



# **Return to Work Evaluation Report**

**Testing Performed on BTE Technologies Evaluation System**

Clinic Name: **BTE Technologies**  
Address: **7455 L New Ridge Road**  
**HANOVER, MD, 21076**  
**USA**

**Mr. Bill Smith**

BTE Technologies  
7455 L New Ridge Road  
HANOVER,MD 21076



## Return to Work Evaluation

### Client Information

**Name :** Mr. Smith, Bill  
2345 West Beacon Dr.  
BRADYVILLE,TN USA

**Phone:**

**Date of Birth :** 6/11/1960      **Age:** 48

**Gender:** M      **Hand Dominance:** L

**Height:** 72.0 in.    **Weight:** 180.0 lbs.

**Occupation:** Laborer

**Employer :** ACME,  
40 Road Runner Way,  
WILLMAR, MN, 56201,  
USA

**Contact:** Wiley Coyote  
123-234-5678

### Case Information

**Evaluation Date:** 3/11/2009 9:24:00 AM

**Physician :** Richard Cast

**Case Manager:** John Case  
555-985-6321

**Referral Source:** Case Manager  
Mr. Case, John  
3009 Payment Rd  
WASHINGTON, DC, 20035,  
USA.

### Injury Information/Diagnoses

Diagnosis	ICD-9 Code	Location	Side	Injury Date
Spinal stenosis of lumbar region	724.02	Lumbar Spine	RIGHT	9/16/2008

Primary Evaluator : Timothy Seals,MS,OTR/L

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## Report Summary

### Referral Information

Thank you for referring Mr. Bill Smith for a Return to Work Evaluation. Testing was completed on 3/11/2009 9:24:00 AM at BTE Technologies of HANOVER, MD. The purpose for the Return to Work Evaluation was to determine his safe capabilities related to work activity. The assessment included a review of medical history, subjective reports and objective physical testing. All testing was performed voluntarily and the quality of effort was thoroughly evaluated.

Mr. Bill Smith is a 48 year old, left handed male referred for a Return to Work Evaluation. He is here for evaluation only and no therapist-patient relationship has been established. Mr. Smith arrived on time for the assessment on 3/11/2009 9:24:00 AM and was in the clinic for 4 hours and 20 minutes.

Mr. Smith sustained a work related injury on 9/16/2008. He reported that the injury occurred while pushing a wheelbarrow across grass. He felt a sharp, shooting pain in the right low back region and right upper thigh. Medical care was received in a physician's office. A diagnosis of spinal stenosis of lumbar region was received. Treatment for this injury has been discontinued. Interventions included 12 physical therapy visits. Symptoms persist. They include occasional radiating ache in right low back and upper thigh. Mr. Smith stated that these symptoms do not prevent participation in work activities, leisure activities and activities of daily living.

Apart from the presenting condition, Mr. Smith denied any relevant medical history. He reported feeling well, without symptoms or dysfunction prior to this incident.

Mr. Smith has been employed by ACME Landscaping since May 2, 2001. At time of injury, he was working full time regular duties in Maintenance. According to the description given by the client, this job involves walking, pushing wheelbarrows, digging, lifting, carrying, reaching and using various gardening tools. The heaviest object he has to lift and/or carry is bags of mulch and cement blocks weighing 50 pounds.

A functional job analysis from the employer is available. Please refer to the Job Demands and Outcomes section.

### Referral Questions

To assist your interpretation of findings, we have provided a response to each referral question below. The referral questions outlined for this evaluator in Mr. Smith's case are as follows:

1. What are the maximum functional capacities of Mr. Smith? He meets 8/10 essential job demands and demonstrates the ability to work an 8 hour day.
2. Were the results of this evaluation consistent and reliable indicating maximum safe effort? Mr. Smith performed consistently throughout the evaluation. Please refer to Consistency Results and Effort Analysis for details.
3. Is Mr. Smith capable of returning to his previous position with ACME, as outlined in the essential functions of the physical demands analysis provided? Two of ten essential job demands were not met. See comments below regarding possible accommodations.
4. Please specify the areas of the essential functions he did not meet. Mr. Smith was unable to lift 50 lbs. from floor to shoulder height (demonstrated ability was 30 lbs.) and exert 50 lbs. of push force to move wheelbarrow (demonstrated ability was 37.5 lbs.).

