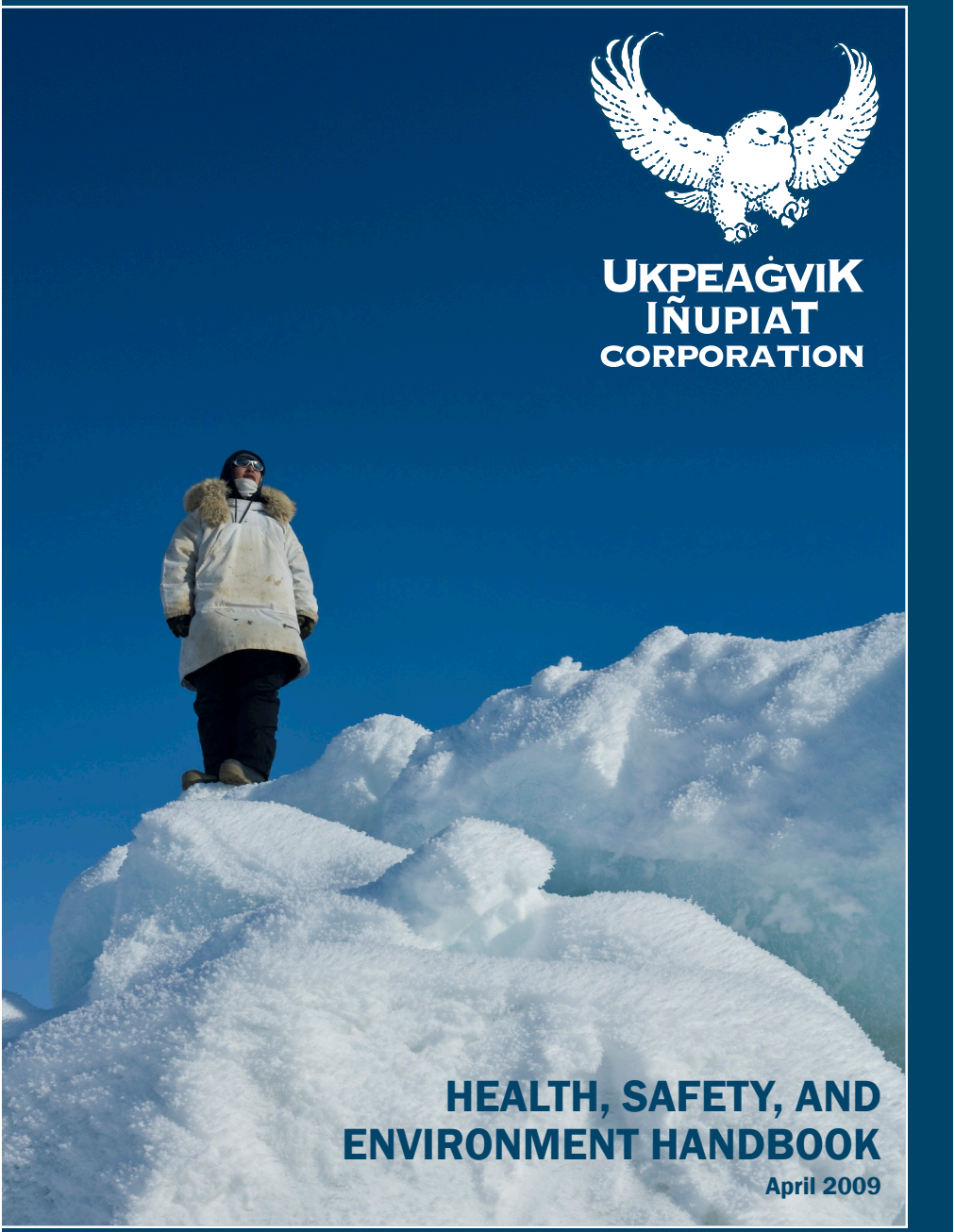

UKPEAĠVIK IÑUPIAT CORPORATION

HEALTH, SAFETY, AND ENVIRONMENT HANDBOOK

April 2009

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Piyaqquutailaqta ~ "Let Us Go Without Injury"

We know our employees as friends, brothers, sisters, family, and we care about their health and safety. We wish them to be well and whole. This is a high call to duty and as your employer, we take our responsibilities seriously. But we cannot do it alone. Each employee, each person in this company, must share in these duties. Safety is a part of everyone's job.

When we are successful in this team effort, we are able to provide an environment where each individual goes home to their family free of injury. The strength of our workers helps us achieve our business goals and grow our company to achieve new successes.

When we learn of a safety problem, our goal is to respond immediately, to effectively manage and minimize the risks to our operations and our people. To accomplish this, we take a strong approach toward maintaining a safe work environment by:

- providing safety education and training for employees
- assigning responsibility for safety management
- continuously reviewing safety efforts to identify areas of improvement
- evaluate accidents that do occur, and develop plans to prevent them from happening again

We have made a commitment to address the environmental and health impact of our operations by reducing waste, emissions, spills and discharges and by using energy efficiently. We strive to be good citizens in every community in which we operate, and to care for our environment as good stewards.

We maintain awareness of safety matters, so as to be proactive in providing quality service to our clients. We will achieve this through education, communication, and definition of the goals and standards appropriate to our operations and those undertaken on behalf of our clients.

We work to ensure solid profitability for our Shareholders as we adhere to UIC's Health, Safety and Environmental Programs, Procedures and Guidelines. This Health, Safety, and Training (HSE) Handbook forms the cornerstone of Ukpeagvik Iñupiat Corporation's (UIC) safety culture, providing a road map and reference guide so that our team, and others that follow, can stay on the path we begin here.

We seek continual improvement of all of our programs. We do not seek a *status quo* but instead to increase what we have learned and share this knowledge and responsibility with others we work with. Please, tell us how we can make you safer, and for now, join us by promising to look out for your own safety and for the safety of your co-worker.

Quyanaq,

Eileen

Eileen Y. Terwilliger, ARM, Director of Risk Management
Ukpeagvik Inupiat Corporation

1.0 INTRODUCTION

UIC is committed to a safe workplace, the protection of the environment, and the health of all employees. However, your help will be needed to accomplish these objectives. UIC believes that HSE is a team effort and is the responsibility of all.

