APPENDIX B

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B.1. Position/Worker Specific Data Form

Position / Worker Specific Data Form (Form A)

1. Subject I.D. _____ <AA0001>
2. Subject Name: _____
3. ☐Male ☐Female
4. Age: _____ <years>
5. Facility: _____
6. Date: _____ <MM / DD / YYYY>
7. Time (24hr): _____ <2:30 pm = 14:30, midnight = 00:00>
8. Analyst #1: _____
9. Analyst #2: _____

Position Information

10. Line / Department Title: _____
11. Position Title: _____
12. Position Description: _____

_____

_____

_____

13. Typical Shift ***Start*** Time (24hr): _____
14. Typical Shift ***End*** Time (24hr): _____
15. Break-Time (Minutes/day): _____ <Total of Lunch & Breaks / Day> Minutes
16. # of ***Distinct*** Jobs Rotated to: _____
17. Average Work ***Hours***/Week: _____
18. Maximum Work ***Hours***/Week: _____
19. Average Work ***Days***/Week: _____
20. Maximum Work ***Days***/Week: _____
21. Note Unusual Schedule Here: _____

_____

22. Jobs Included in Position:

Job #	Job Title/Description	PACE Self, Line, Piece Rate	LBS/Rotation (lbs/t)	Continuous Duration (Hours, t)	Total Hours/ Day (∑t, Hours)	Typical Work % of Week	# of Times/ Month (Peak Exposures Only)
1		S L P					
2		S L P					
3		S L P					
4		S L P					
5		S L P					
6		S L P					
7		S L P					
8		S L P					

Form# LBP05042004

B.2. Job Summary Data Form

Subject ID: _____

Worker Information

23. Prior Work Experience; Maximum of 10 Years ***OR*** Maximum of 5 Jobs[1]:
(Include Current Position and *significantly* different prior positions with *present* employer first)

Position	Title / Description	Years	Average Low Back Borg Rating
Current			
Prior #1			
Prior #2			
Prior #3			
Prior #4			
Prior #5			

24. Do you currently work on a second job outside of this facility? ☐Yes ☐No

25. If Yes, 2nd Job Title/Description: _____

_____

26. Average Hours/Week on 2nd Job: _____ 27. Number of Years on 2nd Job: _____

28. Low Back Overall (Average) Borg Rating for 2nd Job: _____

	Worker Estimated Rating (Stress) (Low Back Only)	Worker Rating @ Beg/End (Stress) (Low Back Only)
29. Overall Worker Rating at ***Beginning*** of Shift[3] (Borg CR-10)		
30. Overall Worker Rating at ***End*** of Shift[3] (Borg CR-10)		

31. Analyst Notes (Optional): _____

_____

_____

_____

Job Summary Data Form (Form B)

1. Subject I.D. _____ 2. Job # (From "Position Data Form, Field #22"): _____
<From Position Form, Field #1>

3. Facility: _____ 4. Date: _____
<MM / DD / YYYY>

5. Data Form Inventory

Data Form 'Name'	Form 'Letter'	Not Used	# of TOTAL Pages
Job Specific Data Form	C		1
Steady State Lifting/Lowering	D		
Variable State Lifting/Lowering	E		
Pushing/Pulling	F		
Walking/Carrying/Holding	G		

6. Summary Notes/Data (include "to-do" for analysis and "issues" with data):

7. Jobs Considered Identical for Data Analysis Purposes

Name	Location	Collected?	Notes:

8. Time Adjustments for Motion Counts / Energy Expenditure

Tape Code	Video Code	Segment Length	Actual Length	Ratio

9. Motion Counts: (Load = >4lbs/Hand)

	W/ Load	*W/O Load*
# Trunk Flexions (≥30°)		
# Trunk Rotations (≥±45°)		
# Lateral Bend (≥10°)		
# 180° Turns		

Form # LBS05042004

B.3. Job Specific Data Form

Job Specific Data Form (Form C)

1. Subject I.D. _____ <From Position Form, Field #1>
2. Analyst Name(s): _____
3. Observation Time (minutes): _____
4. Job ID (Plant Official): _____
5. Facility: _____
6. Time (24hr): _____ <2:30 pm = 14:30, midnight = 00:00>
7. Date: _____ <MM / DD / YYYY>
8. Job # (From "Position Data Form, Field #22"): _____

