Employer Business Card

KUUKPIK DRILLING, LLC

Kenny Overvold
General Manager

582 E. 36th Ave., Ste. 600
Anchorage, AK 99503

Ph (907) 279-6216
Cell (907) 223-5044
Fax (907) 279-2609
kenny.overvold@kuukpikdrilling.com

Mark Chadwell
Operations Manager

582 E. 36th Ave., Ste. 600
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Fax (907) 279-2609

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Phil Fortner
Administration Manager

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Scott Heim
Drilling Superintendent

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Anchorage, AK 99503

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Cell (907) 982-9226
Fax (907) 279-2609
scott.heim@kuukpikdrilling.com

907 223 7535

"Making a Difference each day"

Brendan Maguire
Chief, Organizational Development

582 E. 36th Ave., Ste. 600
Anchorage, AK 99503

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Cell (907) 229-9232
Fax (907) 279-2609
brendan.maguire@kuukpikdrilling.com

"Driving Value, Driving Results"

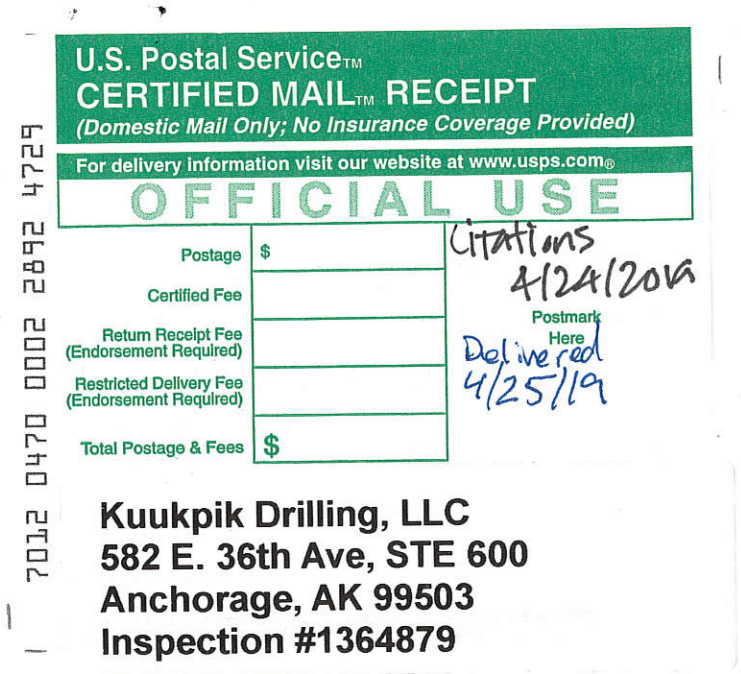
Sonny Kula
HSE Manager

582 E. 36th Ave., Ste. 600
Anchorage, AK 99503

Ph (907) 279-6223
Cell (907) 315-4423
Fax (907) 279-2609

Sonny.Kula@KuukpikDrilling.com

Certified Mail Receipt



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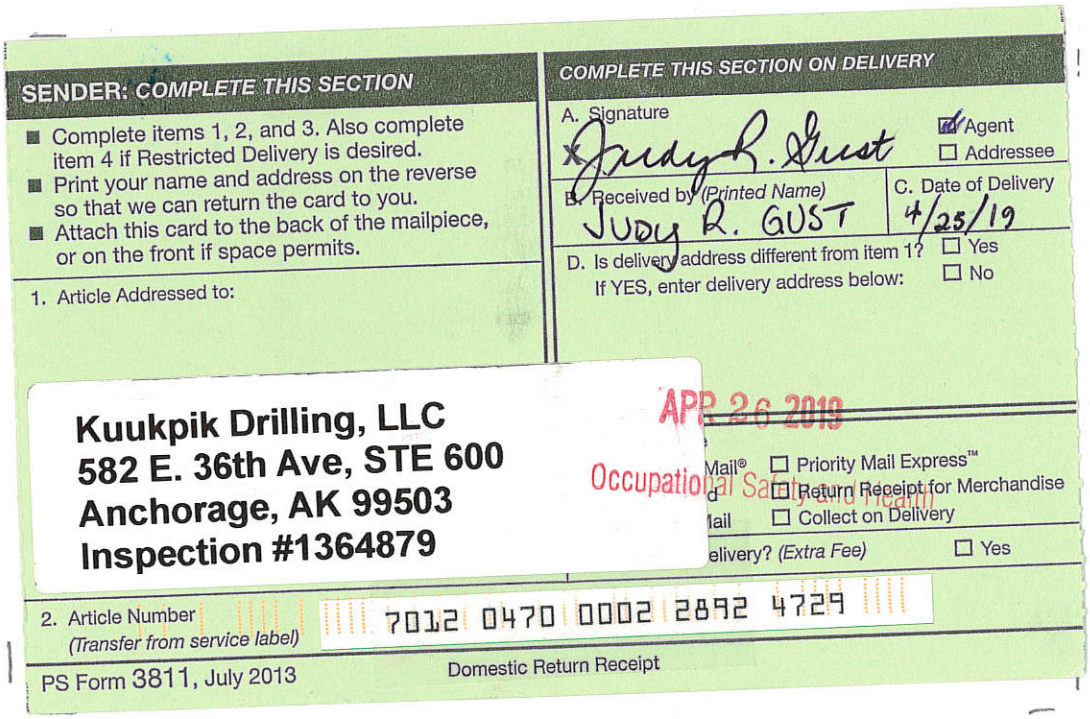
Citations 4/24/2019

Postmark Here

Delivered 4/25/19

7012 0470 0002 2892 4729

Kuukpik Drilling, LLC
582 E. 36th Ave, STE 600
Anchorage, AK 99503
Inspection #1364879



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Judy R. Gust ☑ Agent ☐ Addressee

B. Received by (Printed Name) JUDY R. GUST C. Date of Delivery 4/25/19

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

Kuukpik Drilling, LLC
582 E. 36th Ave, STE 600
Anchorage, AK 99503
Inspection #1364879

APR 26 2019
Occupational Safety and Health

Mail® ☐ Priority Mail Express™
☐ Return Receipt for Merchandise
☐ Collect on Delivery
elivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7012 0470 0002 2892 4729

PS Form 3811, July 2013 Domestic Return Receipt

U.S. Department of Labor
Occupational Safety and Health Administration
1251 Muldoon Road
Suite 109
Anchorage AK 99504
Phone: 9072694940 Fax: 9072694950
RID: 1050210

Penalty Payment Report

Payment Report: **506370**
Payment Report Date: 05/02/2019

	Inspection Number	Establishment Name	Penalty Amount	Penalty Type
1	1364879	Kuukpik Drilling, LLC	$30265.00	Violation Penalty Amount