This HSE Handbook is a guide to your responsibilities on the job while on UIC premises. This handbook outlines the minimum expectations with which you shall comply while working on UIC premises. Of course, good judgment and clear thinking are required to supplement any rules. HSE shall be a core value in all work performed for UIC. If you are in doubt at any time about whether the HSE aspect of the operation at hand is being properly managed, stop the work and consult with your supervisor or the UIC HSE Representative. It is your duty to report conditions that could lead to an HSE incident and to stop the operation immediately until conditions are fixed or safeguarded. In addition, you are required to report all HSE incidents, including accidents and injuries, as soon as possible to your supervisor or the HSE Representative.

1.1 Employee HSE Responsibilities

All employees are responsible for the following:

- Performing work to prevent HSE incidents by following UIC HSE policies and procedures, as well as federal, state, and local HSE rules, regulations, and ordinances while working on site.
- Notify supervisor or HSE Representative immediately of any HSE incidents (including spills and near misses), even if no injury occurs.
- Performing a Job Safety Analysis (JSA) that addresses the specific hazards of a job prior to beginning all work.
- Using stop work authority to immediately stop any work for which HSE is not being properly managed.
- Wearing required personal protective equipment (PPE) at all times.

1.2 Manager and Supervisor HSE Responsibilities

All managers and supervisors are responsible for the following:

- Undertaking proactive HSE efforts. UIC managers are expected to have programs in place that proactively ensure improvements to HSE performance. These efforts include, but are not limited to, observing the behaviors of employees to positively reinforce behaviors that prevent HSE incidents and to correct behaviors that do not. HSE performance shall be monitored and documented. Contractor management should be accountable for HSE performance, as well.

- Communicating HSE policies and procedures. Ensuring that the appropriate HSE policies and procedures are communicated to all personnel working on site, including contractor employees.
- Adhering to the Short-Service Employee (SSE) Program. The SSE Program is described in Section 1.3 of this handbook and effectively manages SSEs through training, mentoring, etc.
- Checking tool and equipment usage. Ensuring that employees are trained in the proper use of tools and equipment.
- Fixing unsafe conditions. Promptly fix or safeguard conditions and correct behaviors deemed to be an HSE risk.
- Developing an HSE culture. Creating an atmosphere in which HSE issues are reported, discussed, and resolved and one in which everyone feels it is their duty to stop an operation immediately if conditions or behaviors present an HSE risk.

1.3 Short-Service Employee Program

Requirements of the SSE Program are described below:

- Personnel employed less than six months at the same job type or with the present employer shall be considered SSEs.
- Each SSE shall be assigned a mentor (typically an experienced employee) to assist the employee during his/her "SSE" period. The mentor shall provide close supervision of the SSE and not allow him/her to perform any task for which he/she has not been properly trained.
- Each SSE shall be distinguished from experienced employees either by wearing a sticker on his/her hard hat that includes the letters "SSE" and is of contrasting color (YELLOW) to the hard hat or by wearing a different colored hard hat than the experienced employees.

To be removed from SSE status, an employee shall demonstrate behavior conducive to HSE (i.e., had no injuries, participated in HSE programs, attended HSE meetings, etc.) for six months and have a general awareness and working knowledge of HSE policies and procedures. UIC may reduce the six-month requirement, with approval of the Safety Manager, based on an employee's HSE performance and a recommendation from his/her supervisor. Documentation should be maintained for a period of one year after an employee has been removed from SSE status.

2.0 WORKPLACE PRINCIPLES AND POLICIES

2.1 Professional Conduct

While on company premises, all employees shall conduct themselves in a professional manner. Horseplay, practical jokes, or any type of harassment is not allowed. This includes sexual harassment, which will not be tolerated. Male and female employees are entitled to a workplace free from sexual harassment. Sexual harassment includes unwelcome sexual advances, requests for sexual favors, threats, actual bodily contact, and other verbal or physical conduct of a sexual nature that interferes with an individual's work performance or creates an intimidating, hostile, or offensive working environment.

2.2 Drugs and Alcohol

The use, possession, transportation, promotion, or sale of illegal drugs, controlled substances, drug paraphernalia, and alcohol while on site is absolutely prohibited. Use of prescription or over-the-counter medications that may impair your ability to work safely shall be discussed with your supervisor before you begin work.

UIC reserves the right to search the person, the vehicle, and other property of individuals while they are on company premises. These searches may be conducted without prior announcement and at such times and locations as deemed appropriate.

2.3 Housekeeping

All walking areas, work areas, handrails, equipment, tools, firefighting and life-saving equipment, etc., shall be kept clean and free of obstructions. Good housekeeping is essential so that work may proceed in a safe and orderly manner. Tools shall be used appropriately and shall be promptly put away after use to prevent a job hazard. Hand and power tools shall be kept in good condition with guards in place and shall not be modified. Defective tools shall be repaired by qualified repair persons or replaced. When grease is being cleaned from equipment and tools, detergents and water or steam are preferable to solvents. When solvents are necessary, only company-approved solvents shall be used, and gasoline and diesel are not allowed for cleaning.

2.4 Smoking

Smoking is only allowed in designated smoking areas.

2.5 Adverse Weather Conditions

When adverse weather conditions present a potential risk to HSE, UIC expects good judgment to be used and action taken, if necessary, up to and including shutting down the job.

2.6 Security

Employees and contractors shall not bring unauthorized individuals (i.e., friends, relatives, or observers) onto UIC and Customer premises. UIC and contractor employees shall observe landowner requirements for site security (e.g., close/lock doors and gates).

2.7 Fire Prevention

Combustible materials such as rags, paper, and trash shall be disposed of in proper containers, and the containers shall be labeled. Flammable liquids such as gasoline, kerosene, fuel oil, etc., shall be transported and stored only in approved metal containers, and the containers shall be labeled.

Firefighting equipment shall not be altered, tampered with, or blocked. All employees are expected to be familiar with the Emergency Response Plan, know the locations of the portable fire extinguishers and fire alarms, and participate in fire drills.

2.8 Emergency Response and Drills

Company employees and contractors shall be familiar with the Emergency Response Plan for their location and shall participate in emergency drills.

3.0 HSE MEETINGS

3.1 Scheduled HSE Meetings

Regularly scheduled HSE meetings shall be conducted monthly (at a minimum) and attended by all personnel on site. Topics may include HSE issues, regulatory issues, HSE training, HSE trends that have been identified, etc. A record of these meetings shall be kept that includes date, location, names/signatures of attendees, and topics covered.