Job Overview

9. Specify the ***Percentage of Time*** Spent in EACH of the Sub-Activities Listed Below:

Manual Material Handling	Assembly (Specify Light or Heavy Assembly)	Paperwork (with or without Computer)	Fork-Truck Riding	Resting/Waiting
_____%	_____%	_____%	_____%	_____%
☐Sitting ☐Standing	☐Sitting ☐Standing ☐Light ☐Heavy	☐Sitting ☐Standing	☐Sitting ☐Standing	☐Sitting ☐Standing

10. Specify the ***Low-Back Borg CR-10 Rating*** for EACH of the Sub-Activities Listed Below:

Manual Material Handling		Assembly		Paperwork (with or without Computer)		Fork-Truck Riding		Resting/Waiting	
Worker	Analyst	Worker	Analyst	Worker	Analyst	Worker	Analyst	Worker	Analyst
CR-10	CR-10	CR-10	CR-10	CR-10	CR-10	CR-10	CR-10	CR-10	CR-10

11. Specify the Single, ***Most Stressful Low-Back Task*** and Associated Borg CR-10 Rating Below:

Task	Worker Rating	Analyst Rating
	CR-10	CR-10

12. Worker Postures (Standing + Sitting = 100%; Back Bent and Squatting are expressed as a sub percentage of standing or sitting (i.e. standing = 50%, Back Bent under standing = 100%, means that 100 percent of the time spent standing is in a bent posture.) NOTE: Walking is Counted as Standing

Standing %		Sitting %
Back Bent (>20°) %	Squatting %	Back Bent (>20°) %

13. Worker Exposed to ***Whole Body Vibration***: ☐Yes ☐No
14. Worker Use of ***Anti-Fatigue*** Mats: ☐Yes ☐No
    Anti-Fatigue Mat ***Usage Time***: _____%
15. Use of "***Insoles***" in shoes: ☐Yes ☐No
16. Worker Uses ***Back Belt***: ☐Yes ☐No
    Back Belt ***Available***: ☐Yes ☐No
    Has Back Belt ***Training***: ☐Yes ☐No
17. Floor: ☐Normal ☐Uneven ☐Slippery
    NOTE: Floors can be Uneven & Slippery
18. Work Space (MMH): ☐Open ☐Obstructed
    Type of Obstruction: _____
19. Typical Plant ***Temperature***:

January	July
°C	°C

20. Typical Plant ***Humidity***:

January	July
%R.H.	%R.H.

Job #____-1

Form #: LBJ05072004

B.4. Lifting/Lowering Steady Data Form

Lifting/Lowering Steady (Form D) **Subject #** _____ **Job #** _____

Normal Carry Height _____ in

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Object Description:_____ Object Location:_____

☐ Lift	W (lbs)	Box Width (In)	H_{OL} (In)	H_{OR} (In)	V_O (In)	H_{DL} (In)	H_{DR} (In)	V_D (In)
☐ Lower								

Date: _____ **Page #** ____ **of** ____

Form #LBLLS05042004

B.5 Lifting/Lowering Variable Data Form

Lifting/Lowering Variable (Form E) **Subject #** _____ **Job #** _____

Normal Carry Height _____ in

	W (lbs)	Width (in)	H_O (in)	V_O (in)	H_D (in)	V_D (in)		W (lbs)	Width (in)	H_O (in)	V_O (in)	H_D (in)	V_D (in)
1.							2.						
3.							4.						
5.							6.						
7.							8.						
9.							10.						
11.							12.						
13.							14.						
15.							16.						
17.							18.						
19.							20.						
21.							22.						
23.							24.						

Date: _____ **Page #** ____ **of** ____

LBLLV05042004

B.6. Pushing/Pulling Data Form

Pushing/Pulling Notes (Form F) **Subject #** _____ **Job #** _____

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Description:_____

☐ Push ☐ Pull	Initial Force (lbs)	Sustained Force (lbs)	Hand Height (in)	Distance (ft)	Time (sec)

