

# Alaska Tanker Company, LLC

Alaska Tanker Company, LLC supports its commitment to excellence in Health, Safety, and Environmental performance with a number of tools, programs, and initiatives. The Job Hazard Analysis (JHA) is one of the more useful tools available in mitigating hazards and there by eliminating accidents and injuries. This section provides information and guidance on procedures to be adopted for improving the safety and health of those living and working onboard ATC vessels. The requirements and recommendations found in this section can only be effective if all crewmembers understand them and cooperate in their implementation. Each crewmember shall have regard for his/her own safety, and also care for the safety of others.

## **3.2 JOB HAZARD ANALYSIS PROCESS (Abridged for Contractors)**

### **3.2.1 PURPOSE**

The objective of Job Hazard Analysis (JHA) is to allow for careful study of the job procedure through the recording of each step of a job, identifying potential hazards (safety, health and environmental) for each of those steps, and determining the best way to perform the job to eliminate or reduce those hazards thereby preventing accidents, injuries and environmental damage. The ultimate responsibility lies with the vessel's Leadership Team to ensure safety on the job. The JHA planning process is to be used as a training tool for the accomplishment of new or different tasks, as well as common or repetitive tasks.

### **3.2.2 Authority/Responsibilities**

**The Senior Supervisors are the Master, Chief Engineer, Chief Mate and the First Engineer except in case of the Steward's Department the Steward is the Senior Supervisor reporting to the Master. The Senior Supervisor is responsible for ensuring that the job plan and risk assessment is complete and providing final approval of the JHA and it's contents. Persons assigned a job shall be responsible for development and review of the JHA and following the approved JHA for that job. They are also responsible for stopping when the job changes from that outlined on the JHA and seeking a supervisor to discuss the changes before proceeding further with the job.**

#### **3.2.2.1 Pre-Task Safety Meeting**

The Chief Mate/First Engineer will conduct a Pre-Task Safety Meeting, usually at 0800 and 1300, and at any other time deemed necessary by the vessel Leadership or ATC Shoreside Superintendent. This is the first step in preparing for the jobs assigned for the day. This meeting will outline the work to be performed for the upcoming period, with a review of the general safety considerations for the work. A review of new Fleet Alerts as well as any near misses or incidents that have occurred in the past that are associated with the intended work will be accomplished. This meeting will also cover any current situational safety related issues such as weather, vessel motion and work being

performed by other departments or contractors in planned work areas for the next work period.

### **3.2.2.2 Job Planning**

Job-related injuries and fatalities occur every day in the workplace. These injuries often occur because employees are not trained in or familiar with the proper job procedures or the hazards associated with the job being performed. Establishing proper job procedures is one benefit of conducting a JHA. As each job is broken down into step by step procedures, keeping in mind how to do the job safely, and what hazards are associated with the task, you can determine and document the procedures to do the job safely with a list of known hazards associated with the job. This will allow the crew to have the required PPE and tools to be used to perform the job in a safe manner and eliminate or mitigate the hazards. When all the steps are completed you can use this information as a training tool for new crewmembers or crewmembers that transfer to another position.

Critical elements in preparing for a job and conducting a Job Hazard Analysis are:

- An understanding of the job or work assignment to be conducted.
- A keen awareness of the hazards associated with each step of the task or work.
- Evaluations of each job or task and the severity of the consequence associated with the hazards identified.
- Familiarity with the tools, means, or procedures available to successfully eliminate or mitigate the hazards.
- Methods to record, document, and visualize the job hazard analysis and communicate the results to those who are to conduct the work or complete the task.

Shipboard JHA begins with job planning. An initial job assessment will be performed by one of four Senior Officers, the Master, the Chief Engineer, the Chief Mate or the First Assistant Engineer. This initial assessment can be performed at any time prior to the job actually being conducted, occasionally as far in advance as a few weeks. This initial assessment will answer the basic questions of:

The Job:

- Does the job have to be done?
- Do we have the proper tools to do the job?
- Are the renewal parts correct? Have certificates been reviewed to verify correctness?
- What are the energy sources we can come in contact with? How will we protect ourselves from these hazards?
- Is the weather going to be a factor? If so, is it manageable?
- What job skills are needed to be successful with this job?
- Are enough personnel available to complete the job safely and efficiently?

- Are the personnel currently aboard capable of accomplishing the job safely and efficiently?
- Can the job be done in the time available?
- Would it be more cost effective to use a contractor?
- What is the plan if the job changes?

Supervision:

- Is the supervisor for the area the right person to supervise the job?
- What level of supervision is needed on site?
- Can supervision be delegated?
- What level of preparation is needed.
- Who will coordinate the permits?

Procedures:

- Is there a written procedure for the job?
- Is the procedure available and will it be utilized for the job?
- Has the procedure been reviewed by a supervisor familiar with the work to verify the accuracy and clarity?
- Is the procedure the most recent version?
- Is the procedure able to be understood by those who will use it?
- Can the JHA be reviewed at the site with the workers? If not how will the requirement to assess the risks at the site with the team be covered?