3.2 Pre-Job Safety Meetings

Prior to beginning all work, a pre-job safety meeting shall be conducted on site in which the specific hazards pertaining to the job are discussed. Additional meetings may be required that same day if a nonroutine job is performed, if a JSA or Work Permit must be reviewed prior to the start of a specific task, or if a change in job scope occurs. Everyone shall attend and participate in all HSE meetings unless specifically instructed otherwise. A record of these meetings shall be kept that includes date, location, names/signatures of attendees, and topics covered.

Suggested topics for pre-job safety meetings are listed below:

- **Responsibilities** – Establish who has the overall responsibility for the job and ensure that each individual understands his/her assignment.
- **Scope of Work** – Discuss the task and job steps.
- **Skills** – Ensure that proper training has been provided if special job skills are needed for a task. Discuss SSEs and how they will be managed.
- **Equipment** – Discuss any special tools that will be needed for a task and the HSE aspects of their usage.
- **Materials** – Discuss HSE aspects associated with materials, including proper PPE, and review Material Safety Data Sheets (MSDS) if appropriate.
- **PPE** – Discuss what PPE is needed for the job.
- **JSA** – Review the JSA.
- **Hazards** – Discuss any locations or job hazards not previously discussed during other portions of the meeting.
- **Work Permit** – Review the Work Permit if required.
- **Emergency Evacuation** – Discuss the rallying point, the evacuation route, nearby hospitals, who the first responders are, etc.
- **Environment** – Discuss weather (heat, cold, wind, lightning, etc.) and location hazards, such as bears, insects, uneven walking surfaces, etc.

- **Conflicting Activities** – Discuss other activities or simultaneous operations that may affect the operation.

4.0 PERSONAL PROTECTIVE EQUIPMENT

All employees shall wear appropriate PPE. It is the responsibility of each person to wear PPE that is suitable for the specific task being performed, the potential hazards that person will be exposed to, and the specifics of the job site. The PPE requirements provided on the MSDS for the material being handled shall be strictly adhered to. In addition, all employees working on site shall wear a shirt and long pants at all times. Tank tops, sleeveless shirts, and short pants or cutoffs are not permitted. Loose or floppy clothing is prohibited around rotating or moving equipment. Rings, neck chains, or loose jewelry shall be removed while employees are engaging in manual labor.

4.1 Head Protection

An approved American National Standards Institute (ANSI) Z89.1 Class B (plastic) hard hat shall be worn by all employees working in field operations when an overhead danger exists.

4.2 Eye Protection

Safety glasses with side shields shall be worn by all employees working in field operations at all times, except while in living quarters, offices, and control rooms. All eye protection must comply with ANSI Z87.1. During nighttime operations, only clear or amber-colored safety glasses shall be worn. Contact lenses may be worn; however, safety glasses with side shields are required.

When performing work for which safety glasses do not provide adequate protection, such as using a high-pressure washer, handling chemicals, etc., other appropriate eye protection, such as goggles, shall be worn. Hard hats with full-face shields are required for all buffing and grinding operations.

Welding Specific – Welding hoods shall be used during all arc-welding operations. Goggles or other suitable eye protection with appropriate filter lenses shall be used during all gas welding, gas cutting, and brazing operations. All filter lenses and plates used in welding hoods and goggles shall meet the test for transmission of radiant energy prescribed in ANSI Z87.1.

Welders' helpers and entry attendants shall use proper eye protection. When not engaged in a welding or cutting activity, safety glasses with side shields shall be worn by welders and welders' helpers.

4.3 Foot Protection

Steel-toed or nonconductive-safety-toed shoes or boots with nonskid soles shall be worn by all employees working in field operations at all times, except when the employees are in vehicles, living quarters, offices, and control rooms or when weather conditions will not permit. All safety-toed footwear must comply with ANSI Z41.1.

Visitors who are not performing work on company property may not be required to wear steel-toed shoes in certain areas if escorted by a designated employee.

4.4 Hand Protection

Appropriate gloves shall be worn when the hands are exposed to hazards such as cuts, punctures, or abrasions (cloth, leather, or leather-palmed gloves); when chemicals or hazardous materials are being handled and absorption is a concern (rubber gloves); and when electrical work is being performed (gloves certified for electrical work).

Welding Specific – Flameproof gloves shall be used during all arc welding, gas welding, or gas cutting operations, except when light work (such as test fitting pieces) is being performed.

4.5 Hearing Protection

Hearing protection shall be worn in all high-noise areas or wherever a high-noise warning sign is posted.

4.6 Protective Clothing

Special protective clothing shall be worn when chemicals are being handled or in other hazardous situations as specified by the MSDS.

During field operations, all personnel shall wear high-visibility work vests, preferably fluorescent orange in color.

4.7 Fall Protection

Fall protection equipment shall be worn when employees are working or climbing more than 6 feet (ft) above an established working surface (ground, deck, or water level); when specified on a warning sign; or when an immediate danger exists below the working surface, regardless of height, and no guardrails are present. All components of the fall protection system must comply with ANSI Z359.1

4.7.1 Working above 6 Feet

Any employee working or climbing more than 6 ft above an established working surface (ground, deck, or water level) shall use one of the following means for primary fall protection.

The preferred system for primary fall protection consists of the following:

- A full-body harness.
- A shock absorber.
- A clevis with cotter pin locking device or snap hooks with an inward moving, self-closing, and self-locking keeper (latch or gate) so that the keeper remains closed and locked until unlocked and pressed open for connection or disconnection.
- A nylon lanyard (steel or rope lanyards are not allowed) attached to a stationary support. The lanyard shall be attached to a stationary support in a manner that will prevent a free fall of more than 6 ft or even less than 6 ft if an immediate danger exists below the working surface, regardless of height.

Additional systems that may be used for primary fall protection follow:

- A retractable lifeline (inertia reel) attached to a full-body harness may be used.
- A cable-grabbing device attached to a static line may be used.

4.7.2 Care and Inspection of Fall Protection Equipment

Fall protection devices such as full-body harnesses, lanyards, static lines with cable-grabbing devices, inertia reels, etc., shall be inspected before each use and replaced if necessary. Fall protection equipment that has been involved in a fall shall be replaced.

