p> <ul style="list-style-type: none"> items which are used every few minutes or more should be placed close to the body. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>low</p> <p>low to med.</p> <p>med. to high</p> <p>low</p> <p>low</p>	<p>low</p> <p>med.</p> <p>med.</p> <p>med.</p> <p>med.</p>	<p>low</p> <p>med.</p> <p>med.</p> <p>med.</p>

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
2. Repeated reaching	<ul style="list-style-type: none"> Turning pages repeatedly Moving documents repeatedly 	57. Position document on document support: <ul style="list-style-type: none"> provide a mechanical holder for pages; separate pages in document so that pages can be viewed one at a time; investigate electronic storage of documents. 	✓		low to med.	low	med.
			✓		low	low	med.
				✓	high	med.	med.
			✓		low	med.	med.
	<ul style="list-style-type: none"> Items used frequently not positioned close to the body 	35. Documents requiring frequent page turning should be in the primary work zone; that is, it should not require a reach in order to turn the pages.	✓		low	med.	med.
		34. Move items closer to body: <ul style="list-style-type: none"> prioritize the location of items on the workstation according to frequency of use; those items which are more frequently used should be closer to the body and more easily accessible. 	✓		low	med.	med.

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> • Too many documents or too much paperwork on the desk at one time 	36. Move items closer to body: <ul style="list-style-type: none"> • prioritize the location of items according to frequency of use; • those items which are not used frequently should be filed or otherwise removed from the work surface to increase space for more frequently used items. 	✓		low	med.	med.
	<ul style="list-style-type: none"> • Inadequate work space • Work surface inadequate space to support materials for required tasks 	77. Provide a larger work surface: <ul style="list-style-type: none"> • provide a work surface which has adequate space for required tasks; • provide an auxiliary work surface; • go to a different area, which has a larger work surface for performing space intensive tasks; • increase the size of the existing work surface. 		✓	med. to high	med.	med.

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Chair positioned too low 	85. Raise chair: <ul style="list-style-type: none"> set the height of the chair so that the work surface is about half way between resting elbow height and shoulder height; Note: in some cases, a footrest will be required in order to support the person's feet. 	✓		low	low	low
3. Shrugging: working with the shoulders shrugged	<ul style="list-style-type: none"> Rarely occurs 	N/A					
4. Repeated arm forces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
5. Holding/ carrying materials	<ul style="list-style-type: none"> Rarely occurs 	N/A					
6. Cradling the telephone between the neck and shoulders	<ul style="list-style-type: none"> Rarely occurs 	N/A					
7. Head Bent down, up, or neck twisted	<ul style="list-style-type: none"> Reference document positioned flat on work surface (see Figure 2.5) 	4. Angle work surface to bring work closer to the body and the eye: <ul style="list-style-type: none"> if document is manipulated frequently or written on, an 	✓		med.	med.	med.

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	 <p>Figure 2.5</p>	<p>inclined work surface is preferred;</p> <ul style="list-style-type: none"> the inclined surface should be able to be moved easily and, preferably, adjustable in incline; the inclined surface needs a stop at the bottom to hold papers; the inclined surface can be a purchased accessory or it can be made by taping several empty 3-ring binders together and taping a clip board or a piece of card board at the bottom to hold papers. 					
	<ul style="list-style-type: none"> Document is too far away or is too far to the side 	<p>34. Move items closer to body:</p> <ul style="list-style-type: none"> prioritize the location of items on the workstation according to frequency of use; those items which are more frequently used should be closer to the body and more easily accessible. 	✓		low	med.	med.
	<ul style="list-style-type: none"> Text is difficult to read 	<p>12. Improve character size and style on document and monitor:</p> <ul style="list-style-type: none"> increase size of text on hard 	✓		low	med.	med.

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
		copy; • improve clarity of text on hard copy.					
	<ul style="list-style-type: none"> Uncorrected visual disorders cause the person to lean forward to read monitor or documents 	6. Check eyes and correct for visual disorders and encourage person to have visual disorders corrected.		✓	med. to high	med.	med.
	<ul style="list-style-type: none"> Light levels too low 	82. Provide task light: <ul style="list-style-type: none"> increase light levels on documents being read; light levels of between 50-100 fc are recommended for reading and writing tasks; an adjustable task light (i.e., desk lamp) can help direct more light to the appropriate documents. 		✓	low to med.	med.	med.