### Conclusions

The performance levels documented in this report should be considered as the client's safe maximal abilities. Based on the physical demands provided with this referral for work as a laborer for ACME Landscaping, Mr. Smith's demonstrated tolerances are less than the required demands. Client did not meet 2/10 job demands. He demonstrated ability to lift only 30 lbs. from floor to shoulder height and push 37.5 lbs. during wheelbarrow task simulation. With accommodation of the floor to shoulder 30 lb. lift requirement (changing to waist to shoulder height), client would be capable of performing the lift. Additionally, placing lighter load in the wheelbarrow would allow client to accomplish the task of pushing the wheelbarrow. If accommodation is not possible and return to a different job is required, note that the client performed at the Medium physical demand level of Occupational Classification. (MEDIUM: Exerting 20 to 50 pounds of force occasionally or 10 to 25 pounds of force frequently or greater than negligible up to 10 pounds of force constantly to move objects. Physical demand requirements are in excess of those for light work.)

It is anticipated that the results of this assessment will be used in further case management.

## Consistency Results

During the functional testing, numerous factors, including subjective reports, clinical observations and objective performance were evaluated in order to comment on Mr. Smith's quality of effort. While no single factor is an absolute means to determine whether or not performance is consistent, reliable and valid, the overall performance on all effort assessments and coefficient of variation testing does provide information about the client's level of participation. Based on this, it is the evaluator's opinion that the results of this FCE do represent the client's current safe maximal performance level.

Mr. Smith demonstrated expected results in the following areas:

1. The maximum voluntary effort (MVE) grip test, when graphed resembled a bell shaped curve.
2. Rapid exchange grip demonstrated a "negative" result which is an indicator of good effort.
3. Cross-reference validity between the MVE, REG and standard grip test was within the expected 20%.
4. There were consistent physiological changes normally associated with maximum effort observed during functional testing.
5. Subjective reports were congruent with objective findings and clinical observations.
6. There were coefficient of variations greater than 15% on 0 out of 14 tests equaling 0%.

## Findings and Results

Mr. Smith demonstrated the ability to sit for 65 minutes, stand for 80 minutes, and intermittently stand, sit and walk for 120 minutes. He reported the ability to sit for 60 of minutes, stand for 60 minutes, and walk for 60 minutes.

Additionally, Mr. Smith demonstrated the ability to lift 50 pounds from waist to shoulder, 50 pounds from floor to waist, and 30 pounds from floor to shoulder on an occasional basis. The biomechanical and physiological changes normally observed when an individual is providing a maximal acceptable effort during these activities were demonstrated by the client.

Other functional capacities measured include the ability to carry 50 pounds over a distance of 40 feet and to static push 127 pounds and static pull 128 pounds of force. Again, he demonstrated the biomechanical and physiological changes normally observed when an individual is providing a maximal acceptable effort.

## Job Demands & Outcomes

Mr. Bill Smith's ability to perform his job functions were assessed based on the information supplied by Job description from employer. The corresponding demands or similar tasks were tested to determine suitability for return to work for each individual demand and/or task.

Job Demand Levels and Ability Demonstrated				Job Match		
OCC = OCCASIONAL	0-33%	YES --> Capable of performing task at current job demand				
FREQ = FREQUENT	34-66%	NO --> Not capable of performing task at current job demand				
CONST = CONSTANT	67-100%	MOD --> Capable of performing task at modified job demand				
NF = Not Frequency Based						

### Job : Landscape Laborer

Physical Demand	Job Task	Job Demand Level				Ability Demonstrated				Job Match			Comments & Observations
		OCC	FREQ	CONST	NF	OCC	FREQ	CONST	NF	YES	NO	MOD	
Walking	intermittent throughout the day (min)		X				X			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 1 below