Full-body harnesses and lanyards shall be kept clean and shall never be laid down in drilling mud, water, dirt, etc. All fall protection equipment shall be placed in a proper storage area when not in use. Only approved cleaning products for full-body harnesses and lanyards shall be used in order to avoid diminishing the rated capacity of the devices.

4.7.3 Guardrails/Handrails and Barricading

Guardrails/handrails and/or barricading shall be provided for the following:

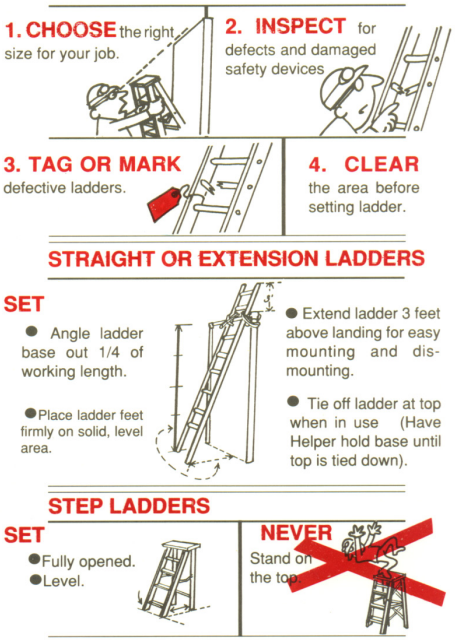
- A walkway or wall opening from which there is a drop of more than 4 ft; and
- An open-sided working surface from which there is a drop of more than 6 ft.

Walkways with missing, broken, or loose guardrails shall be taken out of service until repaired.

4.7.4 Ladders

A ladder shall always be used to access objects or areas that are not within an employee's easy reach. Some specific requirements for the use of ladders follow:

- All ladders shall be inspected before use. Any damaged or unsafe ladders shall be tagged and taken out of service. Stationary ladders with missing, broken, or loose steps shall be taken out of service until repaired.
- Both hands shall be kept free for climbing, descending from, and performing work on a ladder. No hand tools, grease guns, etc., shall be carried while climbing a ladder. Articles that are too large to be carried in a pocket or on a belt shall be lifted and lowered by a hand line. Employees shall not rush while climbing or descending from a ladder and shall only take one step at a time.
- Only one person at a time shall be on a ladder.
- Portable ladders shall have antislip safety feet and be secured at the top before work begins to prevent shifting. A second employee shall hold the ladder until the climber can secure it at the top. In addition, portable ladders shall be set at the correct angle (1 ft out at the bottom for every 4 ft of ladder height) to ensure stability.
- Only ladders that are not electrically conductive (wooden ladders or ladders with fiberglass rails) shall be used during the performance of electrical service work.
- Stationary ladders with a height of more than 6 ft shall be caged, or fall protection (such as an inertia reel, a static line with a cable-grabbing device, or a double lanyard climbing method) shall be used. See Section 4.7.1 for more information about proper fall protection.



5.0 RESPIRATORY PROTECTION

Respiratory protection shall be worn by employees working in areas where respiratory hazards exist and are not controllable by other means. Some respiratory hazards that may be encountered include hydrogen sulfide, chlorine, galvanized pipe welding, or sand blasting.

The following requirements must be met by employees who will be using respiratory protection:

- The employee shall meet medical requirements for using this equipment.
- The employee shall receive training on the proper use, fit, and maintenance of this equipment.
- The employee shall not have facial hair that will interfere with the seal of the face piece.
- The employee shall not wear eyeglasses that interfere with the seal of the face piece.
- The employee shall not wear contact lenses while using a respirator.

6.0 PERSONAL FLOTATION DEVICES

Approved personal flotation devices (PFDs), such as life jackets or flotation suits, shall be worn and properly secured at all times by personnel working over the water.

7.0 TRANSPORTATION

7.1 Vehicles / Equipment

Employees who drive/operate a company owned, leased or rented vehicle or piece of equipment shall have a valid driver's license with appropriate endorsements. Seat belts shall be worn by all occupants, and all traffic regulations shall be obeyed when driving. Driving while under the influence of alcohol or other drugs is prohibited.

While on location, vehicles shall be parked in a safe area or designated area. Also, when possible, vehicles shall be parked so the drivers can exit by driving forward.

7.2 Vessels

Employees shall follow the instructions of the vessel master. All vessels operating for UIC shall meet U.S. Coast Guard (USCG) regulations.

7.3 Helicopters

Employees shall follow the instructions of the dispatcher and helicopter pilot at all times. A helicopter preflight HSE orientation shall be conducted. The helicopter shall not be approached until a signal is received from the pilot. No hazardous material shall be carried on the helicopter unless the proper paperwork has been completed and the pilot has been notified of the material.

Some additional requirements for helicopter use follow:

- Walk (do not run) to or from the helicopter.
- Never walk behind the aft cargo compartment.
- Never walk under the helicopter tail boom.
- Watch carefully and crouch down when under the turning rotors.
- Remain clear of the tail rotor at all times.
- Never use the emergency exit from the heliport unless it is a real emergency.
- Wear a seat belt secured tightly during flight.

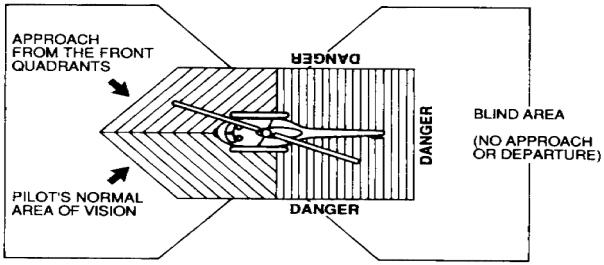


Exhibit 7. Helicopter Danger Areas

8.0 ENVIRONMENTAL

8.1 Environmental Assessment

Prior to beginning any work activity, an Environmental Assessment should be completed to determine if adequate barriers are in place to prevent an environmental incident or a permit violation.

The Environmental Assessment shall evaluate the following factors:

- Whether activities will generate any new discharges to the air, water, or land;
- Whether activities will require any new permits;
- Whether activities will affect any existing discharges;
- Whether existing discharges exceed the permit limits; and
- Whether activities will lessen the effectiveness of existing barriers that protect the environment from an oil or a chemical spill.

8.2 Waste Management

All waste materials shall be disposed of properly. Employees are responsible for taking the necessary steps to prevent pollution and minimize the generation of waste.