Case Study 2 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Chair too high 	28. Lower chair: <ul style="list-style-type: none"> set the height of the chair so that the work surface is about half way between resting elbow height and shoulder height. 	✓		low	low	med.
	<ul style="list-style-type: none"> Work surface too low 	86. Raise desk: <ul style="list-style-type: none"> set the height of the document support surface so that the work surface is about half way between resting elbow height and shoulder height. 	✓	✓	low	low	med.

Case Study 2 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
8. Bent wrists	<ul style="list-style-type: none"> Angle and position of work surface/document used for writing (see Figure 2.6)  <p style="text-align: center;">Figure 2.6</p>	<p>4. Angle work surface to bring work closer to the body and the eye:</p> <ul style="list-style-type: none"> if document is handled, flipped or written on, an inclined work surface is preferred; the inclined surface should be able to be moved easily and, preferably, adjustable in incline; the inclined surface needs a stop at the bottom to hold papers; the inclined surface can be a purchased accessory or it can be made by taping several empty 3-ring binders together and taping a clip board or a piece of card board at the bottom to hold the papers. 	✓		low	low	med.
9. Repeated wrist movements		<p>34. Move items closer to body:</p> <ul style="list-style-type: none"> prioritize the location of items on the workstation according to frequency of use; those items which are more frequently used should be closer to the body and more easily accessible. 	✓		low	low	med.

Case Study 2 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
			✓		low	low	low
	<ul style="list-style-type: none"> Person rests wrists on front edge of large book or binder that is used for writing 	44. Orient paper by turning it so that the area worked on is close to the body and a straight wrist is maintained while writing. 95. Train proper body mechanics posture: <ul style="list-style-type: none"> encourage person to maintain straight wrists while keying; encourage person to keep wrists free while keying ; encourage person to avoid bending the wrists while resting the hands. 	✓		low	low	low
		18. Install palm rest: <ul style="list-style-type: none"> a palm rest can provide a comfortable place to rest when not keying and encourages neutral wrist posture; a palm rest is only necessary if there is not another comfortable place to rest the hands without having to bend the wrists. 	✓		low	low	low

Case Study 2 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
10. Repeated finger movements	<ul style="list-style-type: none"> • Writing speed and length of task • Length of task without a work break 	95. Train proper body mechanics posture and encourage the person to avoid rushing.	✓		low	med.	med.
		13. Incorporate health comfort strategies: <ul style="list-style-type: none"> – alternate tasks; – stretch; – take rest pauses. 	✓		low	low	low
		88. Redesign job: <ul style="list-style-type: none"> • adjust job activities to distribute keying activities throughout the day; • break up continuous keying and mousing tasks with other types of tasks. 		✓	low to med.	med.	med.
11. Hyper-extension of finger/thumb	<ul style="list-style-type: none"> • Rarely occurs 	N/A					
12. Hand forces	<ul style="list-style-type: none"> • Gripping the pen/pencil too hard 	96. Train proper body mechanics; encourage person to practice using as light a grip as possible on the pen or pencil.	✓		low	low	low

Case Study 2 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
		2. Alternate grips for pen to help reduce gripping force: <ul style="list-style-type: none"> attach a compressible grip surface to pens/pencils to reduce forces required to hold pen/pencil 	✓		low	low	low
13. Hard edges	<ul style="list-style-type: none"> Wrists rest on edge of work surface or 3-ring binder (see Figure 2.7)  <p style="text-align: center;">Figure 2.7</p>	18. Install palm rest: <ul style="list-style-type: none"> the hard edge can be eliminated by attaching a rounded edge to the front edge of the work surface. This option is generally preferred over the use of a palm rest; a palm rest can provide a comfortable place to rest when not keying and encourages neutral wrist posture; a palm rest is only necessary if there is not another comfortable place to rest the hands without having to bend the wrists. 	✓	✓	low to med.	low	low

Case Study 2 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Hard arm rests 	94. Train worker to properly adjust chair: <ul style="list-style-type: none"> attach padding to the armrests to eliminate exposure to hard edges. 	✓		low	low	low

Case Study 2 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
		78. Provide proper chair: <ul style="list-style-type: none"> provide a chair with padded armrests. 		✓	med to high	low	low
14. Repeated forearm rotation	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
15. Leaning forward or poor lower back posture	<ul style="list-style-type: none"> Document positioned flat on work surface 	4. Angle work surface to bring work closer to the body and the eye: <ul style="list-style-type: none"> if document is handled, flipped or written on, an inclined work surface is preferred; the inclined surface should be able to be moved easily and, preferably, adjustable in incline; the inclined surface needs a stop at the bottom to hold papers; the inclined surface can be a purchased accessory or it can be made by taping several empty 3-ring binders together and taping a clip board or a piece of card board at the bottom to hold the papers. 	✓		med	med	med
	<ul style="list-style-type: none"> Documents too far away or too far to the side 	35. Move item closer to body: <ul style="list-style-type: none"> position documents so they can be read easily without leaning forward; prioritize the location of items on the workstation according to frequency of use. 	✓		low	med	med