Physical Demand	Job Task	Job Demand Level				Ability Demonstrated				Job Match			Comments & Observations
		OCC	FREQ	CONST	NF	OCC	FREQ	CONST	NF	YES	NO	MOD	
Carrying	mulch bags (lbs)	50				50				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 2 below
Lifting	cement blocks to shoulder height (lbs)	50				30				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 3 below
Hand Grip Strength	trimming shears ( )	X				X				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 4 below
Reaching	pruning branches ( )	X				X				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 5 below
Pushing	utility cart (lbs)	30				127				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 6 below
Pulling	utility cart (lbs)	30				128				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 7 below
Pulling	wheelbarrow (lbs)	40				254				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 8 below
Pushing	wheelbarrow (lbs)	50				37.5				<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Note 9 below
Pushing	Shovel push with foot (lbs)	X				114				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Note 10 below

**Notes**

- 1.Client met or exceeded job requirement.
- 2.Client met or exceeded job requirement.
- 3.An accommodation could be made by placing the 50 lbs. at waist height instead of at floor level. Doing so improves the ergonomic position of the lift.
- 4.Client met or exceeded job requirement.
- 5.Client met or exceeded job requirement.
- 6.Client met or exceeded job requirement.
- 7.Client met or exceeded job requirement.
- 8.Client met or exceeded job requirement.
- 9.Increase in low back pain reported
- 10.Client met or exceeded job requirement.

## Comprehensive Report of Evaluation

### **Behavioral Observations**

Mr. Smith was pleasant and cooperative in nature. His affect appeared normal, and he was able to follow instructions and maintain concentration adequately throughout the evaluation. His speech was normal and he did not have difficulty in communicating effectively.

Mr. Smith appeared comfortable during the intake process, sitting continuously for 50 minutes. He was not observed guarding, bracing, grimacing, static weight shifting, moaning/groaning, rubbing, and/or massaging. During the physical examination, Mr. Smith appeared comfortable. He was not noted to guard, brace, grimace, static weight shift, moan/groan, rub and/or massage. A pain level of 3 out of 10 was reported by the client.

### **Physical Examination**

CARDIOVASCULAR/PULMONARY  
CIRCULATION: Unremarkable.

INTEGUMENTARY

SOFT TISSUE OBSERVATION: Clinical examination reveals no soft tissue changes of gluteal and thigh musculature.

MUSCULOSKELETAL

EDEMA: Clinical examination reveals no edema.

POSTURE: In the standing position, Mr. Smith exhibited normal head position, normal cervical lordosis and normal upper thoracic kyphosis. He presented without protracted shoulders and normal position of scapulae, and there was no scoliosis present. Lumbar lordosis was well maintained. The pelvis appeared symmetric. Knee joints were not extended beyond neutral and the slight valgus position was within normal limits.

RANGE OF MOTION (ROM): Objective ROM measures are included in detailed report.

STRENGTH: Objective strength measures are included in detailed report.

NEUROMUSCULAR

SENSATION: Deep tendon reflexes were within normal limits of both lower extremities.

GAIT: Bill Smith exhibited a normal gait pattern. At increased speeds or with fatigue, gait remains normal. 3

ADDITIONAL TESTS: Waddell's Non-organic Signs performed; findings insignificant.

PAIN PROFILE:

Pre-test pain level was reported to 3 on a scale of 0 to 10, with 0 being no pain and 10 being severe unrelenting pain that requires immediate medical attention. Post-test pain level was reported to be 6 out of 10 on the same scale. Best/lowest pain level over the past 30 days was reported to be 1 out of 10; worst/highest pain over the past 30 days was 7 out of 10.

## Physical Capacity Summary

### Cardiovascular

Test Name	Test Date	METS	Start HR	End HR	Blood Pressure	Number of Levels
Single Stage Treadmill	2009-03-11 10:58:49	1.3%	-	115	0/0	3

### Range of Motion

Test Name	Test Date	First Movement	First Movement ROM (deg)	First Movement Norm (deg)	First Movement COV (%)	Second Movement	Second Movement ROM (deg)	Second Movement Norm (deg)	Second Movement COV (%)
<b>Lumbar Spine</b>									
Lumbar Lateral Flexion	2009-03-11 09:56:24	Left Lateral Flexion	13	25	3.46%	Right Lateral Flexion	16	25	40.41%
Lumbar Flexion/Extension	2009-03-11 09:54:09	Flexion	21	60	2.21%	Extension	14	25	1.82%