Communications:

- How will the expectations and needs of the job be conveyed to those doing the work?
- Will the worker/s starting the job finish the job? Will there be a need for turn over protocol?
- Will noise levels in the area effect communications on the job? How will communications be accomplished if this is the case?

It is important to recognize that not all-shipboard jobs are capable of being done safely and/or efficiently by shipboard personnel. This may be due to weather constraints, equipment or tool deficiencies, or by personnel limitations.

It must also be recognized that following this initial assessment and the job being considered a “GO”, circumstances may change and the job as initially planned may be canceled or delayed.

If the determination has been made by the shipboard leadership that the job can be done safely and efficiently with shipboard personnel the job hazard analysis process may begin.

### **3.2.3 Documenting the Job Hazard Analysis**

#### **3.2.3.1 JHA Development at the Job Site**

The proposed personnel working the job shall proceed to the job site and evaluate the work site with the intended job in mind. Personnel requirements

shall be discussed for the accomplishment of the job. A detailed step by step process shall be developed with all identifiable hazards listed for the work intended. This information shall be recorded on the Job Hazard Analysis form thus creating a documented work plan and hazard analysis. The more difficult the job, the more detailed the work plan/JHA.

Review the tools, P.P.E., and equipment required in completing the job. Review all hazards associated with each step of the job. Ask if there are any concerns or questions from the crew on the assigned tasks.

Example Work Site Hazard Identification

**Work site/Personnel/Equipment/Environment:**

- Is the work site effected by environmental factors? (i.e. wind, sun, heat, cold, rain, snow, decreased/enriched oxygen, fumes, presence of chemicals etc.)
- Will the work site atmosphere need to be tested prior to personnel being allowed to work?
- Are permits required?
- Will monitoring of the environmental conditions be required throughout the job?
- Is the work site free of unsecured equipment such as tools, portable equipment or parts that may have been left there?
- Is the space in the work site sufficient for the persons performing the work to move freely without squeezing into an area or reaching excessively?
- Are there overhead obstructions?
- Are there slip or trip hazards? Can they be removed prior to work starting?
- Is there a possibility that pollution to the environment could occur when the job is performed?
- Does the work site need to be blocked off from traffic to protect people passing by?
- Will the tools necessary to complete the job fit in the area with all the workers without creating a hazard?
- Does the size of the work site require less or more personnel than would normally be needed to accomplish the job?
- Is visibility or hearing going to be an issue during the job?
- Will the layout or location of the work site require a change in the way the workers will communicate?
- Can a worker be caught in between anything while in the work site?
- Will moving equipment or tools in the work site have an impact on the worker? (i.e. tight space with little room to lift properly, no place for chain falls to be attached, too small a space to get jacks or trucks in to help with movements of equipment.)
- Will the workers need to exert effort beyond what should be required to accomplish the task?
- What are the energy sources I can come in contact with? How will I protect myself and my crew from these hazards?

- Is their sufficient clearance for effective use of fall protection? Secure attachment points?

If all agree that the job can be performed safely, then all personnel involved shall sign the JHA, and complete any additional Permits to Work.

It is to be expected that on some occasions the JHA process, once completed, will indicate that the job cannot be done safely. When this occurs, the job shall be re-evaluated by Senior Supervisors to determine what changes can be made to rectify the condition or mitigate the hazard.

### **3.2.3.2 Work Permits**

Many jobs will require the completion of a Work Permit in conjunction with the JHA. These will be completed only if the JHA process indicates the job can be done safely.

### **3.2.3.3 Authorization to work**

A Senior Supervisor (Master/Chief Engineer/Chief Mate/First Engineer and Chief Steward for steward's department only) or their designee will visit the job site and review the JHA with the work crew.

The JHA review at the site should be lead by the crew assigned to perform the work. This verbal explanation of the work to be performed, the hazards associated with the work and what will be accomplished to ensure safety on the job, will provide the assurances needed to allow the work to be approved by the supervisor or their designee.

Once the supervisor or their designee is in agreement with the work crew that they have identified and eliminated or mitigated the hazards for the job, the supervisor/designee will sign the JHA authorizing the job to begin. This will ensure to the best of the ability of those involved that this job can be conducted in a safe manner. The work cannot be started until this agreement is reached and the JHA signed by the Senior Supervisor or their designee.

See "Common Jobs" section for variation in approval process for repetitive jobs.

#### **3.2.3.3.1 Designee**

A designee may be any officer or the Bosun. The designee must be familiar with and have experience with the work being reviewed in order to be assigned as designee.

#### **3.2.3.3.2 Responsibility**

Although the Senior Supervisor may delegate JHA review to another supervisor the Senior Supervisor retains overall responsibility for the safety of his/her personnel. There are certain jobs that will require review by the Senior Supervisor only; the shipboard leadership must determine those jobs. Examples of these may include rigging jobs, tank work, major overhauls of equipment, etc.

