

A Job Safety Analysis (JSA) is a method that can be used to identify, analyze and record the steps involved in performing a specific job, the existing or potential safety and health hazards associated with each step, and the recommended action(s)/ procedure(s) that will eliminate or reduce these hazards and the risk of a work- place injury or illness.

Why is job safety analysis important?

One of the best ways to determine and establish proper work procedures is to conduct a job safety analysis. A job safety analysis is one component of the larger commitment of a safety and health management system.

- To ensure that hazards are identified and controlled for all major tasks and processes.
- To be proactive in identifying and eliminating hazards.

- Prior to performing all major work processes and tasks, whether routine or non-routine, that may be hazardous.
- When a Loss Investigation or Near Loss root causes indicate “Lack of/ inadequate procedures.”
- Prior to working with new or modified equipment or procedures.

Common JSA Misconceptions:

We need to have employees sit down and write a JSA each time they do a particular job.

We use a JSA as a substitute for the last minute safety assessment (LMSA) process.



Ardaman
& Associates, Inc.



Job Safety Analysis continued.....	2
Why do we do what we do?	2
Thoughts to start the work day ..	2
Elimination of hazards	3
Which safeguard.....	3
Spotter Safety	4
New Equipment	4
How long do tires last	4
Ardaman Update	5
Quiz	6

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JSA Continued

Job Safety Analysis Process: Implementation

1. List the steps of a job or task.
2. Identify hazards associated with each step.
3. Develop procedures to prevent hazard/ manage risk.

Breaking down each step of the Job Safety Analysis process requires a group to think about and discuss the following:

List the steps:

Each Job or Operation consists of a set of steps. Be sure to list all the steps in the sequence that they are performed. Specify the equipment or other details to set the basis for the associated hazards.

Identify the hazards:

A hazard is a potential danger. What can go wrong? How can someone get hurt? Consider, but do not limit, the analysis to: Contact - victim is struck by or strikes an object; Caught - victim is caught on, caught in or caught between objects; Fall - victim falls to ground or lower level (includes slips and trips); Exertion - excessive strain or stress / ergonomics / lifting techniques; Exposure - inhalation/skin hazards. Specify the hazards and do not limit the description to a single word such as "Caught".

Develop procedures:

Describe what actions or procedures are necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable and quantified terms. Avoid subjective general statements such as, "be careful" or "use as appropriate".

Why do we do what we do?

We have Loss Prevention Observation/Audits, near miss reports, hazard identification reports, JSA's, last minute safety assessments, and so on. Lots of reports, lots of policies. A lot of safety "stuff". Why?

We are trying to proactively identify actions that can lead to an accident or injury, and in the very worst case, death. The use of these documents allows us to develop a procedure to minimize such a potential accident prone action. If it appears that we go overboard sometimes on a particular item, good! We may save a life as a result. It would be horrible for an Ardaman employee to be injured or die as a result of an accident that could have been prevented by a safer practice.

So how do we get to an accident/injury free work place? By doing an audit a month, by doing a near miss report every month? Not really. We will get closer to our goal if each office develops a safety culture where working safely, and looking out for our fellow employees' safety, becomes a habit. If we observe a near miss, and fail to report it, Ardaman will not be able to modify our practices to prevent one of our employees from being injured. If an office discusses near misses or hazards that they have identified, and the observations are not shared throughout the Company, an employee in

another office may suffer an injury that could have been easily prevented. It is through this cooperation together as a company that we are able to learn from each other.

So, we should put forth the effort it takes to create a safety culture in each Ardaman office and at every job site whereby we go about our jobs safely, as a matter of habit. It is who we are as employees and who we are as a Company.

Please do your part to help us achieve this vital Company value. You and your fellow employees will benefit. Conduct Loss Prevention Observations/audits, identify near miss reports, etc. not to "check the box"; but do them because you care about your safety and the safety of other Ardaman employees.