### Strength Tests

Test Name	Test Date	Left Peak Force (lbs)	Right Peak Force (lbs)	Left COV (%)	Right COV (%)	Left Avg. Force (lbs)	Right Avg. Force (lbs)	Combined Force (lbs)	Start HR (bpm)	End HR (bpm)	Max HR (bpm)	Pre-Post Pain Level (1 - 10)
Hand Grip - Three Trials in Position 1	2009-03-11 10:10:15	60.8	53.5	6.0	3.8	-	-	-	-	-	-	...
Hand Grip - Three Trials in Position 2	2009-03-11 10:11:26	96.3	99.2	4.1	3.5	-	-	-	-	-	-	...
Hand Grip - Three Trials in Position 3	2009-03-11 10:12:21	89.4	85.8	5.8	5.8	-	-	-	-	-	-	...

## Strength Tests

Test Name	Test Date	Left Peak Force (lbs)	Right Peak Force (lbs)	Left COV (%)	Right COV (%)	Left Avg. Force (lbs)	Right Avg. Force (lbs)	Combined Force (lbs)	Start HR (bpm)	End HR (bpm)	Max HR (bpm)	Pre-Post Pain Level (1 - 10)
Hand Grip - Three Trials in Position 4	2009-03-11 10:14:33	83.9	74.9	6.3	4.3	-	-	-	-	-	-	...
Hand Grip - Three Trials in Position 5	2009-03-11 10:25:36	65.0	68.0	5.0	3.7	-	-	-	-	-	-	...
Rapid Exchange Grip	2009-03-11 10:31:43	89.8	81.1	15.0	9.8	-	-	-	-	-	-	...
Hand Grip - Standard	2009-03-11 10:32:46	100.1	98.1	5.2	3.3	-	-	-	-	-	-	...
UTM Cart Push Test	2009-03-11 10:40:54	65.5	61.7	4.0	3.1	-	-	127.1	84	100	100	-- 4
UTM Cart Pull Test	2009-03-11 10:43:26	73.6	54.7	2.0	5.0	-	-	128.4	89	105	105	-- 4
Wheelbarrow Lift	2009-03-11 12:23:36	130.3	123.7	3.4	6.2	-	-	254.0	85	103	103	-- 4
Wheelbarrow Push	2009-03-11 12:30:19	-	-	11.2	7.4	14.5	23.1	37.5	108	108	120	-- 5
Shovel Push with Foot	2009-03-11 12:40:30	-	-	6.5	-	120.0	-	-	91	109	111	-- 4

## WorkSim - Carry

Test Name	Test Date	Max Safe Weight	Final % APMHR	Max HR	Initial-Final HR	Final RPE	Test Time	Start Position	Lift Item	Number of Reps	Distance
Bilateral Carry	2009-03-11 11:48:08	50	71	145	88-121	5	135	Shelf	BTE Crate	5	40 ft

**WorkSim - Lift**

Test Name	Test Date	Max Safe Weight	Final % APMHR	Max HR	Initial-Final HR	Final RPE	Test Time	Start Position	Lift Item	Lift Item To	Number of Reps
Waist to Shoulder Occasional	2009-03-11 11:22:01	50	88	146	98-116	4	86	Lower Shelf	BTE Crate	Upper Shelf	5
Floor to Waist Occasional	2009-03-11 11:40:22	50	71	146	97-122	5	84	Floor	BTE Crate	Lower Shelf	5
Floor to Shoulder Occasional	2009-03-11 11:43:23	30	87	146	101-114	3	46	Floor	BTE Crate	Lower Shelf	3

**WorkSim - FROM**

Test Name	Test Date	MTM Score	Rating	Start HR	End HR	Max HR	Test Time	Number of Pegs	Number of Cycles	Number of Sets	Frequency
Positional Test - Axial Rotation - Occasional	2009-03-11 14:08:39	126	Above Competitive	-	110	130	273	15	4	1	Occasional
Positional Test - Kneeling to Standing to Kneeling - Occasional	2009-03-11 14:35:37	74	Entry Level	-	101	119	386	3	7	1	Occasional
Positional Test - Stooping Reach - Occasional	2009-03-11 14:42:34	98	Competitive	-	117	123	302	15	5	1	Occasional