### **3.2.3.4 Change of Work Scope**

Once a job is started, the job plan will be followed as documented and approved until completion. Jobs will not be modified in mid stream. If it becomes apparent that the original job plan is not working or modifications/additions to it must be made, **STOP THE JOB**. Everyone, from the Senior Supervisor to the onsite workers, must be cognizant of the changes required to the original job plan. This will necessitate a re-evaluation and possibly revision and re-approval of the JHA as modified.

Examples of changes may be the addition of a rigging evolution or a requirement to relocate heavy gear or the need to remove parts to be machined. If a process has not been identified in the original work plan/JHA and that process is covered by policies or set procedures of its own then you are looking at a change. The worker should evaluate the hazards of this additional work and make a new plan and present it to the Senior Supervisor for approval before proceeding with the work.

If a Senior Supervisor is performing the work a JHA must still be written and approved. If the scope of the work changes once work has begun that would substantially increase the risk of personal injury, harm to the environment, damage to equipment or cause a potential delay to the vessel, then approval must be obtained from the Captain or Chief Engineer for these new risks incurred before moving forward.

### **3.2.4 Expectations for Application**

JHA's are to be developed and documented for all jobs conducted aboard ship when conducted or directed by ship's crew where risk to personnel, equipment or the environment exists. These jobs include both level 1 and level 2 jobs.

#### **3.2.4.1 Repair Periods and Contractors**

JHA's are to be used during any in-service or out-of-service period for any work performed by an outside contractor. This JHA may be completed by the vessel personnel, by the repair contractor's personnel, or jointly, in a written format, and reviewed by the vessel Supervisor with the contractors at the worksite.

It is expected that a JHA be conducted when the vessel is under the control of a shipyard if the scope of the individual repair job poses potential risks above those normally expected for a shipyard task, or the task is outside the scope of the "spec".

#### **3.2.5 Level 2 JHA, Company pocket guide. (Removed)**

#### **3.2.6 Guidance on Form completion (HSSE 04)**

All JHAs shall be completed/reviewed at the actual work-site to ensure proper attention to current conditions and needs. The JHA may be accomplished by creating a completely new workplan/JHA or by review and/or

revision/modification of an existing JHA for the job from the vessel files.

### **Front Page**

- Complete the front page filling in all boxes provided for Job name, date etc.
- If safety equipment is used that is not identified on the page please check other and write in the PPE used.
- All personnel on the job should sign the JHA form in the box provided
- Check yes in the box for environmental aspects if the hazards have been covered in the body of the JHA.
- Check off the box for any additional permits and fill in tools and materials box.

### **Body of the JHA**

Identify and then list the sequence of basic job steps by:

- Visualizing the job
- Discussing it with the worker
- Drawing on your knowledge of the job.

List the potential hazard associated with each basic step Review each step asking these questions about each step.

- Is there a danger of the employee striking against, being struck by, or otherwise making injurious contact with an object?
- Can an employee be caught in, by, or between objects?
- Is there potential for slipping, tripping or falling?
- Could the employee suffer strains from pushing, pulling, lifting, bending or twisting?
- Is the environment hazardous to safety and/or health (toxic gas, vapor, mist, fumes, dust, heat or radiation)?
- What potential system or equipment failures could cause bodily injury?
- Is the position the employee will have to work in likely to put them in harms way or cause cramping, strains etc?

List recommended action or procedures to mitigate or eliminate the potential hazard. Begin by trying the following:

- Engineer the hazard out. I.e. clean up, move out of the way, renew tool etc.
- Provide guards, safety devices etc.
- Provide personal protective equipment.
- Provide job instructions training.
- Maintain good housekeeping
- Lock out/Tag out.

Insure good ergonomics (positioning the person in relation to the machine or other elements in such a way as to improve safety)

Use simple “do” or “don’t” statements to explain recommended precautions. Begin with an action word. Say exactly what needs to be done to correct the hazard, such as, “lift using your leg muscles.” Avoid general statements such as, “be careful.”

The person/s responsible for the accomplishment of the task shall sign the JHA.

### **3.2.7 Revising file copies of the Job Hazard Analysis**

A job hazard analysis can do much toward reducing accidents and injuries in the workplace, but it is only effective if it is reviewed and updated periodically. Even if no changes have been made in a job, hazards that were missed in an earlier analysis could be detected.

If an injury or illness occurs on a specific job, the job hazard analysis should be reviewed immediately to determine whether changes are needed in the job procedure. In addition, if a “close call” or “near miss” has resulted from an employee’s failure to follow job procedures, this should be discussed with all employees performing the job.

Anytime a job hazard analysis is revised, training in the new job methods, procedures, or protective measures should be provided to all effected by the changes. Date of revision should be recorder on the form.

### **3.2.8 JHA Recap**

- Attend Safety Meeting.
- Receive Job assignment.
- Conduct and document the JHA at the work site.
- Review the JHA with the supervisor at the site and have the JHA signed off prior to starting the work.
- If the job scope changes during the job, stop work, evaluate hazards, make a plan and get approval from the Senior Supervisor before proceeding.
- Workers may follow the common job process only if the individual is approved to do so by his/her supervisor.