Date: _____ **Page #** ____ **of** ____

LBDPP04052004

B.7. Walking/Carrying Data Form

Walking/Carrying Notes (Form G) **Subject #** _____ **Job #** _____

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Description:_____

	Weight (lbs)	Distance (ft)	Time (sec)
☐ Walk			
☐ Carry			

Date: _____ **Page #** ____ **of** ____

LBDWC05042004

B.8. Lifting/Lowering Tasks Data Form

Lifting/Lowering Tasks (Combined Form) **Subject #** _____ **Job #** ____

1. *Task #*____ 2. *Description:*_____
3. ☐Lift ☐Lower 4. ☐Box ☐Bag ☐Other_____
5. Separate Hands: ☐Yes ☐No 6. ☐Even ☐Uneven | ☐Stable ☐Unstable
7. *Hands:* ☐Left ☐Right ☐Both 8. *Grasp:* ☐Good ☐Fair ☐Poor
9. *Technique:* ☐Stoop ☐Semi ☐Squat ☐Side ☐Stand
10. *Object Dimensions:* W_____in, L_____in, H_____in
11. *Observation Duration:*_____min 12. *Number of Lift/Lowers:*_____
13. *Total Weight/Lift:*_____lbs SCD? ☐Yes ☐No

V_{OL}	in	V_{OR}	in	V_{DL}	in	V_{DR}	in
H_{OL}	in	H_{OR}	in	H_{DL}	in	H_{DR}	in
L_{OL}	in	L_{OR}	in	L_{DL}	in	L_{DR}	in
D	in	A_O	°	A_D	°		

1. *Task #*____ 2. *LIFT/LOWER Biomechanical Analysis*
3. *Object Weight:* ____lbs 4. *Hands: L R B*
5. *Limb Angles:*

	Left		Right	
	Horz.	Vert.	Horz.	Vert.
Upper Arm	0	0	0	0
Lower Arm	0	0	0	0
Upper Leg	0	0	0	0
Lower Leg	0	0	0	0

6. *Trunk Angles:*

Flexion		0
Axial Rotation R L		0
Lateral Bending R L		0

NOTE: Lifting and then lowering are 2 seperate tasks (one lifting and one lowering).

1. *Task #*____ 2. *Description:*_____
3. ☐Lift ☐Lower 4. ☐Box ☐Bag ☐Other_____
5. Separate Hands: ☐Yes ☐No 6. ☐Even ☐Uneven | ☐Stable ☐Unstable
7. *Hands:* ☐Left ☐Right ☐Both 8. *Grasp:* ☐Good ☐Fair ☐Poor
9. *Technique:* ☐Stoop ☐Semi ☐Squat ☐Side ☐Stand
10. *Object Dimensions:* W_____in, L_____in, H_____in
11. *Observation Duration:*_____min 12. *Number of Lift/Lowers:*_____
13. *Total Weight/Lift:*_____lbs SCD? ☐Yes ☐No

V_{OL}	in	V_{OR}	in	V_{DL}	in	V_{DR}	in
H_{OL}	in	H_{OR}	in	H_{DL}	in	H_{DR}	in
L_{OL}	in	L_{OR}	in	L_{DL}	in	L_{DR}	in
D	in	A_O	°	A_D	°		

1. *Task #*____ 2. *LIFT/LOWER Biomechanical Analysis*
3. *Object Weight:* ____lbs 4. *Hands: L R B*
5. *Limb Angles:*

	Left		Right	
	Horz.	Vert.	Horz.	Vert.
Upper Arm	0	0	0	0
Lower Arm	0	0	0	0
Upper Leg	0	0	0	0
Lower Leg	0	0	0	0

6. *Trunk Angles:*

Flexion		0
Axial Rotation R L		0
Lateral Bending R L		0

NOTE: Lifting and then lowering are 2 seperate tasks (one lifting and one lowering).

Date: _____ **Page #** ____ **of** ____

Form #: LBLC03222004

B.9. Pushing/Pulling Tasks Data Form

Push/Pull Tasks (Combined Form) **Subject #** _____ **Job #** ____

1. *Task #*____ 2. *Description*: _____
3. *Activity*: ☐Push ☐Pull
4. *Type of Cart*:☐4W Cart ☐2W Hand Truck ☐Pallet Jack ☐Box ☐Other: _____
5. *Hands*: ☐Left ☐Right ☐Both 6. *Height of Hands*: _____in
7. *Posture*: ☐Lean Forward ☐Lean Back ☐Lean Side ☐Stand
8. *Distance per Push/Pull*: ____ft 9. *Time per Push/Pull*: ____sec
10. *Initial Force*: _____lbs 11. *Sustained Force*: _____lbs
12. *Observation Duration*: _____min 13. *Number of Push/Pulls*: _____