Waste management shall include the following:

- Proper identification of each individual waste stream;
- Segregation of individual waste streams; and
- Proper labeling, marking, manifesting, storage, and shipping of each waste stream.

8.3 Environmental Rules, Regulations, and Guidelines

The company recognizes that protection of natural resources and sound environmental performance are essential. UIC conducts its business in compliance with the laws and regulations designed to protect the vital natural resources of clean air, water, land, and wildlife.

In order to achieve the environmental goals of supporting sustainable development and minimizing impacts to the environment, the company will continue the following practices:

- Provide adequate resources to implement this environmental policy.
- Comply with all environmental laws, regulations, permit stipulations, and all other environmental requirements, at a minimum.
- Promote environmental awareness among its employees, business units, subsidiaries, and subcontractors through training.
- Listen, consult, and respond openly to any environmental concerns.
- Expect management and supervisors to take ownership of and share responsibility for environmental performance.
- Adopt the philosophy to reduce, reuse, and recycle, while promoting sound waste management principles.
- Correct practices or activities promptly that are not in compliance with this policy.
- Strive to continually improve on environmental performance.

9.0 OCCUPATIONAL HEALTH

Occupational health deals with identifying, evaluating (through monitoring, surveys, etc.), and controlling (through engineering, material substitutions, work practices, PPE, etc.) workplace health hazards.

Occupational health objectives include the following:

- Protect personnel health.
- Provide a framework for recognizing and managing health hazards.
- Comply with regulatory requirements.

9.1 Hazard Communication/MSDS Program

The purpose of the Hazard Communication (HAZCOM)/MSDS Program is to ensure that all known potential hazards of substances used or present in the workplace are communicated to all employees.

Compliance with this program is achieved through the following activities:

- Providing employees with information and training, including measures that employees should take to protect themselves from these hazards (such as proper work practices, PPE, and emergency procedures);
- Labeling containers and providing information regarding hazards associated with unlabeled containers;
- Maintaining MSDS; and
- Maintaining workplace chemical inventory lists.

9.2 Heat and Cold Stress

The need to develop work/rest cycles, provide protective clothing and equipment, etc., shall be evaluated on a case-by-case basis for activities for which exposure to heat or cold stress can occur.

9.3 Food Control

Food and drink preparation, and storage and consumption practices shall prevent contamination from chemicals, oils, dirt, biological agents, and any foreign matter. Facilities for washing before food preparation and consumption shall be available near the workplace. Eating areas that are separate from work areas shall be provided wherever practical.

10.0 WORK PERMIT PROCESS

UIC utilizes a Work Permit Process (WPP) for nonroutine work activities to ensure that hazards and risks associated with these activities are identified and safeguarded against. The WPP is a comprehensive process for analyzing, planning, authorizing, and executing work, with the goal of preventing HSE incidents. The process involves much more than simply issuing permission to conduct certain jobs.

10.1 Work Permit

One of the key tools utilized in the WPP is the Work Permit, which is a written document that authorizes identified personnel to conduct certain work activities within designated boundary conditions. These conditions include factors such as time, place, and the specific work steps required to ensure that a job shall be completed in a manner that prevents HSE incidents. The Work Permit generally shall be issued on a daily basis and reissued if a shift/tour change or significant change in hazard classification of job assignment occurs.

Activities that require a Work Permit follow:

- All hot-work welding, cutting, grinding, etc.;

- Confined-space entry (both permitted and non-permitted);
- Lockout/tagout; and

The Work Permit shall contain the following information, at a minimum:

- The date and time when the specified work will begin and end, and/or the date and time when a new permit will be required. A formal hand-over procedure must be in place when Work Permits are issued for periods longer than one shift/tour or when Work Permit authorization changes.
- The names of the company and individual to whom the permit is issued.
- The location where the specified work will take place.
- A full description of the work that will be performed, including proposed tasks and objectives, and a description of the equipment that will be used.
- Special considerations for safeguarding SSEs.
- A description of all major hazards that could be encountered during the job, as well as documentation of appropriate controls for each hazard identified.
- The PPE necessary for the specified work that will take place.
- Specific standards, procedures, and guidelines applicable to the work that will take place.
- A contingency plan in case the work does not proceed as planned.
- The actions to be taken in the event of an HSE incident and appropriate emergency response and notification telephone numbers for UIC employees and contractors.
- Reference to all other activities (and associated Work Permits) that may be impacted by the work that will be performed, to ensure alignment and coordination between projects.
- The signatures of all the workers who have reviewed the Work Permit and who have agreed to meet all the operational and HSE requirements.
- Final documentation and a formal hand-over procedure to declare that the work has been completed and the job site has no remaining HSE issues or problems and is ready to be returned to service.

10.2 Job Safety Analysis and Job Hazard Analysis

Other key tools utilized in the WPP, besides the Work Permit, are the JSA and Job Hazard Analysis (JHA). The JSA and JHA help to ensure that appropriate precautions and procedures are employed to eliminate or minimize identified HSE hazards and risks for activities conducted. The JSA and JHA are processes for discussing and documenting each step of a job, identifying the existing or potential HSE hazards, and then determining the best way to perform the job to reduce or eliminate those hazards. The JSA and JHA are effective tools to be used for jobs that will take place even if a Work Permit is not required.

11.0 MANAGEMENT OF CHANGE PROCESS

UIC requires that a Management of Change (MOC) process be used for all operations in which major changes are planned, both permanent and temporary, that can have a significant impact on the HSE aspects of a job or operation. The purpose of the MOC process is to ensure hazards and risks associated with these changes are identified and managed.

Examples of "changes" may include:

- Physical changes to equipment.
- Equipment and/or structural additions to a physical asset.
- Changes to software.
- Personnel changes (staff and management).
- Changes in project scope.
- Procedural changes.

The MOC Process provides for appropriate review, approval, implementation, and tracking. Contractors shall have an MOC process consistent with UIC's process. An appropriate UIC employee should review changes to contractor equipment, procedures, etc., to ensure proper use of the MOC process and also determine if any adverse affects to HSE could result from the change.