Remember, our Loss Prevention Observation/ Safety audits are an excellent tool for observing and identifying both positive and negative behaviors, along with site conditions and work practices that need attention. These observations allow us to proactively identify and correct issues that may arise, and help in our continuing efforts to achieve an accident free work environment for all our employees. In addition, these observations provide an opportunity to recognize those individuals who are performing their tasks safely.

Thoughts to Start The Work Day

Do you realize how important your safety is to you and to your family? Are you "on the alert" every minute of the day to the dangers of using unsafe procedures? Many safe procedures have been designed to protect you on the job. These safe procedures are vital to you for you are up against a tough enemy who has an arsenal of missiles to launch against one of your most vulnerable targets; your hands. Safe procedures protect hands against injury causing "missiles," such as sharp edges improperly conditioned hand tools, improperly handled material and other pinch points.

Be on guard every minute of the day. Failure to observe just one safe procedure just one time can cause injury to your vulnerable "tools" YOUR HANDS!

If you have learned the safety know-how of your job and learned it well, it will be easy for you to catch anything some other person does that isn't as safe as it should be. If you see it and don't say anything and they get hurt, aren't you partly to blame? Think it over.

Keeping an eye out for the other person's safety can help you too. We all make mistakes. We slip up once in a while. After all, we're only human. But if each of us is keeping the other person's safety in mind, and that person is doing the same

for us, they are likely to catch our slips or at least the serious ones. You help them, they help you. One hand washes the other.

How are you fixed for safety? Have you enough left to last until the next hazard comes along? Be sure before you answer.

Buying safety is pretty much the same process as buying anything.

Most employees buy it. Some buy more than others. Big buyers, naturally, are less likely to be injured on the job. They are also less likely to injure someone else.

The question isn't always how much safety does an employee WANT, but rather, how much safety does the employee NEED.

How are you fixed for safety?



Elimination of Hazards

When discussing how to mitigate hazards in the workplace there is a hierarchy of controls that is often referred to. The safeguards we use to control hazards fall into the various levels of the hierarchy of controls. The hierarchy of controls outlines the safeguards used to mitigate a hazard from most effective to least effective. The hierarchy can have additional or fewer levels of controls listed depending on the version you are looking at.

A common version of the hierarchy from most effective to least effective control is listed as elimination, substitution, engineering controls, administrative controls, and PPE. Elimination should always be considered first when attempting to mitigate hazards in the workplace.

Relying on Lower Levels of Controls

If employees are not trained to eliminate or use effective engineering controls to protect themselves against hazards, many of them will settle for some type of PPE to attempt to mitigate the chance they are injured. This is not an effective way to prevent injuries and accidents. Safeguards that would fall under the PPE level of the hierarchy of controls are far less effective than safeguards that eliminate or through engineering controls, in removing hazards.

An example would be relying on a pair of gloves to protect your fingers from a pinch point hazard instead of ensuring there is proper guarding around the pinch point. PPE should always be considered the last line of defense and employees should have this mindset as well.

Elimination

Elimination of hazards is the most effective way to protect employees against injuries. However, far too often companies or individual employees do not take the time to plan out work tasks or the time to actually eliminate the hazards they are faced with. Every day millions of workers are faced with hazards that they do not need to be exposed to.

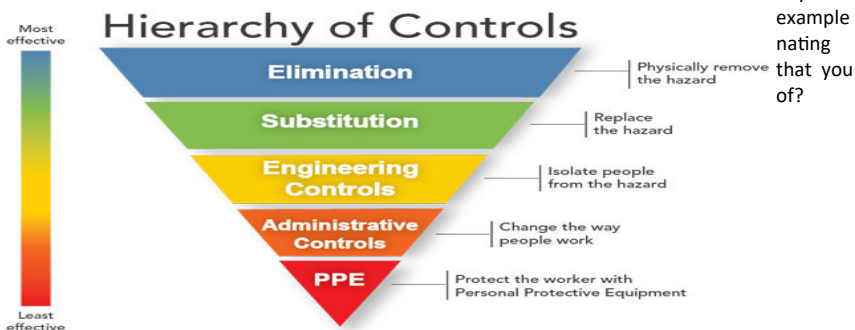
Proper planning of work, thinking about alternative safer ways to complete a work task, and allocating the necessary resources to complete the task are some of the first steps supervisors can take to begin to eliminate hazards. At the worker level, hazard recognition and the elimination mindset is important to ensure any additional hazards are eliminated.