Batch Total: $30265.00

NOTES

RECEIPT DATE 5/2/2019 NO. 8627

RECEIVED FROM Kuukpik Drilling, LLC

ADDRESS 582 E 36th Ave, Suite 600

Anchorage, AK 99503 $ 30,265.00

FOR Citations — Aug Insp. #1364879

ACCOUNT			HOW PAID		
AMT. OF ACCOUNT	30,265	00	CASH		
AMT. PAID	30,265	00	CHECK	30265	00
BALANCE DUE	0	00	MONEY ORDER		

BY

CASH ONLY IF ALL *CheckLock*™ SECURITY FEATURES LISTED ON BACK INDICATE NO TAMPERING OR COPYING

KUUKPIK DRILLING, LLC
582 EAST 36TH AVENUE, SUITE 600
ANCHORAGE, AK 99503

NORTHRIM BANK
ANCHORAGE, AK 99503
89-093/1252

AP 15004

5/1/2019

PAY TO THE ORDER OF State of Alaska

$ **30,265.00

Thirty Thousand Two Hundred Sixty-Five and 00/100********** DOLLARS

PROTECTED AGAINST FRAUD

State of Alaska
Occupational Safety and Health
1251 Muldoon Road, Suite 109
Anchorage, AK 99504

TWO SIGNATURES REQUIRED OVER $10,000

MEMO

⑈015004⑈ ⑆125200934⑆ 710225019⑈

KUUKPIK DRILLING, LLC

State of Alaska

Date	Type	Reference	Original Amt.	Balance Due	5/1/2019 Discount	AP 15004 Payment
4/25/2019	Bill	1364879	30,265.00	30,265.00		30,265.00
					Check Amount	30,265.00

schedule ID # 818603
Payment Report # 506370

Accounts Payable Nor 30,265.00

Alaska Department of Labor and Workforce Development
Occupational Safety and Health
1251 Muldoon Road
Suite 109
Anchorage, AK 99504
Phone: (907) 269-4940 Fax: (907) 269-4950

INVOICE/ DEBT COLLECTION NOTICE

Company Name: Kuukpik Drilling, LLC
Inspection Site: 1000 Milne Point Prudhoe Bay, AK 99734
Issuance Date: 04/24/2019

Summary of Penalties for Inspection Number: 1364879

Citation 1 Item 1, Serious	$8148.00
Citation 1 Item 2, Serious	$8148.00
Citation 1 Item 3, Serious	$8148.00
Citation 1 Item 4a, Serious	$5821.00
Citation 1 Item 4b, Serious	$0.00
TOTAL PROPOSED PENALTIES:	**$30265.00**

To avoid additional charges, please remit payment promptly for the total amount of the uncontested penalties summarized above. Make your check or money order payable to: "**State of Alaska**". Please send the remittance to the address listed above and indicate AKOSH's Inspection Number (indicated above) on the remittance. Return this form along with your remittance.

AKOSH does not agree to any restrictions or conditions or endorsements put on any check or money order for less than full amount due, and will cash the check or money order as if these restrictions, conditions, or endorsements do not exist.

Delinquent Charges A debt is considered delinquent if it has not been paid within one month (30 calendar days) of the penalty due date or if a satisfactory payment arrangement has not been made. If the debt remains delinquent for more than 90 calendar days, the amount due will be turned over to the current state contracted collection agency for collection nationwide.

Administrative Costs Agencies of the Department of Labor are required to assess additional charges for the recovery of delinquent debts. These additional charges are administrative costs incurred by the Agency in its attempt to collect an unpaid debt. Administrative costs will be assessed for demand letters sent in an attempt to collect the unpaid debt.

Ronald Larsen
Assistant Chief of Enforcement, AKOSH

4/22/2019
Date

Alaska Department of Labor and Workforce Development
Occupational Safety and Health
1251 Muldoon Road
Suite 109
Anchorage, AK 99504
Phone: (907) 269-4940 Fax: (907) 269-4950

Citations and Notification of Penalty

To:
Kuukpik Drilling, LLC
and its successors
582 E. 36th Ave, STE 600
Anchorage, AK 99503

Inspection Site:
1000 Milne Point
Prudhoe Bay, AK 99734

Inspection Number: 1364879
Inspection Date(s): 12/07/2018-02/21/2019
Issuance Date: 04/24/2019

The violation(s) described in this Citation and Notification of Penalty is (are) alleged to have occurred on or about the day(s) the inspection was made unless otherwise indicated within the description given below.

This Citation and Notification of Penalty (this Citation) describes alleged violations of the Alaska's occupational safety and health laws (AS 18.60.010 - AS 18.60.105) and adopted standards under the Occupational Safety and Health Act of 1970. Each alleged violation has a designated penalty outlined in the citation. Please refer to the enclosed form – *Employer Responsibilities Following an AKOSH Inspection* for additional details.

Hazards Correction/Abatement – Each alleged violation must be abated immediately to reduce the risk of an accident. You must provide proof (photos, statements, receipts, work orders, sampling results, etc.) to demonstrate that the alleged violations have been abated by the dates listed in the citation. If you file a formal notice of contest, you are not required to provide proof of abatement, but you are nevertheless required to correct hazardous conditions and provide a workplace that is free from recognized hazards.

Posting - The law (AS 18.60.091 (b)) requires that a copy of this Citation and Notification of Penalty be posted immediately in a prominent place at or near the location of the alleged violation(s). Posting is required until the alleged violations have been abated or for five working days (excluding weekends and state holidays), whichever is longer. If it is not practical to post at the worksite, due to the nature of the employer's operations, it should be posted where it can be seen by all affected employees.

See pages 1 through 2 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

Informal Conference - You may request an informal conference to discuss the alleged violations, abatement issues and associated penalties. During the informal conference you may present any evidence or views which you believe would support an adjustment to the citation(s) and/or penalty(ies). **Should you decide that you want to request an informal conference, you must submit a written request. This request must be received by AKOSH (either by mail or fax at (907) 269-4950) during the contest period.** This period extends 15 working days from the date of your receipt of this Citation.

If you are considering a request for an informal conference to discuss any issues related to this Citation and Notification of Penalty, **you make the request immediately. If you wait too long, there may not be enough time to conduct the informal conference prior to the expiration of the 15 working day contest period. (See "Right to Contest" below.)**

If you decide to request an informal conference, you must complete and post the attached *Notice to Employees of Informal Conference* next to the Citation and Notification of Penalty as soon as the time, date, and place of the informal conference have been determined. Be sure to bring to the conference any and all supporting documentation of existing conditions as well as any abatement steps taken thus far. If conditions warrant, it may be possible to enter into an informal settlement agreement to resolve this matter without litigation or contest.

Right to Contest - You have the right to formally contest this Citation and Notification of Penalty. You may contest all citation items or only individual items. You may also contest proposed penalties and/or abatement dates without contesting the underlying violations. **By law, an employer has only 15 working days (excluding weekends and state holidays) from the date citations were received to file a written notice of contest. Failure to meet this deadline will result in the alleged violations and penalties becoming a final order that is not subject to review by any court (see AS 18.60.093(a)).**

Penalty Payment – Penalties are due within 30 calendar days of receipt of this notification, unless informally settled under alternate terms or formally contested. Make your check or money order payable to "State of Alaska". Please indicate the AKOSH Inspection Number on the check.

AKOSH does not agree to any restrictions or conditions or endorsements put on any check or money order for less than the full amount due, and will cash the check or money order as if these restrictions, conditions, or endorsements do not exist.