12.0 GENERAL OPERATIONS

12.1 HSE in the Office

HSE in the office is as important as HSE in the field. Each office shall have an emergency evacuation plan and shall conduct an evacuation drill annually. UIC employees shall be familiar with emergency evacuation procedures, evacuation routes, and specific responsibilities. Office doors shall be closed but left unlocked during an emergency evacuation. Elevators shall not be used. Handrails shall be used when ascending or descending stairs. Hallways, entrances, and exits shall be kept free of obstructions. Materials shall be stored in an orderly fashion, and work areas shall be kept clean and free of tripping hazards, such as cords, drawers, books, files, etc.

12.2 Lifting of Loads by Personnel

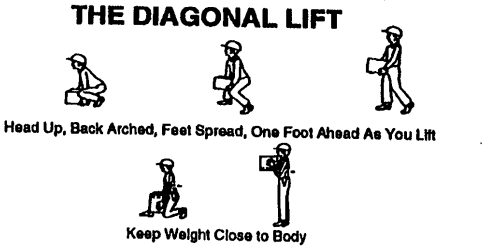
Back injuries may result from improper lifting techniques. Lifting a load that is too heavy or lifting in the wrong position can cause an injury.

Guidelines for safe lifting follow:

- Make sure the area is clear of tripping hazards.

- Face the load you intend to lift.
- Bend your knees.
- Keep the load close to your body.
- Keep your back straight.
- Use your legs, not your back, to lift the load.
- Do not twist your body while carrying the load.
- Do not try lifting a load that is too heavy; ask for help.

When lifting a load with another person, communicate with the other person at all stages of the lift, especially before lowering your end of the load.



12.3 Lockout/Tagout

Lockout/tagout is a procedure required by the Occupational Safety and Health Administration (OSHA) to isolate personnel from all potential energy sources when they are performing maintenance or service on equipment, especially when that maintenance or service requires the disabling or removal of normal guards and safety devices. Potential energy sources include electrical, mechanical, pneumatic, hydraulic, thermal, chemical, and all forms of potential stored energy. A logbook of lockouts/tagouts shall be maintained for each UIC location.

A description of the lockout/tagout requirements follows:

- Repairs, service, or alterations shall not be performed on equipment that is in operation. All equipment shall be shut down, and a lockout/tagout device shall be used so that the equipment cannot be accidentally started while it is being worked on. The power switch of the equipment to be worked on shall be locked out and tagged out.
- A qualified person shall attempt to turn on the equipment power source prior to the start of any work, to ensure that the equipment has been properly locked out of service and does not become energized.

- Consult with your supervisor or the UIC Safety Manager about site-specific work that requires the use of lockout/tagout procedures. Examples of equipment repair or maintenance projects that require lockout/tagout procedures include, but are not limited to, the following:
  - Pump repairs;
  - Generator repairs; and
  - Compressor repairs.

12.4 Confined Space

Confined-space entry is defined as entry of personnel into a confined space, such as a tank, vessel, rig cellar, earth pit, etc. A confined space is defined as space that:

(a) has an open top and is more than 4 ft in depth;

(b) has openings large enough and configured so that a person can physically enter the space and perform work;

(c) has limited or restricted means of entry or exit; and

(d) is not designed for continuous human occupancy.

Confined-Space Entry Requiring a Work Permit – Per OSHA 29 Code of Federal Regulations (CFR) 1910.146, a Work Permit shall be required for personnel to enter a confined space that could expose them to one or more of the following hazards:

- A hazardous atmosphere, such as toxic or flammable vapors;
- An oxygen-deficient atmosphere;
- Material, such as mud or sludge, that has the potential to engulf an entrant;
- An internal configuration that could trap or asphyxiate an entrant;
- Inwardly converging walls or floors that slope downward and taper to a small cross section; and
- Other recognized serious health or safety hazards.

Under no circumstances shall an employee be allowed to enter a permit-required confined space without a properly completed Work Permit, a site-specific Safety Plan, and a JSA approved by the UIC Safety Manager.

All confined spaces that can be readily accessed and have the potential to contain hazards shall be barricaded or labeled "DANGER – DO NOT ENTER – ENTRY PROCEDURES REQUIRED."

Procedures and Testing for Permit-Required Confined Spaces – The procedures and testing for permit-required confined spaces include all of the following:

- All personnel shall be properly trained in confined-space entry procedures prior to the start of work.
- A site-specific Safety Plan shall be written for all permit-required confined spaces.
- A JSA shall be completed that reviews each job-specific procedure to be performed, potential hazards associated with each task, and controls initiated for each hazard.
- The contents of the confined space shall be identified.
- All potential energy sources affecting the space shall be identified and isolated.
- The confined space shall be depressurized, cleaned, flushed, and ventilated to the fullest extent possible prior to initial atmospheric testing.
- Atmospheric testing shall be conducted for oxygen, flammability (Lower Explosive Limit [LEL]) and any toxic or hazardous substances that could result in a dose in excess of the Permissible Exposure Limit (PEL) for any substance.
- Acceptable entry condition shall include the following:
  - Oxygen content levels between 19.5 percent and 23.5 percent;
  - Flammable gas vapor or mist concentrations below 10 percent of the LEL; and
  - Toxic or hazardous substances below the PEL.
- The presence of adequate ventilation shall be verified throughout all entry operations.
- All authorized entrants, attendants, and supervisors shall be identified.
- Emergency response communication capability shall be verified. Are emergency rescue procedures or equipment required?
- Visual inspection from outside the space shall be performed to identify unusual conditions, such as liquid pooling or flowing into the space.
- The UIC Safety Department shall authorize and issue a confined-space entry permit.

Some additional important requirements for confined-space entry follow:

- Authorized entry into atmospheric conditions outside of the acceptable conditions listed above shall require the implementation of specific engineering and PPE hazard controls, as determined by the UIC Safety Department.
- Under no circumstances shall entry be permitted in atmospheres containing an oxygen concentration of more than 23.5 percent.
- Ventilation means shall be designed and configured to ensure that positive pressure air flow is maintained at all times within the entrants' work area. In addition, all ventilation equipment shall be bonded and grounded. If mechanical ventilation is used, it must be located so that it will not introduce toxic or harmful vapors into the confined space nor block means of egress.

12.5 Hot Work

Hot work is defined as welding, flame cutting, burning, grinding or using a torch. When possible, hot work shall be performed in a shop, outside a facility, or in a Safe Welding Area (SWA). An SWA shall be established on all platforms and rigs where substantial welding or flame cutting is anticipated. All welding and flame-cutting operations shall be performed in the established SWA unless otherwise authorized. SWAs are typically located on a noncombustible surface at least 100 ft from well bores, 50 ft from heavily vegetated areas, and 35 ft from combustibles (stored oil, diesel, etc.).