Quick Examples of Eliminating Hazards

1. John Smith sees a hammer hanging halfway off of a piece of equipment that is being worked on and tells the mechanic it is up there. Instead of just not trying to knock the hammer off the elevated surface the mechanic decides to remove it and put it back on the tool bench. This ensures he or anyone else will not be struck by it falling off the elevated surface.
2. Two cooks have cut their fingers while sharpening knives at XYZ Restaurant. The manager of the restaurant decided to make a new policy that knife sharpening is completed by a third-party company and not by the cooks in the restaurant. The sharpeners are removed from the restaurant and the cooks are trained on the new policy.
3. ACME Construction Company is excavating and moving excessive soil for a footing of a large warehouse. Due to excessive rain, the site conditions make it very dangerous for dump trucks to operate. The superintendent decides to shut down dump trucks for the day and have only the dozer operators come in to dress up the site.

Are there hazards that we are relying on PPE or a lower-level control to mitigate the hazard instead of eliminating it completely?

Is there
other
of elimi-
hazards
can think



Which Safeguard makes the difference?

Every day the word “safety” is sung by safety managers, supervisors, and clients of projects throughout the world as the workday begins. At the same time, there are many employees who are tired of the constant barrage of safety discussions, rules, procedures, paperwork, inspections, etc. While safety can get repetitive at times and seem excessive, it is for good reason.

There are many safeguards we put into place every single day for a single hazard and many more for all of the other hazards that we face. Oftentimes, we cannot “see” or know what exactly prevents an incident from occurring. This is because injuries and incidents are prevented without any indication something would have occurred since the safeguards are in place during a work task.

An example of a best practice that is effective but often times does not equate to knowing whether or not an incident was prevented is stopping work to address a hazard. For example, you see a new employee repeatedly struggle with picking up heavy boxes that a forklift operator has been setting down on the floor. Having more experience with the task, you stop the employee and have them move to an area where the forklift operator can safely set the boxes on an elevated surface. This allows the employee to pick up the boxes with the correct posture and without straining.

These kinds of stop-work situations occur all the time in a variety of forms, but many times they do not occur right before an obvious incident is about to happen. Because of this, you do not know if what you did prevented an injury that day or in the future. If the stop-work situation was you shouting to the forklift operator to stop before he reversed off of a ledge of a loading dock you know that you most likely just stopped a serious incident from occurring. Most often the stop-work situations look more like the first example of lifting boxes and it is never known for sure if an injury was prevented or not.

It is not just stop-work situations that can make the difference in preventing an incident. Literally, any single safeguard could be the one that makes the difference. From listening to a safety meeting to verifying a message from a coworker you heard on the radio, the simplest safeguard or best practice could prevent the most serious incident on any given day. Take all safeguards and best practices seriously when dealing with the hazards of your work. Safety is a combination of many things and it is hard to exactly pinpoint what one thing may make the difference between an injury occurring that day or not.

Spotter Safety at Work

While spotting for heavy equipment operators, trucks, trailers, or drill rigs may not seem like a dangerous task, it certainly is. Every year back-over incidents between equipment and spotters result in fatalities. OSHA states that dump trucks followed by semi-trucks and ordinary pickups are responsible for the majority of back over incidents in the past 10 years on the job.

Spotting for equipment has been proven to be an effective safeguard for preventing incidents between pedestrians and the equipment as well as preventing property loss incidents, but safe work practices need to be established to protect spotters as well.

Basic Safe Work Practices for Spotting

- Never walk behind the equipment and spot at the same time. When spotting, stand at the desired area where the equipment is going and direct the equipment back to you.
- Agree on hand signals prior to any spotting activities with equipment operators.
- Ensure the spotter is wearing high visibility clothing.
- As the operator, stop anytime you lose sight of the spotter.
- Review the work area for any additional hazards such as trip hazards that a spotter or other ground personnel could trip over. Or evaluate the work area for fixed objects that the equipment can strike. Remove any people, objects, or equipment prior to spotting equipment in or out of an area to eliminate the possibility of a strike.