Employer Discrimination Unlawful – The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under AS 18.60.010 – AS 18.60.105 or the OSH Act of 1970. An employee who believes that he/she has been discriminated against may file a complaint within 30 days after the discrimination occurred.

Notice to Employees - The law gives an employee or his/her representative the opportunity to object to any abatement date set for a violation if he/she believes the date to be unreasonable. The contest must be mailed to the Alaska Department of Labor Office at the address shown above and postmarked within 15 working days (excluding weekends and State holidays) of the receipt by the employer of this Citation and Notification of Penalty.

Alaska Department of Labor and Workforce Development
Occupational Safety and Health
1251 Muldoon Road
Suite 109
Anchorage, AK 99504
Phone: (907) 269-4940 Fax: (907) 269-4950

NOTICE TO EMPLOYEES OF INFORMAL CONFERENCE

An informal conference has been scheduled with AKOSH to discuss the Citation(s) issued on 04/24/2019. The conference will be held at the AKOSH office located at 1251 Muldoon Road, Suite 109 Anchorage, AK 99504 on _____ at _____.

Employees and/or representatives of employees have a right to attend an informal conference.

Citation and Notification of Penalty

Company Name: Kuukpik Drilling, LLC
Inspection Site: 1000 Milne Point Prudhoe Bay, AK 99734

Citation 1 Item 1 Type of Violation: **Serious**

AS 18.60.075(a)(4):

18 Health, Safety, and Health

60 Safety

075 Safe employment

(a) An employer shall do everything necessary to protect the life, health, and safety of employees including, but not limited to;
(4) furnishing to each employee employment and a place of employment that are free from recognized hazards that, in the opinion of the commissioner, are causing or are likely to cause death or serious physical harm to the employees. (b) An employee shall comply with occupational safety and health standards and all regulations issued under AS 18.60.010 - 18.60.105 that are applicable to the employee's own actions and conduct.

EXAMPLE: Employees are exposed to struck by/caught between hazards as a result of the employer's failure to ensure that all employees are protected from recognized hazards at their place of employment. On 12/7/2019, The Driller who is in charge of the normal operations of the crew, was training a co-worker in the control room while removing drill pipe from the ground.
The Driller was verbally describing a pipe release procedure to the trainee, when he inadvertently released the pipe, causing it to fall approximately 28 feet striking and fatality injuring an employee who was working in the danger zone.

Date by Which Violation Must Be Abated: **May 20, 2019**
Proposed Penalty: **$8148.00**

Citation 1 Item 2 Type of Violation: **Serious**

29 CFR 1910.181(i)(4)(ii):

181 Derricks

Citation and Notification of Penalty

Company Name: Kuukpik Drilling, LLC
Inspection Site: 1000 Milne Point Prudhoe Bay, AK 99734

(i) Handling the load

(4) Holding the load

(ii) People should not be permitted to stand or pass under a load on the hook.

Example: Employees are exposed to struck by/caught between hazards as a result of the employer's failure to ensure that employees do not walk or work under suspended loads while on the drill rig. On 12/7/2018, while working under a suspended drill pipe, an employee was fatality injured when the pipe he was working under was accidently released and fell 28 feet striking the him on the back of the head.

Date by Which Violation Must Be Abated:	**May 20, 2019**
Proposed Penalty:	**$8148.00**

Citation 1 Item 3 Type of Violation: **Serious**

29 CFR 1910.1030(d)(4)(ii)(A):

1030 Bloodborne pathogens.

(d) Methods of Compliance

(4) Housekeeping

(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(A) Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

EXAMPLE: Employees are exposed to bloodborne pathogen health hazards due to the employers failure to have the contaminated working surface properly cleaned and decontaminated after contact with blood. On 12/18/18 the employer provided a video recording of the incident that occurred on 12/7/18 when an employee was fatality injured after being struck on the head by a drillpipe. After the injured employee was removed from

Citation and Notification of Penalty

Company Name: Kuukpik Drilling, LLC
Inspection Site: 1000 Milne Point Prudhoe Bay, AK 99734

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the rig floor, other crew members wiped up the blood with rags and rinsed the floor off with water from a hose. This was observed on the video recording the employer provided, approximate time from 03:16:00 to 03:20:00.

Date by Which Violation Must Be Abated: **May 20, 2019**
Proposed Penalty: **$8148.00**

Citation 1 Item 4 a Type of Violation: **Serious**

29 CFR 1910.23(c)(8):

23 Ladders

(c) Portable ladders

(8) The cap (if equipped) and top step of a stepladder are not used as steps;

Example: Employees were exposed to fall hazards as a result of the employer's failure to ensure the cap of a stepladder is not used as a step. This was observed on the video recording the employer provided of the incident that occurred on 2/7/2018, time frame from 22:41:11 to 22:42:30 an employee was standing on the cap of an "A" frame ladder.

Date by Which Violation Must Be Abated: **Quick Fix**
Proposed Penalty: **$5821.00**

Citation 1 Item 4 b Type of Violation: **Serious**

29 CFR 1910.23(c)(2):

23 Ladder

(c) Portable ladders

(2) Each stepladder or combination ladder used in a stepladder mode is equipped with a metal spreader or locking device that securely holds the front and back sections in an open position while the ladder is in use;

Citation and Notification of Penalty

Company Name: Kuukpik Drilling, LLC
Inspection Site: 1000 Milne Point Prudhoe Bay, AK 99734

Example: Employees were exposed to fall hazard injuries as a result of the employers failure to ensure that the spreader bar on the step ladder is locked into place when in use. This was observed on the video recording the employer provided when an employee was standing on top of a step ladder and the spreader bar was not locked into place.

Date by Which Violation Must Be Abated:	**Corrected During Inspection**
Proposed Penalty:	**$0.00**

Ronald Larsen
Assistant Chief of Enforcement, AKOSH

Alaska Department of Labor and Workforce Development
Occupational Safety and Health
1251 Muldoon Road
Suite 109
Anchorage, AK 99504
Phone: (907) 269-4940 Fax: (907) 269-4950

NOTICE OF CORRECTION

Inspection Number: 1364879 Date Issued: 04/24/2019

EMPLOYER: Kuukpik Drilling, LLC

The "ALLEGED VIOLATIONS" and the abatement dates are listed on this form in the same manner as they were on the Citation. This form is designed to help you explain how the alleged violations were corrected. Failure to correct a violation by the required date carries a penalty of up to $7,000 for each day the violation is not abated.

In order to complete this form, **you must provide an explanation of the method used to abate the violation**, fill in the date the condition was corrected and sign/initial the appropriate block. **For those citations marked with a "Y" under the heading of "Documentation Required", you must attach documentation of the method used to correct the violation.** Such documentation can be in the form of photographs and/or diagrams; an appropriate narrative of how the violation was corrected; or a written order for a part, service, or action that resulted in the correction of the violation. Please identify by violation, the attached documentation submitted as proof of correction. If insufficient documentation is provided, a representative of the Department will contact you and it may result in a follow-up inspection to verify correction of the violation(s). This form (including documentation of abatement) needs to be completed and mailed or faxed to the above address within 10 days of the last abatement date listed.