If hot work needs to be performed outside of an SWA it may be necessary for UIC personnel to shut-in or curtail other operations. In addition, all movable fire hazards in the vicinity shall be removed to a safe distance, or guards shall be used to confine the heat, sparks, and slag and to protect the immovable fire hazards. A Work Permit shall be issued for all hot work done outside of an SWA and the permit shall be approved by the UIC supervisor. Hazards and recommended special precautions should be documented in the Work Permit.

The hot work equipment and work area shall be inspected prior to the start of any hot work operations to ensure safe working conditions. This inspection shall include checking for explosive atmospheric conditions in all vessels, piping, and confined spaces and documenting the results on the Work Permit. Oxygen and acetylene cylinders shall be stored valve end up and shall be properly secured.

12.5.1 Fire Protection during Hot Work Operations

The following precautions shall be taken during hot work operations for fire protection:

- Fire watchers with suitable fire-extinguishing equipment shall be required whenever hot work operations are performed outside of an SWA. The fire watch shall be maintained for a minimum of a half hour after completion of a hot work operation until the danger of fire has passed.
- Oxygen and acetylene cylinders shall be kept a safe distance from the actual hot work operation so the sparks, hot slugs, or flames do not reach the cylinders. If a safe distance cannot be maintained, fire-resistant shields shall be used.
- A jet of oxygen shall not be permitted to strike an oily surface or greasy cloths or enter a fuel oil storage tank or other hydrocarbon storage tank.
- A jet of oxygen shall not be used to blow dirt out of bolt holes, sockets, nuts, etc. If objects such as these need to be cleaned, compressed air shall be used.
- Welding cables that have splices within 10 feet of the clamps shall not be used. The welder shall not coil or loop welding electrode cables around parts of his/her body.
- Wherever there are floor openings or cracks that cannot be closed, precautions shall be taken so that no readily combustible materials below will be exposed to sparks.

- During hot work operations outside of an SWA, combustible floors shall be kept wet, covered with damp sand, or protected by fire-resistant shields.
- Hot work operations shall not be permitted in the following situations:
    - In areas not authorized by the UIC supervisor;
    - In the presence of an explosive atmosphere or where such an atmosphere may develop;
    - Where ignition can be caused by heat conduction, such as on metal walls or pipes that are in contact with combustibles on the other side; and
    - When wind conditions could cause sparks to be carried to combustible materials.
- Prior to welding or cutting, all hollow spaces or containers shall be vented to permit the escape of air or gases. In addition, purging with inert gas is recommended.
- No cutting shall be allowed on used drums or tanks.

12.5.2 Ventilation during Hot Work Operations

Adequate ventilation shall be provided when hot work is performed in the following situations:

- In a space of less than 10,000 cubic feet per welder;
- In a space having a ceiling height of less than 16 ft;
- In a confined space or in a hot work space that contains partitions, balconies, or other structural barriers, to the extent that they significantly obstruct cross ventilation; and
- When the nature of the hot work may result in the release of toxic fumes or gases, such as hot work performed on stainless steel, zinc, lead, and degreasing or cleaning compounds containing hydrocarbons.

12.6 Electrical Safety

Each UIC job site shall address and minimize personnel exposure to electrical hazards through effective equipment operation, design, specification, installation, and maintenance.

12.6.1 Electrical Safe Work Practices

All electrical work shall be performed in accordance with the latest codes, standards, and regulations, including, but not limited to, the following: National Electrical Code; OSHA Subpart S; National Electrical Safety Code; and any other federal, state, or local standards. Hazardous electrical work shall only be performed by qualified electricians using proper PPE. PPE must comply with OSHA 29 CFR 1910.137. All electrical work shall be reviewed in advance with the UIC supervisor to determine if a Work Permit is required.

A qualified person shall discharge all stored electrical and shall verify that the equipment is de-energized and proper lockout/tagout procedures are implemented prior to the start of electrical work.

12.7 Static Electricity

Static electricity is generated any time liquid or solid substances are flowed, sprayed, agitated, rubbed, or splashed. Static electricity can cause a spark hazard unless special precautions are taken.

The following are requirements to minimize the possibility of creating a spark and to minimize the hazard of a fire or explosion in the presence of hydrocarbons or other flammable/combustible liquids:

- **Containers** – Only metal buckets (with metal handles) shall be used for collecting hydrocarbons or other flammable/combustible liquids. A metal bucket must have direct metal contact via a bonding cable to the nozzle or fill pipe from which a liquid is to be discharged. The nozzle and fill pipe shall also be metal. The liquid shall be discharged slowly into the bucket to maintain a low velocity and minimize the amount of static electricity generated.
- **Tanks** – Metal storage tanks shall be grounded. All personnel shall ground their bodies by taking hold of a grounded metal surface, such as a steel walkway, before opening a gauge hatch on a tank.
- **Tank/Vacuum Trucks** – During the loading and unloading of hydrocarbons or other flammable/combustible liquids, tank/vacuum trucks shall be grounded via a bonding cable to the storage tank before the transfer line is connected. The transfer line shall be disconnected before the bonding cable is disconnected.

12.8 Operating Equipment

Operating equipment typically refers to rotating or reciprocating equipment, such as compressors, pumps, pumping units, etc.

The following are requirements to minimize the possibility of an HSE incident during the repair, service, start-up, etc., of operating equipment:

- Only trained operators shall start and stop operating equipment.
- Jewelry, such as rings, watches, wrist chains, and key chains, and loose clothing shall not be worn when working around operating equipment. Long hair shall be confined.
- Repairs, service, or alterations shall not be performed on equipment that is in operation. All equipment shall be shut down, and a lockout/tagout device shall be used to prevent the equipment from accidentally starting while it is being worked on.
- Guards and other safety devices shall be reinstalled before the equipment is operated.

12.9 Use of Hand and Power Tools

Tools shall be maintained in good condition, and defective tools shall be repaired by qualified personnel or replaced. Where potentially explosive atmospheres exist, explosion-proof and non-sparking tools and extension cords shall be used.