Other Tips for Spotting

When planning work, look at the task and determine if there is a way to eliminate backing or minimize it. Look to be able to pull through and not back in. If pulling through is not possible, pick a route that minimizes the need to back up.

Oftentimes, personnel who are spotting for equipment may not have ever operated that specific piece or model of equipment. Work with operators to discuss and review the blind spots of the equipment onsite. Some of the large trucks have more than a 90-foot blind spot in the rear. If the spotter or other personnel in the work area are not aware of the blind spots of the equipment, they may unknowingly walk into the line of fire.



New Equipment, What must be considered?

Every single day, new technologies and equipment are being introduced into the marketplace. These technologies and equipment eventually make it to our workplaces. It is important to fully understand these new tools before beginning work. Often new tasks and equipment are a source of injury on the job.

Before Using New Equipment

Depending on how complex the task or piece of equipment is that you are going to use will dictate what will need to be addressed before it is put into service. Here we will only discuss a few basic guidelines of what needs to happen before a new piece of equipment or process is put into place.

Involve a subject matter expert (SME). This person can be a rep from the supplier, someone who is familiar with the process within your company, or a consultant. Regardless of who it is, involving someone with expertise on the new equipment before the decision is made to purchase or use it is crucial. Involving the SME before the equipment is purchased better ensures that all aspects of bringing in the new equipment have been thought of and if it will actually fit the needs of what is being brought into the workplace for.

Review all the relevant paperwork for the piece of equipment. Documentation such as the operator's manual, safety guidelines, and technical sheet should be reviewed by everyone involved in the process. From this material and guidance from the subject matter expert, a company-specific job hazard analysis, job safety analysis, and/or standard operating procedures should be created.

Ensure that all of the other necessary resources are in place to safely operate the equipment. Some

other resources that could be needed are additional training, other tools, other emergency equipment, maintenance equipment, additional personnel, more time to complete the task, shutdown schedules, etc. The list goes on and on depending on how complex the new equipment is. The subject matter expert along with the other personnel involved in this process should be able to foresee these other needs and communicate them to the management during the onboarding process.

Other Considerations

The above steps may seem excessive for many new tools or tasks, however, even new versions of equipment used onsite could benefit from the guidelines above. For example, it may not seem like a big deal to bring in new 2024 models of the CME Drill Rigs you are already using onsite. However, if the model the company is using onsite now is from 2005 there can be a major number of differences.

Items like operational controls, safety controls, maintenance schedules, training requirements, new features, etc. can be vastly different than the model from eight years prior. Use the guidelines above to review the equipment before bringing it onsite and having your operators put the equipment to use. This could save a life from a safety standpoint and time and efficiency from an operations standpoint.

There are almost always secondary considerations that are not thought of when bringing in new equipment. Creating a thorough process for bringing in new equipment is a proactive approach that benefits everyone involved in many ways. The proper process will not only help to ensure injuries are prevented, but can also help to avoid costly mistakes from an operational standpoint.

How long should a new set of tires last?

There is some fluidity as to when tires go bad by age, because the reasons for their degradation are numerous. Most tire manufacturers and tire shops state the following regarding tire replacement:

- Vehicle manufacturers recommend tire replacement at 6 years.
- Tire manufacturers' warranties expire at 6 years.
- Tire manufacturers recommend replacement at 10 years, regardless of tread depth.

Tires get weaker with age because of heat, oxidation, humidity, and other external factors, such as where they're driven or stored. Even tires that are never put on the wheels of a car age as they sit. Let's face it, tires are not the same as fine wine.

The risk you run by using an aged tire is tread separation, and then, obviously, possible loss of control of the vehicle you're driving. A tire's age can be checked by looking at the U.S. Department of Transportation's Tire Identification Number (TIN) on the sidewall.