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Text is difficult to read 	12. Improve character size and style on document and monitor: <ul style="list-style-type: none"> increase size of text on hard copy; improve clarity of text on hard copy. 	✓		low	med	med
	<ul style="list-style-type: none"> Uncorrected visual disorders cause the person to lean forward to read monitor or documents 	6. Check eyes and correct for visual disorder: <ul style="list-style-type: none"> encourage person to have visual disorders corrected. 		✓	med to high	med	med
	<ul style="list-style-type: none"> Light levels too low 	82. Provide task light: <ul style="list-style-type: none"> increase light levels on documents being read; light levels of between 50-100 fc are recommended for reading and writing tasks; an adjustable task light (i.e., desk lamp) can help direct more light to the appropriate documents. 		✓	low to med	med	med

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Chair too high 	28. Lower chair: <ul style="list-style-type: none"> set the height of the chair so that the work surface is about half way between resting elbow height and shoulder height. 	✓		low	low	med
	<ul style="list-style-type: none"> Work surface too low 	86. Raise desk: <ul style="list-style-type: none"> set the height of the document support surface so that the work surface is about half way between resting elbow height and shoulder height. 	✓	✓	low	low	med
	<ul style="list-style-type: none"> Person has a habit of leaning forward while working. 	95. Train worker on proper body mechanics: <ul style="list-style-type: none"> encourage person to rest the back against back rest and sit back and relax while working; encourage person to push his or her chair toward the workstation in order to reduce the tendency to lean forward. 	✓		low	med	med

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Inappropriate chair adjustment 	94. Train worker to properly adjust chair: <ul style="list-style-type: none"> adjust back rest to support lower back; attach a small pillow to back rest to support lower back. 	✓		low	med	med
	<ul style="list-style-type: none"> Inadequate chair 	78. Provide proper chair: <ul style="list-style-type: none"> provide a chair with a back rest; provide a chair with adequate lower back support. 		✓	med to high	med	med
	<ul style="list-style-type: none"> Chair arms interfere with moving chair closer 	90. Remove or lower armrests: <ul style="list-style-type: none"> remove or adjust armrests, pencil drawers or other obstructions if they prevent the person from moving close enough to the workstation. 	✓		low to med	med	med
		78. Provide proper chair: <ul style="list-style-type: none"> provide a chair in which the armrests can be adjusted or removed. 		✓	med to high	med	med

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> • Seat pan on chair is too deep 	75. Provide back support: <ul style="list-style-type: none"> • attach a pillow to back rest to decrease the seat pan depth and support the lower back; • provide a chair with an adequate/adjustable seat pan depth and adequate lower back support. 	✓		low	med	med
	<ul style="list-style-type: none"> • Inadequate foot support causes person to not lean against back rest. 	81. Provide footrest: <ul style="list-style-type: none"> • provide a footrest which allows both the heels and toes to be supported; 		✓	med to high	med	med
	<ul style="list-style-type: none"> • Chair too high causes person not lean against back rest. 	<ul style="list-style-type: none"> • a footrest can be a purchased item ; • a box or several ring binders taped securely together can also be used; • A footrest of one height may not be appropriate for all sized individuals or workstations (footrests which come in several heights or are adjustable in height are preferred); • a footrest should be large enough to allow the feet to move freely (a size of 16" x 20" (40.64 cm X 50.8 cm) is recommended). 	✓		low	low	low

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
		28 Lower chair: <ul style="list-style-type: none"> adjust the chair height so that the person's heels and toes can both rest comfortably on the floor or other foot rest; care must be given to insure that adjusting the chair for the feet does not cause problems for the hands, wrists, and arms; 	✓		low	low	low
16. Repeated bending	<ul style="list-style-type: none"> Reaching for items too far from body (See Figure 2.8)  <p style="text-align: center;">Figure 2.8</p>	35. Move item closer to body: <ul style="list-style-type: none"> position documents so they can be read easily without leaning forward; prioritize the location of items on the workstation according to frequency of use. 	✓		low	med	med
17. Lifting forces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
18. No foot support	<ul style="list-style-type: none"> Chair too high 	28 Lower chair: <ul style="list-style-type: none"> adjust the chair height so that the person's heels and toes can both rest comfortably on the floor or other foot rest; care must be given to insure that adjusting the chair for the feet does not cause problems for the hands, wrists, and arms. 	✓		low	low	low

