# Job Safety Analysis

**Job:** Operating a Baler  
**Date:** 11/17/2010  
**Completed By:** Andrew Gondzur, CSP  
**Job Location:** Multiple-Varies  
**Contractor:** HWI Environmental Technologies, Inc.  
**PPE Required:** Safety glasses, Steel-toed shoes, Gloves  
**Training Required:** Machine-guarding, safe baler operator, PPE, lockout/tagout

<table>
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<tr>
<th>#</th>
<th>TASK</th>
<th>HAZARDS</th>
<th>CONTROLS</th>
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</table>
| 1 | Pre-operation Safety Check | Untrained or inexperienced baler operator | • Train all baler operators – thoroughly review HWI’s Guide to Safe Bailer Operation  
• Complete daily baler safety checklist (see attached checklists) |
| 2 | Load the material hopper | Strain from bending, twisting, overreaching | • Pivot feet, do not twist at waist  
• Bend at knees, not at waist  
• Keep back upright  
• Avoid overreaching  
• Use tool to extend reach |
| 3 | Operate the baler | Caught in, caught between  
Pinch points  
Crushing injuries | • Use two-hand controls  
• Keep safety gates down  
• Keep body parts out of points of operation  
• Wear tight fitting clothes, do not wear long hair or dangling jewelry  
• Respect all lockout/tagout devices and warnings tags  
• Notify supervisor if baler is malfunctioning or undergoing unscheduled maintenance |
| 4 | Tie bale with wire | Cuts/lacerations from sharp wire | • Wear leather gloves and approved eye protection |
| 5 | Eject bale | Struck by bale and baling wire | • Keep a safe distance from bale during ejection process  
• Wear steel-toed safety shoes |
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<tbody>
<tr>
<td>6</td>
<td>Reset baler</td>
<td>None observed</td>
<td>• Follow baler operating instructions</td>
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</table>
Guide to Safe Baler Operation

THIS MANUAL IS REQUIRED READING FOR ALL OWNERS, OPERATORS, AND MAINTENANCE PERSONNEL
Heed & Obey Warning Signs

Signs such as DANGER, CAUTION, WARNING, and ATTENTION are on the machine for your protection. Warning signs must remain in place and be kept in readable condition. Report and replace all damaged or missing warning signs.

YOUR OPERATIONAL CARELESSNESS AND SAFETY SHORTCUTS CAN CAUSE SERIOUS INJURY OR DEATH! FOLLOW SAFETY GUIDELINES AND BE SAFETY CONSCIOUS.
Prior to Start Up

1. Wear proper safety equipment as recommended by your employer.
2. *Never* allow yourself or anyone involved with the baling system to be under the influence of intoxicants or narcotics while the baler is operating.
3. Walk around the baling system to check for proper equipment condition. Open hopper door and check inside the baler.
4. Report any problems to your immediate supervisor.
5. Be positive no one is working on the baler or on adjoining equipment. Open hopper door and check inside the baler.
6. If anyone is found working on or in the baler or any associated equipment, make sure power to the baler has been DISCONNECTED AND LOCKED OUT. If it is not, report the incident to your immediate supervisor. *NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE’S SAFETY LOCK!*
Safety Guidelines for Baler Operation

1. Only authorized personnel trained in baler operation are to operate this equipment.
2. The owner and operator are responsible for the safety of the employees and should be familiar with applicable OSHA codes and ANSI Safety Standard Z245.5.
3. Operate in accordance with the owner's manual supplied with your baler.
4. Do not set the hydraulic pressure above recommended levels. Severe baler damage and/or personal injury could result.
5. Bale only the specific material for which the baler was built (varies from baler to baler).
6. Never overload the hopper or feed conveyor.
7. Never enter the hopper unless the power is DISCONNECTED AND LOCKED OUT.
8. Make sure warning horns and lights are working properly. If they are not, shut down, lock out and report the malfunction. Repair it immediately.
9. If work on or in the baler or any associated equipment is required, DISCONNECT THE POWER TO THE BALER, AND LOCK OUT. NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE'S SAFETY LOCK! Before restarting, repeat the “PRIOR TO START UP” procedures.
10. Anytime the baler is shut down, repeat “PRIOR TO START UP” procedures before starting for any reason.
11. Do not enter or attempt to ride on the hopper feed conveyor.
12. Do not place your head, limbs or any part of your body in a “pinch” or “scissors’ point on the baler.
13. Always know where emergency help can be reached quickly.
14. NEVER ENTER A FEED CONVEYOR UNLESS THE POWER TO BOTH THE BALER AND FEED CONVEYOR ARE LOCKED OUT.
15. Never bale AEROSOL cans in the baler.
Heed Warning Lights & Horns

Always observe safety warning lights and horns that indicate baler start up or wire tier operation. Keep lights and horns in good working order. Report any malfunctioning warning device to your supervisor immediately. Repair or replace the device immediately.

Keep Safety Guards In Place

Safety guards must be kept closed at all times. Keep the guards in good repair with periodic maintenance. When necessary, open guards ONLY AFTER THE MACHINE POWER HAS BEEN DISCONNECTED AND LOCKED OUT. NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE’S SAFETY LOCK!

Check guards and hopper door limit switches for proper shut off function on a regular basis. Keep limit switches free of debris or obstructions. DO NOT OVERRIDE OR BYPASS SAFETY SWITCHES!
Practice Fire Prevention

1. Keep fire extinguishers accessible at all times. Use the extinguisher recommended for the material being baled. It should be rated safe for use on electrical fires.
2. Never smoke close to combustible material.
3. Clean the area before welding or other activities, which may make sparks. Observe the area for at least six hours after such activity.
4. Keep tank and motor areas clear of oil, dust or paper accumulations.