Hand tools shall always be used for their intended purpose. For example, a wrench shall not be used as a hammer; a screwdriver shall not be used as a chisel or pry bar; a pipe wrench shall not be used on hex nuts; and grinder wheels shall be properly rated for the speed of the grinder. Guards shall be in place and shall not be modified. Power tools and extension cords shall have proper grounding.

12.10 Crane and Rigging Safety

Only trained and qualified personnel shall operate cranes and boom trucks. All work utilizing cranes shall be done in accordance with OSHA 29 CFR 1910. Only trained and approved personnel shall be allowed to operate cranes. All cranes shall be strictly maintained in accordance with the manufacturer's recommendations.

Only those personnel who are certified through UIC's crane operator training shall be authorized to operate the cranes. Only personnel that have received rigger training and certification may perform rigging operations for cranes operating for UIC.

The following are requirements to minimize the possibility of an HSE incident during crane and rigging operations:

- All personnel shall be clear of a load before it is picked up and shall remain clear at all times. Personnel should face the crane in full view of the crane operator and/or signal man. Personnel, including those holding the tag line, shall never be under suspended loads or go between the load and other objects where they may be trapped or crushed;
- The crane operator shall never leave the controls while a load is suspended;
- Non-conducting tag lines shall be used to control all suspended loads. Chains or steel cables are not acceptable. Tag lines shall be attached before a load is lifted;

- A signalman shall be used if the crane operator does not have full view of lifting operation. Where practical, the use of radios or other communication equipment is also recommended. The crane operator shall respond only to signals from the signalman, but shall obey a stop signal from anyone at any time;

- The crane operator shall inspect lift lines, rigging, slings and crane fittings/fasteners daily when in use or prior to each lift and replace if necessary. This equipment shall be properly rated for the intended load and certification tags attached to all slings. All wire rope clamps shall comply with OSHA 29 CFR 1926.251. Wire rope shall not be secured with knots;
- The operator shall inspect all cranes prior to use. Cranes should be load marked per OSHA 29 CFR 1910.179. In addition, cranes shall have the most recent inspection records posted in the cab;

- A crane shall not be used to pull a load sideways;

- A crane boom shall not be used as a ladder for walking, except for necessary maintenance of the boom and its components; and

- When not in use, the crane boom shall be kept in the cradle.

- For rigging, never use a chain when it is possible to use a wire rope;

- Determine the load weight before rigging it and do not exceed the safe working load of any equipment;

- Before being unhooked, all loads shall be safely landed and properly blocked;

- Wire rope slings and chain shall never be shortened by tying knots in them or by wrapping them around the crane hook. Protruding ends of strands in splices on slings shall be covered or blunted;

- Slings shall be protected from sharp edges by blocking or protective pads;

- When multi-leg slings are used, each leg of the sling should be loaded evenly; and

- Kinked wire rope slings shall be removed from service. Wire rope shall be kept lubricated and free of corrosion.

12.10.1 Procedure for Using Tag Lines

- If tag lines are impractical during final positioning of the load, caution should be taken to ensure that no part of the person's body guiding the load be between the load and other objects where they may be trapped or crushed;

- No attempt to guide a load shall be made with the tag line wrapped around a hand or waist;
- The tag line must be free of knots; and
- A tag line shall be of sufficient length so that no part of the person guiding the load shall be under the load at any time.

12.11 Painting

The only painting allowed by UIC (except construction) is minor touch up painting using pre-approved paints. Construction groups shall follow site specific safety plans for painting.

- All work plans for painting shall be approved by the UIC HSE Manger prior to work starting.

12.12 Compressed Air Use for Cleaning

Compressed air used for drying or cleaning shall be limited to 30 psi (gage) by a pressure regulator or pressure-reducing nozzle as specified in OSHA 29 CFR 1910.242.

Directing compressed air toward a person for any reason is prohibited. When using compressed air for cleaning in a dry and dusty situation, protective eye goggles, gloves, and a dust filter for respiratory protection shall be worn at a minimum.

12.13 Use of Cheater Bars/Pipes

- Use of cheater bars/pipes shall only be used as a last resort to break a connection after the largest wrench available has been tried.
- Cheater bars/pipes **shall not** be used to open a closed chain-binder (boomer). Pry bars shall be used in this application. When using a cheater bar/pipe to close a boomer, avoid standing in the path of the binder release in case of kickback.
- It is recommended that the cheater bar/pipe length not exceeds twice the length of the wrench or binder handles. According to wrench manufacturers, use of cheater bars/pipes longer than twice the length of the wrench creates a potential for failure of the wrench. This type of failure usually occurs in the heel of the bend in the wrench head. If the cheater bar/pipe that is twice the length of the wrench doesn't work, it is recommended to move to a larger wrench, which would allow a longer cheater bar/pipe. In tight work areas, where an extension via means of the cheater bar/pipe would optimize the footing of the person turning the wrench, a cheater bar/pipe longer than twice the length of the wrench may be used.

When using a cheater bar/pipe to pull on a wrench handle, always assume the proper stance to prevent falling

12.14 Forklift Safety

Only trained and qualified personnel shall operate forklifts. Training shall be conducted as specified in OSHA 29 CFR 1910.178. Written certification shall be provided to UIC by the contractor for each contractor employee who might operate a forklift. All forklifts shall be strictly maintained in accordance with the manufacturer's recommendations.

- Unauthorized personnel shall not ride on forklifts. Each forklift will be required to have a "NO RIDERS" sign in a visible area of the forklift;
- The forklift shall have an alarm signaling when vehicle is backing up;
- When a forklift is left unattended, the forks shall be fully lowered, controls put in "off" or "neutral" position, the power shut-off, and the brakes set. Wheels shall be chocked if the forklift is parked on an incline;
- The forklift operator shall ensure that the forklift's wheels are properly chocked before unloading; and
- Seat belts shall be worn when operating a forklift equipped with a rollover protection device.

12.15 Battery Charging

Precautions shall be taken when working around battery charging areas. These precautions consist of wearing appropriate eyewear to prevent chemical burns in the event of a battery discharge or explosion. Inspection of batteries should be done frequently for leaks or defects, and the battery repaired or replaced immediately.

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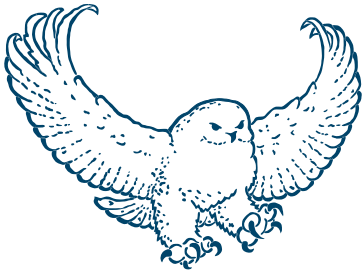

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