Note those four digits at the end on the adjoining picture. They tell us that the tire was made in the 26th week of the year 2016, so this example is about 8 years old. This use of a four digit date setup on tires only goes back to 2000. The complete TIN is now federally required to be on the tire, but the code only has to be on one side, so you may have to get under a vehicle with a flashlight to find it or remove the wheel from the vehicle. The adjoining picture is an example of TIN could look like on a tire and where.



Born on date aside, another sign to look for in aged tires is weather checking, also known as dry rot. This can appear as small cracks on the sides or in the treads of the tires, light discoloration, or carcass deformation, which means the tire is becoming misshaped.

Most new tires will come with a warranty, which will cover workmanship and materials and tread wear. The manufacturer will cover things which are in their control, like defects. What they won't cover in most cases is the condition of the roads or your inability to avoid debris in the road or potholes. Road hazard damage is damage that occurs when a tire fails as a result of a puncture, bruise or impact break incurred during the course of normal driving on a maintained road. Nails, glass and potholes are the most common examples of road hazards. These types of road hazards are not covered under tire manufacturers' warranties; so many drivers value a road hazard warranty as the prices of new tires are expensive, especially for trucks

Ardaman Update



Injury Incidents:

- No injuries for the month of August, great job everyone!

Vehicle and Equipment Incidents:

- The employee was at the traffic light in the right hand turn lane. The vehicle in front was making a right turn. The other vehicle began to turn and suddenly applied their brakes. Our driver was unable to stop in time and struck the rear bumper of the other vehicle at a low speed. Maintain a one car length buffer zone from the vehicle in front of you when stopping. Always look ahead prior to moving to ensure the area is clear. (Bartow)
- The AAI driver was stopped at the red traffic light. Our vehicle was the first vehicle at the light in the left through lane. Another vehicle behind our vehicle failed to stop and rear ended our vehicle while it was stopped at the red light. Other drivers need to maintain a proper following distance and minimize distractions. (Orlando)
- The employee was parked off the roadway to take a break after inspections and to cool down. Another vehicle was parked on the other side of the road. The other vehicle backed up across the roadway at least fifteen feet and backed into our parked truck without warning and dented the driver side lower front bumper corner of our vehicle. Always try to park at least 30 feet away from other vehicles and heavy equipment on job sites. Refer to JSA G-13 Vehicle Operation on Construction Sites. (Orlando)
- Employee was in the process of backing their vehicle into the driveway. They checked the mirrors and did not see any vehicle behind them. They began to back up while checking the passengers side mirror as there was a mailbox along the roadway. While backing, another vehicle suddenly pulled in front of their driveway and stopped. Our driver backed into their front bumper. Always back slowly, check all three mirrors (sides and rear) and your back up camera if available. Yield to other vehicles while backing on roadways. (Orlando)
- Employee was inside an automated car wash with their vehicle in neutral per the car wash policy. The car wash mechanism malfunctioned. The truck in front of our vehicle rolled back and struck the front bumper of our truck and cracked the lower grill, the impact caused our vehicle to roll back and then strike the vehicle behind us causing a small crack in the paint on their front bumper. All vehicles were in neutral so the responsibility for damages is on the car wash owner. (Orlando)
- Employee was traveling in heavy traffic on a roadway. The vehicle in front of us came to a sudden stop, prompting our driver to brake hard. Our driver was nearly at a complete stop, avoiding a collision, when the vehicle behind us struck our vehicle and pushed us into the vehicle ahead. Always maintain a one car length buffer zone when stopped in traffic and maintain a four second following distance while driving. The additional space provides the driver time to recognize potential hazards and take action to avoid them. (Bartow)
- Employee was traveling home and was approaching a red light. The vehicle in front of them applied their brakes and our driver was unable to stop in time and rear ended the other vehicle at a low speed. The employee pulled over and exchanged information with the other driver, however, law enforcement was not contacted. Always maintain a four second following distance while driving. The additional space provides the driver time to recognize potential hazards and take action to avoid it. Always contact law enforcement when a vehicle incident occurs and do not admit liability. (Ft. Myers)
- Employee had a rental vehicle parked at the hotel while working out of town. Another vehicle that was staying at the hotel backed into the front of our parked truck and then took off without notifying anyone. The cleaning staff heard the impact and witnessed the other vehicle leaving the hotel parking lot. Hotel management was notified and law enforcement was contacted. Other party is responsible for damage to our vehicle. (Bartow)

Near Miss / Hazard Identification

Highlighted Near Miss/ Hazard Identifications from 35 reports received from the month of July.