Completion of this form does not preclude the department from conducting subsequent inspections to verify that abatement has taken place. However, by providing clear explanations of the steps taken to abate a violation and documentation that the violation has been abated, your chances of receiving a follow-up inspection are reduced. Your cooperation is appreciated.

Citation # / Item	Abatement Date	Documentation Required	Correction Date	Signature
1-1	May 20, 2019	Yes	12/10/18	
1-2	May 20, 2019	Yes	12/20/18	
1-3	May 20, 2019	Yes	5/8/19	
1-1a	Quick Fix	No	3/21/19	

1-1b	Corrected During Inspection	No	3/21/19	

You must sign off on each individual alleged violation and provide documentation of how each alleged violation was corrected.

I K.E OVERVOLD hereby certify under penalty of perjury that the above cited violation(s) were abated by the date(s) specified.

5/13/19		GENERAL MANAGER
Date	Signature	Title

TO: Ronald Larsen
Assistant Chief of Enforcement
AKOSH

SUBJECT: Citation Abatements

FROM: Sonny Kula
HSE Manager
Kuukpik Drilling, LLC

RE: Inspection Number 1364879

On April 24, 2019, Kuukpik Drilling, LLC received 5 citations categorized as Serious in the course of the above referenced inspection. All alleged violations are abated, and proof of abatement has been attached to this document. As per AS 18.60091 (b) a copy of the Citation and Notification of Penalty was immediately posted in a prominent place near the location of the alleged violations. Below is a summary of abatements for the alleged violations.

- **Citation 1 Item 1, Serious- AS 18.60.076(a)(4) Safe Employment**

  Engineering controls have been programed into the PLC by Ariss Controls to eliminate the potential for a worker to accidentlly open the elevators between 3.0 feet (36 inches) and 55.0 feet (660"). This engineering control ensures that workers on the rig floor are not subject to accidental release of a tubular or and other item secured within the elevators.

  Attachment 1
  - Ariss Controls PLC Logic Email

- **Citation 1 Item 2, Serious- 29 CFR 1910.181(i)(4)(ii) Derricks**

  Administrative controls are established to ensure compliance with the CFR stated above. KD and Hilcorp have designated safe working and exclusion zones on the rig floor as well as tasks that will not be performed while the top drive is in motion. Workers with essential operations are permitted within the fall zone; but not directly under the load.

  Attachment 2
  - Safe working and exclusion zone pictorial
  - Top Drive In Motion Document

- **Citation 1 Item 3, Serious- 29 CFR 1910.1030(d)(4)(ii)(A) Bloodborne Pathogens**
  Administrative controls are established to help ensure the safety of workers in regard to their potential exposure to bloodborne pathogens in the event of an emergency response. Kuukpik Drilling has established a written Bloodborne Pathogens Program that has been reviewed by all Kuukpik Drilling employees. Kuukpik Drilling has also retrained all workers in Bloodborne Pathogens through MEDIC First Aid in compliance with 20 CFR 1910.1030.

  Attachment 3
  - Written Kuukpik Drilling Bloodborne Pathogens Program
  - Signed Worker Training Rosters for Bloodborne Pathogen Program
  - Bloodborne Pathogens Certification Cards

Attachment 3

Citation 1-3

- Written Kuukpik Drilling Bloodborne Pathogens Program
- Signed Worker Training Rosters for Bloodborne Pathogen Program
- Bloodborne Pathogens Certification Cards

Bloodborne Pathogen Program

Bloodborne Pathogens - *Current as of 4/25/2019*

29 CFR 1910.1030 Bloodborne pathogens.
29 CFR 1910.1030 App A Hepatitis B Declination (Mandatory)

NOTE

Per CPL 2-2.69, *Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens*, the bloodborne pathogens standard does not apply to the construction industry. OSHA has not, however, stated that the construction industry is free from the hazards of bloodborne pathogens. Exposure to bloodborne pathogens would fall under Section 5(a)(1) of the OSH Act which states that "each employer shall furnish to each of his employees employment and a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents and only at the location where the incident occurred.

Recordkeeping: all work-related injuries from needlesticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person's blood or other potentially infectious materials (OPIM) are to be recorded on the OSHA 300 as an injury.

Note: Our first aid kits do not contain sharps or needles. However, a contaminated sharp, such as a broken pair of glasses, may trigger the above.

a. **To protect the employee's privacy, the employees name may not be entered on the OSHA 300.**

b. **If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.**

POLICY STATEMENT

This bloodborne pathogen program with its exposure control plan has been developed to eliminate or minimize the risk of exposure to bloodborne pathogens and other potentially infectious materials. This program presents methods and procedures to eliminate and/or minimize the hazards associated with occupational exposure to bloodborne pathogens or other infectious materials.

As a matter of policy, universal precautions will be used.

Additional components of this Plan include exposure determinations by job classification, standard operating procedures to eliminate or reduce the likelihood of disease transmission, the methods of disease transmission, definitions of terms, post exposure procedures and follow-up, training documentation, and recordkeeping.

Compliance with this Plan not only fulfills the requirements of the Occupational Safety and Health Administration, more importantly, it fulfills our desire to maintain a safe working environment and safeguard the health of our employees.

All affected employees should feel free to review this Plan at any time and are encouraged to consult with our Exposure Control Plan Administrator to resolve any issues affecting its implementation. Immediately following our Exposure Control Plan is a copy of 29 CFR 1910.1030, *Bloodborne Pathogens*.

DEFINITIONS

All employees should know the "language" of this plan. Because some of the words and/or terms are not used in everyday life, each person must be aware of the definitions so that we are all "reading off the same page". Below are OSHA definitions:

Blood: human blood, human blood components, and products made from human blood.

Bloodborne Pathogens: pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory: a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated: the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry: laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps: any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination: the use of physical or chemical: to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Director: the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Engineering Controls: controls (e.g., sharps disposal containers,

self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident: a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Handwashing Facilities: a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional: a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph 29 CFR 1910.1030(f), *Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up*, a copy of which follows this section.

Note: The above activities include actually providing Hepatitis B vaccine, ordering appropriate laboratory test, determining contraindications to vaccination, providing post-exposure prophylaxis and counseling. The legal scope of practice for this professional must allow the independent performance of all the procedures described in paragraph (f), Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV: hepatitis B virus.

HIV: human immunodeficiency virus.

Needleless systems: a device that does not use needles for:

a. The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;

b. The administration of medication or fluids; or

c. Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure: reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials:

a. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

b. Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

c. HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral: piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment: is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility: a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste: liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory:a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharps with engineered sharps injury protections: a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual: any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure

to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize: the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions: is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls: controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

EXPOSURE CONTROL PLAN

[29 CFR 1910.1030(c)]

This Exposure Control Plan is provided for all personnel who, as a result of the performance of their duties, would have reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials.

This Plan will be reviewed and updated annually and whenever necessary as new or modified tasks and procedures are introduced which affect occupational exposure to bloodborne pathogens or other potentially infectious materials. The review and update of this plan will:

a. reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens.

b. document, annually, consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

First aid providers employees responsible for direct trauma victim care who are potentially exposed to injuries for contaminated sharps will be asked for input in the identification, evaluation, and selection of effective engineering and work practice controls.