REMEmBER! ALL POSSIBLE DANGERS CANNOT BE PREDICTED. YOUR OWN SAFETY AWARENESS AND GOOD SAFETY HABITS ARE YOUR BEST PROTECTION.
Always Disconnect & Lock Out

Power must always be disconnected and locked out before working within or performing maintenance on the baler or associated equipment.

Every employee who works on or with the baler should have his own lock and key. *NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE’S SAFETY LOCK!*

Use a safety lockout to allow more than one employee to work on the baling system — while not permitting any one person to unlock the system.
Never Enter the Hopper Without First Disconnecting and Locking Out Power.

NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE’S SAFETY LOCK!

Never Work on the Wire Tier Without First Disconnecting and Locking Out Power.

NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE’S SAFETY LOCK!
Keep a Clean Machine

Good Housekeeping Makes A Safe Workplace

1. Keep handrails and steps clean of grease and debris.

2. Clean motor area daily.

3. On balers so equipped, blow dust from the air to oil heat exchanger several times a day, especially under severe operating conditions. Do not use more than 40 PSI for the air supply. Use respiration and eye protection to be safe.

4. Clean out the back of the ram daily. Make sure you first DISCONNECT AND LOCK OUT THE POWER. NEVER ASSUME THAT YOU ARE PROTECTED BY ANOTHER EMPLOYEE’S SAFETY LOCK!

5. Clean bale retainer dog box areas and tiers after each work shift or as needed.
Baler Safety Features

Hopper doors that will not allow the machine to run when they are opened.

Bale chamber doors, which stop the baling operation when they are opened.

Wire tier guards that stop machine operation if accidentally opened.

Warning light and horn to indicate baler start up.

Warning light and horn to indicate wire tier operation.

Machine guards cover dangerous moving parts.

Emergency baler stops which stop entire baling operation located on console and wire tiers.

Recessed start button.

Time delay on baler start to allow for warning (requires start button to be pressed the second time). Two ram balers only.

Main power disconnect equipped for a locking device on every machine.

Full manual operation modes.

Full set of warning and safety decals placed in strategic areas.

Control Console situated so major baler operations can be observed.

Control Console equipped with on / off key switch for additional safety. Key should be turned to off and removed before performing any maintenance, cleaning, or clearing of baler and any associated equipment.

REMEMBER! ALL POSSIBLE DANGERS CANNOT BE PREDICTED. YOUR OWN SAFETY AWARENESS AND GOOD SAFETY HABITS ARE YOUR BEST PROTECTION.
Safety Recap

WORKERS should take the following steps to protect themselves from injury when operating or working near compacting and baling equipment:

- **Never** bypass or disable interlocks or control switches.
- Keep all equipment guards in place during operation.
- Before attempting to clear jammed material from a compactor or baler, follow OSHA standards on lockout/tag out procedures [29 CFR 1910.147]:
  1. Disconnect the power from the machine.
  2. Isolate the power by locking the disconnect.
  3. Tag the disconnect to notify others that the power must remain off.
  4. Mechanically block any ram that has the potential to move before accessing the compacting chamber.
  5. Test equipment to ensure power has been de-energized before beginning work.
  6. Locate all coworkers before activating power to the compactor or baler.
HWI Vertical Baler Daily Check List

#1  #2

☐  ☐  Check floor around the baler to be sure there isn't any
    hydraulic oil indicating a possible leak.

☐  ☐  Raise and lower gate to be sure it is working properly

☐  ☐  Look for any visible damage to the main structure of the
    baler.

☐  ☐  Check all conduit to be sure there isn't any damage that
    could result in electrical shock.

☐  ☐  Be sure that control panel is closed and fastened.

☐  ☐  Close baler gate and cycle the baler. Place selector
    switch in the down position. Press both green start
    buttons (baler should start to travel down). Let off one of
    the green buttons (baler should stop). Push both buttons
    again then let off the other button to ensure both are
    operational.

☐  ☐  Open the rear side gate (loading gate should be down).
    Press both green buttons. Baler should not operate

If all of the above check out fine, then you can begin baling. If there is a
problem with any of the above, or if you see or hear something that doesn't
seem right lock and tag out the baler and inform your supervisor.

Date: ____________________  Signed: ____________________
# HWI Horizontal Baler Daily Checklist

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<th>2nd</th>
<th>3rd</th>
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<tr>
<td>Check Oil Level. Make a note if any oil was added</td>
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<td></td>
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<tr>
<td>Inspect for leaks and condition. Check hoses, pump, valve, cylinders, and reservoir.</td>
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</tr>
<tr>
<td>Inspect for overall condition. Make sure the equipment is clean, free of debris, all warning stickers are in place and easily read, no structural defects are noted.</td>
<td></td>
<td></td>
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<tr>
<td>Access panels, covers and Guards are in place.</td>
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<tr>
<td>Inspect dogs</td>
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**Supervisor:**

Lubricate Baler Side Wear Pads

Notes:

______________________________________________________________________________________________________________________
______________________________________________________________________________________________________________________
______________________________________________________________________________________________________________________

First shift
Signed ____________________ Date ________________

Second shift
Signed ____________________ Date ________________

Third Shift
Signed ____________________ Date ________________

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