- Employees were reviewing the ticket responses from the 811 ticket that was created. The ticket responses showed that the area was marked for specific utilities, but when the crew went on site to verify, the utilities were not marked properly. Our branch had requested as built drawings from the client which indicated several lines in the drilling location but only one line was marked by the locators. The AAI PM, contacted the client and locators and met with them on site to request additional information and identification of the utilities. If the utility tickets show that utilities are marked and present and the AAI personnel in the field do not see any markings, always stop and contact your AAI project manager for guidance. (Miami)

Ardaman Safety Audits

Identified Hazards from Loss Prevention Observation/ Safety Audits conducted in the month of July.

- **Overexertion:** Employee placed wheelbarrow away from the sampling location and was pivoting from the waist to make concrete cylinders. Always set up the work area to reduce overexertion hazards. Never pivot from the waist while lifting. Always bend your knees and use your feet to change direction. Set up the sampling area in a manner to reduce overexertion concerns.



Ardaman Health and Safety Recognition Awards

This month, the Ardaman safety committee reviewed an increased volume of submittals. We are continuing the lottery pool this month and with the increase of submittals this month, we drew two winners at random for a \$25.00 gift card.

July Winners:

Tonya Erbland: Tampa
Nicholas Blackburn: Houston

A Safety Sticker was awarded to the following individuals:

- **Ed Perez** for recognition and actions regarding the task of using the tripod for drilling. The employee recognized an ergonomic/over exertion hazard involving the use of the mud adapter. He provide an adapter design to reduce the potential for overexertion and provide the operator better control/ ergonomics when using the equipment. A gift card was awarded for his actions. (Orlando)

September 2025 Safety Quiz

Please circle the letter of the answer that fits best. Some answers can be found in the newsletter

1. Do you need a Job Safety Analysis (JSA) for all tasks?

- A. Yes B. No

2. What is a Job Safety Analysis?

- A. Tool B. Technique C. Method D. All the above

3. There is only one individual who writes all the JSAs.

- A. True B. False

4. What types of tasks should have JSAs?

- A. Hazardous B. Non-hazardous C. Complex D. JSAs are not needed

5. When developing a JSA, what is the first part of the process?

- A. Identify the hazards B. List the steps C. Develop procedures to control or mitigate the hazards
D. All the above

6. JSAs can be used on different job sites.

- A. True B. False

7. Which of the following are some of the types of hazards that we identify in a JSA?

- A. Struck by B. Falls C. Over exertion D. All the above

8. In the hierarchy of controls, what is the least effective and last line of defense.

- A. Elimination B. Engineering Controls C. Administrative Controls D. PPE

9. The best way to control a hazard is to eliminate it completely.

- A. True B. False

10. When acting as a spotter to aid in backing a vehicle, trailer, or mobile equipment you must first agree on a location you will stand that is clear of impact, establish hand signals with operator, don high visibility clothing, and evaluate/remove all trip hazards in the area you are standing.

- A. True B. False

11. In what time frame should you report an incident (injury, vehicle accident, property damage, etc....)?

- A. Within 15 minutes B. When it is safe to do so C. Whenever you want D. A&B

All Ardaman employees must complete the quiz and turn it into their H&S coordinator by the end of each month. For those individuals who cannot attend the monthly safety meeting, please complete the quiz and submit it to your supervisor for approval. All completed quizzes must be submitted at a designated location at each office. The supervisor only needs to sign the quiz if you are unable to attend the monthly safety meeting. Please provide a reason for your absence in the box below:

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Employee Print Name	Employee Sign Name	Date
Supervisor Print Name	Supervisor Sign Name	Date