This Exposure Control Plan, with a copy of 29 CFR 1910.1030, Bloodborne Pathogens, will be made accessible to all employees.

EXPOSURE DETERMINATION

Three (3) lists will be prepared and they will be maintained in Section II of this plan.

List I: A list of all job classifications in which all employees have occupational exposure.

List II: A list of job classifications in which some employees have occupational exposure.

List III: A list of all tasks and procedures or groups of closely related tasks and procedures in which occupation exposure occurs and are performed by employees in job classifications noted in List II.

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

METHODS OF COMPLIANCE

Universal precautions will be used. We will treat all trauma victims' blood, bodily fluids, and other potentially infectious materials as if they are known to be infectious. Unfortunately, there is no immediate, practical way to determine if HIV, HBV, and other bloodborne pathogens are present so, to be safe, we will assume they are. Traditionally, isolation of infectious materials has been diagnosis-driven. This meant that if a person were diagnosed to have HIV or HBV infection, for example, then isolation precautions would be taken. Because the infection status of each trauma victim cannot be immediately known, it makes sense to treat all trauma victims and their body fluids as if they were infected. The precautions to take depend on the procedures being performed. For example, if one's hands will be in contact with body substances, disposable gloves will be worn. If there is risk of one's eyes being splashed with body fluids, eye protection will be worn. An impermeable barrier must be placed between yourself and the potentially infectious bodily fluids. Overkill is not necessary. Cleaning up a minor spill on a counter top does not require a mask, eye protection, and plastic apron. It does, however, require disposable gloves.

All employees will strictly adhere to the below engineering and work practice controls to eliminate or reduce the possibility of occupational exposure to bloodborne pathogens or other potentially infectious materials. Specific controls and procedures, noted below, will be used to eliminate or minimize employee exposure. If occupational exposure is:

HANDWASHING EQUIPMENT AND PROCEDURES: Handwashing facilities are provided which are readily accessible to all employees.

Employees will wash their hands and any other skin area exposed to blood or other potentially infectious materials with soap and water immediately or as soon as feasible:

a. after removal of gloves or other personal protective equipment.

b. following contact with blood or other potentially infectious materials.

Particular attention will be given to fingernails and between fingers and rings under which infectious material may lodge. Furthermore, one should be aware that rings and jewelry are a good hiding place for bloodborne pathogens and other potentially infectious materials.

Examples of situations where handwashing is appropriate:

a. before and after examining any trauma victim.

b. after handling any soiled waste or other materials.

c. after handling any chemicals or used equipment.

If for some reason handwashing facilities are not functioning, appropriate antiseptic hand cleaner and clean cloth/paper towels (antiseptic towelettes) will be provided and used. If antiseptic hand cleaner and clean cloth/paper towels are used, hands will be washed with soap and water as soon as feasible.

EATING, DRINKING, SMOKING:

There shall be no eating, drinking, smoking, applying cosmetics or lip balm, or handling contact lenses in areas where there is a likelihood of occupational exposure to bloodborne pathogens or other potentially infectious materials.

Furthermore, food and drink shall not be kept in refrigerators, freezers, shelves, cabinets, or on countertops or benches where blood or other potentially infectious materials are present.

CONTAMINATED NEEDLES & OTHER CONTAMINATED SHARPS:

Contaminated needles will not be sheared, or broken.

Furthermore, all contaminated needles and other contaminated sharps shall not be bent, recapped, or removed unless:

a. it can be demonstrated that no alternative is feasible or that it is required by a specific medical procedure.

b. recapping or needle removal may be accomplished through the use of a mechanical device or a one-handed method.

Contaminated **reusable** sharps will be placed in appropriate containers immediately or as soon as possible after use until properly reprocessed. These containers will:

a. be puncture resistant.

b. have warning labels affixed to containers potentially infectious material and contain the following legend:

Note: The above label will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Red bags or red containers may be substituted for labels.

c. be leak proof on the sides and bottom.

Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

Contaminated **non-reusable** sharps will be discarded immediately or as soon as feasible and placed in containers that:

a. are closable

b. are puncture resistant.

c. are leakproof on sides and bottom.

b. have warning labels affixed that contain the following legend:

Note: The above label will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Red bags or red containers may be substituted for labels.

Contaminated **reusable** sharps shall not be stored or processed in such a manner that requires employees to reach by hand into the containers where these sharps have been placed.

During use, containers for contaminated sharps must be:

a. easily accessible to our employees.

b. located as close as feasible to the immediate area where sharps are used or can be reasonably anticipated to be found.

c. maintained upright throughout use.

d. replaced routinely and not be allowed to overfill.

If leakage is possible when removing a container of contaminated sharps, it shall be placed in a second container with the following container requirements:

a. it will be closable.

b. it will be constructed to contain all contents and prevent leakage during handling, storage, transport or shipping, and;

c. colored coded red or labeled as noted above.

Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous (introduced through the skin such as a cut) injury.

OTHER REGULATED WASTE - CONTAINMENT:

The provisions that apply to contaminated sharps, above, apply to other regulated waste.

DISPOSAL OF CONTAMINATED SHARPS & OTHER REGULATED WASTE:

The actual disposal of all regulated waste shall be in compliance with applicable state laws.

SPECIMENS OF POTENTIALLY INFECTIOUS MATERIALS:

Specimens of blood and potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

SPLASHING, SPRAYING OF POTENTIALLY INFECTIOUS MATERIALS:

All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and the generation of droplets of these substances.

MOUTH PIPETTING:

Mouth pipetting and mouth suction of blood or other potentially infectious materials is prohibited.

DESIGNATED EXPOSURE CONTROL PLAN ADMINISTRATOR

Our designated the Exposure Control Plan Administrator will be knowledgeable in all aspects of this Plan as it relates to our operations and be available to answer questions raised by our first aid providers. The Exposure Control Plan Administrator may call upon professionals in the Medical Arts to field questions that are of technical nature outside of the Administrator's area of expertise.

The Exposure Control Plan Administrator will:

a. ensure this Plan is kept current.

b. ensure training is provided as required.

c. maintain all records associated with this plan.

DESIGNATED FIRST AID PROVIDERS

Before one may be designated as a first aid provider, he/she must have a valid certificate in first aid training from the U.S. Bureau of Mines, the Red Cross, or equivalent training that can be verified by documentary evidence. No person is to administer any medical assistance for which they are not appropriately trained. It is noted that the rendering of first aid is not the primary job of the our designated first aid providers.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

In spite of work practice and engineering controls, there is a requirement for appropriate personal protective equipment to provide an impermeable barrier between potentially infectious materials and the employees work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Employees will use appropriate personal protective equipment when there is a possibility of occupational exposure to bloodborne pathogens or other potential infectious materials.

Personal protective equipment will be provided in appropriate sizes and at no cost to the employees. Further, maintenance and replacement of personal protective equipment will be provided at no cost to the employee.

Personal protective equipment will be discarded immediately if its ability to function as a barrier is compromised.