1. *Task #*____ 2. *PUSH/PULL Biomechanical Analysis*
3. *Object Weight*: ____lbs 4. *Hands: L R B*
5. *Limb Angles:*

	Left		Right	
	Horz.	Vert.	Horz.	Vert.
Upper Arm	o	o	o	o
Lower Arm	o	o	o	o
Upper Leg	o	o	o	o
Lower Leg	o	o	o	o

6. *Trunk Angles:*

Flexion		o
Axial Rotation	R L	o
Lateral Bending	R L	o

1. *Task #*____ 2. *Description*: _____
3. *Activity*: ☐Push ☐Pull
4. *Type of Cart*:☐4W Cart ☐2W Hand Truck ☐Pallet Jack ☐Box ☐Other: _____
5. *Hands*: ☐Left ☐Right ☐Both 6. *Height of Hands*: _____in
7. *Posture*: ☐Lean Forward ☐Lean Back ☐Lean Side ☐Stand
8. *Distance per Push/Pull*: ____ft 9. *Time per Push/Pull*: ____sec
10. *Initial Force*: _____lbs 11. *Sustained Force*: _____lbs
12. *Observation Duration*: _____min 13. *Number of Push/Pulls*: _____

1. *Task #*____ 2. *PUSH/PULL Biomechanical Analysis*
3. *Object Weight*: ____lbs 4. *Hands: L R B*
5. *Limb Angles:*

	Left		Right	
	Horz.	Vert.	Horz.	Vert.
Upper Arm	o	o	o	o
Lower Arm	o	o	o	o
Upper Leg	o	o	o	o
Lower Leg	o	o	o	o

6. *Trunk Angles:*

Flexion		o
Axial Rotation	R L	o
Lateral Bending	R L	o

Date: _____ **Page #** ____ **of** ____ Form #: LBUC03222004

B.10. Walking/Carrying Tasks Data Form

Walking/Carrying Tasks Subject # _____ Job # ____

1. *Task #*_____ 2. *Description*: _____
3. *Activity*: ☐Walk ☐Carry 14 *Hands*: ☐Left ☐Right ☐Both
5. *Technique*: ☐Waist ☐Thighs ☐Side ☐Other: _____
6. *Distance per Walk/Carry*: _____ft
7. *Time per Walk/Carry*: _____sec
8. *Object*: ☐Box ☐Bag ☐Other: _____
9. *Object Weight*: _____lbs
10. *Observation Duration*: _____min
11. *Number of Walk/Carries*: _____

1. *Task #*_____ 2. *Description*: _____
3. *Activity*: ☐Walk ☐Carry 14 *Hands*: ☐Left ☐Right ☐Both
5. *Technique*: ☐Waist ☐Thighs ☐Side ☐Other: _____
6. *Distance per Walk/Carry*: _____ft
7. *Time per Walk/Carry*: _____sec
8. *Object*: ☐Box ☐Bag ☐Other: _____
9. *Object Weight*: _____lbs
10. *Observation Duration*: _____min
11. *Number of Walk/Carries*: _____

1. *Task #*_____ 2. *Description*: _____
3. *Activity*: ☐Walk ☐Carry 14 *Hands*: ☐Left ☐Right ☐Both
5. *Technique*: ☐Waist ☐Thighs ☐Side ☐Other: _____
6. *Distance per Walk/Carry*: _____ft
7. *Time per Walk/Carry*: _____sec
8. *Object*: ☐Box ☐Bag ☐Other: _____
9. *Object Weight*: _____lbs
10. *Observation Duration*: _____min
11. *Number of Walk/Carries*: _____

1. *Task #*_____ 2. *Description*: _____
3. *Activity*: ☐Walk ☐Carry 14 *Hands*: ☐Left ☐Right ☐Both
5. *Technique*: ☐Waist ☐Thighs ☐Side ☐Other: _____
6. *Distance per Walk/Carry*: _____ft
7. *Time per Walk/Carry*: _____sec
8. *Object*: ☐Box ☐Bag ☐Other: _____
9. *Object Weight*: _____lbs
10. *Observation Duration*: _____min
11. *Number of Walk/Carries*: _____

Date: _____ Page # ____ of ____ Form #: LBW03222004