Case Study 2 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> • Feet are unsupported 	76. Provide footrest: <ul style="list-style-type: none"> • provide a footrest which allows both the heels and toes to be supported; • a footrest can be a purchased item or a box or several ring binders taped securely together; • a footrest of one height may not be appropriate for all sized individuals or workstations (footrests which come in several heights or are adjustable in height are preferred); • a footrest should be large enough to allow the feet to move freely (a size of at least 16" x 20" (40.64 cm X 50.8 cm) is recommended). 	✓		low to med	low	low

Case Study 2 (continued)

Legs/Feet

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
19. Edge of seat or worksurface presses into legs	<ul style="list-style-type: none"> • Feet are not supported 	<p>76. Provide footrest:</p> <ul style="list-style-type: none"> • a footrest can support the feet and simultaneously reduce pressure on the back of the leg; • a footrest can be a purchased item or a box or several ring binders taped securely together; • a footrest of one height may not be appropriate for all sized individuals or workstations (footrest footrests which come in several heights or which are adjustable in height are preferred); • a footrest should be large enough to allow the feet to move freely (a size of at least 16" x 20" (40.64 cm X 50.8 cm) is recommended). 	✓		low to med	low	low



Figure 2.9

Case Study 2 (continued)

Legs/Feet

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
		28 Lower chair: <ul style="list-style-type: none"> adjust the chair height so that the person's heels and toes rest comfortably on the floor or other foot rest; insure that adjusting the chair for the feet does not cause problems for the hands, wrists, and arms. 	✓		low	low	low
	• Seat pan has a hard front edge	94. Train worker to properly adjust chair: <ul style="list-style-type: none"> provide a cushion for the seat pan to prevent contact with hard edge. 	✓		low to med	low	low
		78. Provide proper chair. <ul style="list-style-type: none"> provide a chair with a rounded front edge on the seat pan. 		✓	med to high	med	med
	• Seat pan too long	75. Provide back support: <ul style="list-style-type: none"> attach a pillow to back rest to decrease the seat pan depth and support the lower back; provide a chair with an adequate/adjustable seat pan depth and adequate lower back support. 		✓	med	low	low
				✓	med	low	low

Case Study 2 (continued)

Legs/Feet

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Obstructions under worksurface interfere with leg clearance and expose person to hard edges: <ul style="list-style-type: none"> pencil drawers keyboard trays or structural supports 	89. Remove clutter from under work surface: <ul style="list-style-type: none"> eliminate obstructions; remove pencil drawers; replace problem keyboard trays with trays that do not expose person to hard edges. 	✓	✓	low to med	med	med
20. Hard floor surfaces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
21. Kneeling/squatting	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 2 (continued)

Head/Eyes

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
22. Staring at screen or document	<ul style="list-style-type: none"> Length of work task without a change of position for the eyes. 	46. Periodically look away from screen/document.	✓		low	med	med
		13. Incorporate health comfort strategies: <ul style="list-style-type: none"> – alternate tasks – stretch – take rest pauses 	✓		low	med	med
23. Glare	<ul style="list-style-type: none"> Glare directly from a light source (e.g., looking towards an uncovered window) Glare from an uncovered window reflected off surfaces Task light shines into eyes (See Figure 2.10)  <p>Figure 2.10</p>	8. Close blinds or curtains: <ul style="list-style-type: none"> provide window coverings if not available. 	✓	✓	low	med	med
		9. Cover or turn out under-cabinet lighting: <ul style="list-style-type: none"> cover the task light to prevent it from shining into eyes; and, replace under-cabinet lighting with an adjustable desk lamp. 	✓	✓	low to med	med	med
		40. Move monitor out from under-cabinet lighting.	✓		low to med	med	med

Case Study 2 (continued)

Head/Eyes

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
24. Light levels	<ul style="list-style-type: none"> Light level too low to read document 	82 Provide task light: <ul style="list-style-type: none"> provide task light (50-100 fc is an appropriate range of light levels for reading tasks); increase overall light levels to meet the lighting needs of computer and paper tasks (50 fc is an appropriate light level where both computer and paper tasks are performed). 		✓	low to med	med	med
25. Screen distance	<ul style="list-style-type: none"> Rarely occurs 	N/A					
26. Difficult to read	<ul style="list-style-type: none"> Document text too small Document text hand written hard to read 	12. Improve character size and style on document and monitor: <ul style="list-style-type: none"> increase size of text on hard copy; improve clarity of text on hard copy. 	✓		low	med	med