Most importantly, employees must understand that personal protective equipment is useless unless it provides an impermeable barrier between bloodborne pathogens and other potentially infectious materials and the employee's clothes, skin, eyes, mouth, or other mucous membranes.

Personal Protective Equipment is considered appropriate if it prevents potentially infectious materials from reaching work/street clothing or body surface when used under normal conditions.

DISPOSABLE GLOVES:

Disposable, single use gloves, such as surgical or examination gloves will be worn when it can be reasonably anticipated that the employee may have hand contact with blood or other potentially infectious materials and when handling or touching contaminated items or surfaces. Disposable gloves will always be used when there is a possibility of contact with bloodborne pathogens or other potentially infectious materials.

Disposable gloves shall never be washed, decontaminated, or reused.

Disposable gloves shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or their ability to function as a barrier is compromised.

Should any employee be allergic to the normal gloves provided, an appropriate alternative (such as hypoallergenic and/or powderless gloves) will be provided in the proper size at no cost to the employee.

UTILITY GLOVES:

Utility gloves may be used for general cleanup (not for any trauma victim procedure) when there is anticipated exposure to bloodborne pathogens or other potentially infectious materials. Utility gloves may be decontaminated for re-use if the integrity of the gloves is not compromised. They will be discarded if they are cracked, peeling, torn, punctured, or exhibit signs of deterioration or when their ability to function as a barrier is compromised.

EYE AND RESPIRATORY PROTECTION:

Eye (goggles, glasses, face shield, etc.) and respiratory (mask, etc.) protection will be used when it can reasonably be expected that bloodborne pathogens or other potentially infectious materials may splash or spray in or around the eyes, nose, mouth, and general head area of the employee.

PROTECTIVE BODY CLOTHING:

Protective body clothing such as gowns, aprons, etc. will be worn as determined by the professional judgment of the employee in relation to task. The protective body clothing will certainly be worn where there can reasonably be expected exposure to bloodborne pathogens or other potentially infectious materials to the body area.

LAUNDRY:

Personal protective equipment will be cleaned, laundered, and disposed of at no cost to the employee.

Note: In rare and extraordinary circumstances, an employee, in her/his professional judgment, may decline to temporarily and briefly wear personal protective equipment if he/she deems that the equipment would prevent the delivery of health care or would have increased the hazard of occupational exposure to the employee or his/her co-workers. Should this event occur, it will be documented, investigated, and procedures will be developed to prevent a reoccurrence.

HOUSEKEEPING

Housekeeping is an ongoing, never ending procedure which not only enhances our work environment but also eliminates health risk to our personnel. In the area of bloodborne pathogens and other hazardous materials, to ensure proper cleaning, decontamination, sterilization, and disinfecting of surfaces within our facility, cleaning will be accomplished only by employees who have received training in universal precautions and the provisions of this plan. The written Housekeeping Schedule & Checklist is found in Section II and this Schedule will be adhered to following an incident that results in the potential exposure to bloodborne pathogens or other potentially infectious materials.

Broken, potentially infected glassware, should be picked up and disposed of using mechanical means such as a brush and dust pan or forceps.

All sharps will be stored in a manner that allows easy access and safe handling.

Infectious waste will be placed in leak-proof containers that are color coded red. These containers will be decontaminated as soon as practical.

Subsequent to rendering any procedures, employees will ensure that all surfaces on which blood, body fluids, bloodborne pathogens, or other infectious materials may be present are cleaned with an appropriate disinfectant.

HEPATITIS B EPIDEMIOLOGY

Hepatitis B (serum hepatitis) routes of infection include parenteral, oral, or direct contact. The virus can also spread by contact with the respiratory tract. Its sources include contaminated needles and surgical instruments as well as contaminated blood products. The virus of hepatitis B has been found in urine. Further, the virus of hepatitis B can live for up to seven (7) days on a dry surface and can be easily be transmitted by a single needle stick. Its incubation period is quite lengthy generally between 45 and 180 days. It affects all age groups. Recovery from hepatitis B does provide immunity. Generally, one can expect a complete recovery from viral hepatitis, however, it is potentially fatal depending on many factors including the virulence (aggressiveness) of the virus, prior hepatic damage, and natural barriers to damage and disease of the liver.

It is possible for viral hepatitis to lead to fulminating viral hepatitis and subacute fatal viral hepatitis both of which are fatal. Onset symptoms may include headache, elevated temperature, chills, nausea, dyspepsia, anorexia, general malaise, and tenderness over the liver. These types of symptoms will last about one (1) week, then subside, and jaundice will occur. Jaundice is caused by damaged liver cells. The convalescent stage begins with the disappearance of the jaundice and may last several months. Recovery is expected in six (6) months.

RISK OF EXPOSURE

Per the Department of Human Services of the Center for Disease Control, below is the risk of infection after occupational exposure:

HBV: First aid providers who have received hepatitis B vaccine and have developed immunity to the virus are at virtually no risk for infection. For an unvaccinated person, the risk from a single needle stick or cut exposure to HBV-infected blood ranges from 6-30% and depends on the hepatitis B e antigen (HBeAg) status of the source individual. In individuals who are both hepatitis B surface antigen (HBsAG) positive and HBeAg positive have more virus in their blood and are more likely to transmit HBV.

HCV: Based on limited studies, the risk for infection after a needlestick or cut exposure to HCV-infected blood is approximately 1.8%. The risk following a blood splash is unknown, but is believed to be very small; however, HCV infection from such an exposure has been reported.

HIV: The average risk of HIV infection after a needle stick or cut exposure to HIV-infected blood is 0.3% (i.e., three-tenths of one percent, or about 1 in 300). Stated another way, 99.7% of needle stick/cut exposures do not lead to infection.

The risk after exposure of the eye, nose, or mouth to HIV-infected blood is estimated to be, on average, 0.1% (1 in 1,000).

The risk after exposure of the skin to HIV-infected blood is estimated to be less than 0.1%. A small amount of blood on intact skin probably poses no risk at all. There have been no documented cases of HIV transmission due to an exposure involving a small amount of blood on intact skin (a few drops of blood on skin for a short period of time). The risk may be higher if the skin is damaged (for example, by a recent cut) or the contact involves a large area of skin or is prolonged (for example, being covered in blood for hours).

All employees with occupation exposure are encouraged to accept the hepatitis B vaccination.

HEPATITIS B VACCINATION

The hepatitis B vaccination series will be provided, at no cost, to all unvaccinated first aid providers as soon as possible (within 24 hours of initial exposure). All exposed first aid providers employees are encouraged to take this vaccination series unless they have previously received the complete hepatitis B vaccination series; antibody testing has revealed that the employee is immune; or the vaccine is contraindicated (not recommended) for medical reasons. Post-exposure evaluation, prophylaxis (prevention of or protection from disease), and follow-up will be provided at no cost to the employee.

The Hepatitis B vaccination will be performed under the supervision of a licensed physician or other licensed healthcare professional.

All laboratory tests will be conducted by an accredited laboratory at no cost to the employee.

Should routine booster dose(s) of hepatitis B vaccine (as recommended by the U.S. Public Health Service at a future date) be required, they will be provided at no cost as long as the employee remains a first aid provider.

An employee may decline the Hepatitis B vaccination and this declination shall not shall not reflect unfavorably upon him/her, however this declination must be in writing. See Section II.

It is important to note that if a first aid provider initially declines the

hepatitis B vaccination series, he/she may at a later date decide to accept the vaccination series and it will be provided at no cost assuming he/she is still occupationally exposed to bloodborne pathogens or other potentially infectious materials.

SHARPS INJURY LOG

A Sharps injury log will be maintained for the recording of percutaneous injuries from contaminated sharps.

The information on the log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

The sharps injury log will contain:

a. the type and brand of device involved in the incident.

b. the department or work area where the exposure incident occurred.

c. an explanation of how the incident occurred.

The sharps injury log shall be maintained for the period of five years.

FIRST AID PROVIDER INPUT

As a matter of policy, all first aid providers who are responsible for first aid delivery as an additional job are encouraged to suggest methods to improve our engineering and workplace controls. This input may be made verbally to the Plan Administrator at any time. Additionally, during the annual refresher training, suggestions will be solicited.

PLAN REVIEW

This plan will be reviewed, and if necessary, updated annually to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. As new medical devices are developed which reduce employee exposure, they will be introduced into our practice. A review of the "Sharps Log" will help identify problem areas and/or ineffective devices which may need replacement.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

The information that has preceded this Section has dealt with the methods to restrict occupational exposure to bloodborne pathogens and other infectious materials. Post-exposure evaluation and follow-up deals with the steps to take immediately following a potential exposure incident and the steps that will be taken over time to protect our employees from further health risk.

All incidents involving exposure to blood or other potentially infectious materials will be reported to the Exposure Control Plan Administrator, in writing, before the end of the shift in which the incident occurred using the Exposure Incident Report (Section II). This Report will be prepared regardless of whether or nor there has been an "Exposure Incident" as defined in this Plan and in 29 CFR 1910.1030. A separate Exposure Incident Report will be completed for each employee who was occupationally exposed.

Information in this Report will include:

a. the date and time the incident occurred.
b. a brief description of the events leading up to the exposure (what happened.)
c. the name of the individual exposed.
d. the route of exposure.
e. "source individual" and "exposed individual" information including the acceptance or rejection of hepatitis B vaccination series.
d. a determination of whether or not an actual "exposure incident" occurred. Refer to Definitions in this Plan or 29 CFR 1910.1030.

The Exposure Control Plan Administrator or his authorized representative will review the Exposure Incident Report and determine if methods or procedures may be altered to prevent a reoccurrence of the incident.

Further, an occupational bloodborne pathogens exposure incident which results in the recommendation for hepatitis B vaccination would be recorded on OSHA Form 300 as an injury. See Recordkeeping.

All unvaccinated employees who have assisted in any situation involving blood will be afforded the opportunity to receive the hepatitis B vaccination series as soon as possible but not later than twenty-four (24) hours after the situation.

A confidential medical evaluation and follow-up will be provided immediately, at not cost, to the employee. The healthcare professional evaluating an employee after an exposure incident will be provided a copy of 29 CFR 1910.1030 (Section II).

Further, the healthcare professional will be provided a description of the exposed employee's duties as they relate to the exposure incident; documentation of the route(s) of exposure; the circumstances under which the exposure occurred; the results of the source individual's blood testing, if available; and all medical records relevant to the appropriate treatment of the employee including vaccination status which is maintained by our office. See Recordkeeping.

The confidential medical evaluation and follow-up will include:

a. documentation of the route(s) of exposure.

b. the circumstances under which the exposure incident occurred.

c. the identification and documentation of the source individual, unless it can be established that the identification is not feasible or prohibited by state or local law.

d. the exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

Note: If the employee consents to baseline blood collection, but does not consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

e. the source individual's blood shall be tested as soon as feasible to determine HBV and HIV infectivity unless it is already known in which case this procedure is not necessary.

If consent to test the source individual's blood cannot be obtained the following will occur:

a. it will be established and documented that legally required consent cannot be obtained.

b. when the source individual's consent is not required by law, the source individual's blood shall be tested and the results documented.

The results of the source individual's testing shall be made available to the exposed employee and the employee shall be informed of applicable laws and the identity and infectious status of the source individual.

The employee shall be provided post-exposure prophylaxis, when medically indicated, and counseling.

The employee will be provided with a copy of the healthcare professional's written opinion within 15 days of the completion of the evaluation. The written opinion shall be limited to:

a. whether Hepatitis B vaccination is indicated and if the employee has received such vaccination.

b. an indication that the employee has been informed of the results of the evaluation.

c. an indication that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

All other findings or diagnoses will remain confidential and will not be included in the written report.

RECORDKEEPING

Complete and accurate medical records will be maintained for each employee with occupational exposure. These records shall remain confidential and will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by law.

We will ensure that all records required by 29 CFR 1910.1020, *Access to employee exposure and medical records*, are made readily available upon request of an employee as well as the Assistant Secretary & the Director for examination and copying. Medical records must have the written consent of employee before being released.

Per 29 CFR 1910.1020(h), medical records will be maintained for at least the duration of employment plus 30 years. If we cease to do business, these records will be transferred to the successor employer. If there is no successor employer, we will notify affected current employees of their rights of access to these records at least three (3) months prior to cessation of business and notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to disposal. If we regularly dispose of records required to be maintained for at least thirty years, we may, with at least (3) months' notice, notify the Director of NIOSH on an annual basis of the records intended to be disposed of in the coming year.

Included in the employee's medical record will be:

a. the employee's name and social security number.

b. a copy of the employee's hepatitis B vaccination status including the date of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.

    1. if the employee has declined to receive the hepatitis B vaccination series when appropriate, this declination will be included in the person's medical records.

c. a copy of all results of examinations, medical testing, and follow-up procedures as required following an exposure incident.

d. the employer's copy of the healthcare professional's written opinion following an exposure incident.

e. a copy of all information provided to the healthcare professional following an exposure incident.

All work-related injuries from needlesticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person's blood or other potentially infectious materials are to be recorded on the OSHA 300 as an injury.

a. To protect the employee's privacy, the employees name may not be entered on the OSHA 300.

b. If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.

TRAINING

All of our first aid providers must have current certificates of first aid and CPR training on file. These records will be maintained by the Plan Administrator.

Initial training, training at the introduction of a new or altered task affecting exposure to bloodborne pathogens or other potentially hazardous materials, and annual training will be provided by a person knowledgeable in the subject matter contained in this Plan.

Training will be interactive between the instructor and employee. An opportunity to ask questions will be provided. Further, this Plan as well as 29 CFR 1910.1030, *Bloodborne Pathogens*, will be readily available for review.

All training will be documented and will be maintained for a period of no less than three (3) years from the date on which the training occurred.

Training will include, but not be limited to, the following topics and materials:

a. a complete review of our Exposure Control Plan and its accessibility.
b. an accessible copy of 29 CFR 1910.1030 and an explanation of its contents.
c. a general explanation of the epidemiology and symptoms of bloodborne diseases.
d. an explanation of the modes of transmission of bloodborne pathogens.
e. an explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
f. an explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment.
g. information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
h. an explanation of the basis for selections of personal protective equipment.

i. information on the appropriate actions to take and persons to contact in an emergency involving blood other potentially infectious materials.

j. an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.

k. information on the post-exposure evaluation and follow-up that is provided after an exposure incident.

l. an explanation of the color coding required by paragraph (g)(1), 29 CFR 1910.1030.

m. a request for input from employees in the identification, evaluation, and selection of effective engineering and work practice controls.

WASTE MANAGEMENT

Waste management, if necessary, will comply with State EPA standards regarding handling, storage, and shipping of medical wastes.

SUMMARY

The whole thrust of the Program is to provide an awareness of the dangers of bloodborne pathogens, provide a means of reducing the possibility of occupational exposure, and, should occupational exposure occur, provide a means of reducing health risk.

Exposure Determination Form - List I

All job classifications in which all employees have occupational exposure.

1. First Aid Providers
2. _____
3. _____
4. _____
5. _____
6. _____

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of the designated first aid providers at Kuukpik Drilling LLC is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from job site incidents and only at the location where the incident occurred.

Kuukpik Drilling LLC
Exposure Determination Form - List II

Job classifications in which some employees have occupational exposure:

1. None
2. _____
3. _____
4. _____
5. _____
6. _____

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of the designated first aid providers at Kuukpik Drilling LLC is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from job site incidents and only at the location where the incident occurred.

Kuukpik Drilling LLC
Exposure Determination Form - List III

All tasks and procedures or groups of closely related tasks and procedures in which occupation exposure occurs and are performed by employees in job classifications noted in List II.

Job Classification	Tasks
1. None	
2.	
3.	
4.	

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of the designated first aid providers at Kuukpik Drilling LLC is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from job site incidents and only at the location where the incident occurred.

Kuukpik Drilling LLC
Housekeeping Schedule & Checklist

SCHEDULE

Following every incident where there is a possibility of the presence of residual bloodborne pathogens or other potentially infectious materials.

CHECKLIST

Only personnel who have had training in our Exposure Control will ensure that all surfaces are decontaminated and that cleaning materials are properly disposed of. Areas to consider include, but are not limited to:

	YES	NA
FLOORS	☐	☐
WALLS	☐	☐
EQUIPMENT	☐	☐
PRODUCT	☐	☐
WASTE CONTAINERS	☐	☐
TOOLS	☐	☐

Broken, potentially infected glassware should be picked up and disposed of using mechanical means such as a brush and dust pan or forceps.

All sharps will be stored in a manner that allows easy access and safe handling.

Infectious waste will be placed in containers that are color coded red. These containers will be decontaminated as soon as practical.

Subsequent to rendering any procedures, employees will ensure that all surfaces on which blood, body fluids, bloodborne pathogens, or other infectious materials may be present are cleaned with an appropriate disinfectant.

Kuukpik Drilling LLC

Sharps Injury Log

Note: A sharps injury log will be maintained for the recording of percutaneous injuries from contaminated sharps.

The information on the log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

This sharps injury log shall be maintained for the period of five years.

(Incident Date) _____ (Employee SSN) _____

Type and brand of device involved in the incident:

_____

Work area where the exposure incident occurred:

_____

Explanation of how the incident occurred:

_____

_____

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Sonny Kula

Safety Program Administrator

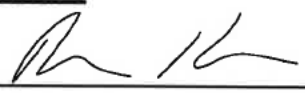
Kuukpik Drilling LLC
Annual Exposure Control Plan Review

This Exposure Control Plan was prepared:

At least annually, this program will be reviewed and, if necessary, updated to reflect innovations in procedures and technological developments that eliminates or reduces exposure to bloodborne pathogens.

As part of the annual review, the below will be considered:

a. Employee Input
b. Sharps Injury Log
c. Exposure Incident Reports
d. Professional Journals

Date Reviewed:	Signature	Title
4/15/2019		HSE Manager

Kuukpik Drilling LLC
Exposure Incident Report

ALL INFORMATION ON THIS FORM IS TO REMAIN CONFIDENTIAL

THIS FORM SHALL BE COMPLETED AS SOON AS FEASIBLE AFTER AN EXPOSURE INCIDENT BUT, UNDER NO CIRCUMSTANCES, AFTER THE SHIFT ON WHICH THE INCIDENT OCCURRED.

DATE:_____ TIME: _____

NAME OF EMPLOYEE: _____

ROUTE OF EXPOSURE: _____

SOURCE INDIVIDUAL'S NAME: _____

a. Above individual did / did not consent to be tested for HBV or HIV.

b. Testing was done by: _____

Results: _____

EMPLOYEE WAS OFFERED AND ACCEPTED:	NO	YES	
a. Hepatitis Vaccination Series. [Date(s)]	☐	☐	_____
1. If "NO", written declination was signed.			
b. Post Exposure Evaluation and follow-up.	☐	☐	
c. Employee consents to baseline blood collection.	☐	☐	_____ (Signature)

Description of events leading to this exposure incident:

_____

_____

_____

_____

Corrective Measures to Prevent a Reoccurrence:

_____

_____

_____

_____

_____ _____

Sonny Kula Employee Signature

Kuukpik Drilling Training Roster

Event: Bloodborne Pathogen Program Review **Time:** 10:00 AM

Location: 1000 Milne Point Road Innovation Rig **Date:** 4/26/2019

Lead By: Kegan Kiel **Signature:**

Learning Objectives: Review and discuess Kuukpik Drilling Bloodborne Pathogen Program

	First Name	Last Name	Full Name (Signature)	Company	Phone	Email Address
1	Ethan	Evens		Kuukpik Drilling	N/A	N/A
2	Joe	Nix		Kuukpik Drilling	N/A	N/A
3	Logan	Mulkey		Kuukpik Drilling	N/A	N/A
4	Brian	Carroll		Kuukpik Drilling	N/A	N/A
5	Jason	Hundley		Kuukpik Drilling	N/A	N/A
6	Kaleb	Hughes				
7	Emanuel	Van Horn		Kuukpik		
8	Shawn	Korell		Kuukpik		
9	Scott	Bennett		Kuukpik		
10	Will	Roberts		Kuukpik		
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Kuukpik Drilling Training Roster

Event: Bloodborne Pathogen Program Review
Time: 1:00 pm

Location: 1000 Milne Point Road Innovation Rig
Date: 5/1/2019

Lead By: Kegan Kiel
Signature: [signature]

Learning Objectives: Review and discuess Kuukpik Drilling Bloodborne Pathogen Program

	First Name	Last Name	Full Name (Signature)	Company	Phone	Email Address
1	Gregory	Gauthier	[signature]	Kuukpik Drilling	N/A	N/A
2	Michael	Craig	[signature]	Kuukpik Drilling	N/A	N/A
3	Travis	LaFrance	[signature]	Kuukpik Drilling	N/A	N/A
4	Jesse	Maddox	[signature]	Kuukpik Drilling	N/A	N/A
5	Mickey	Roberts	[signature]	Kuukpik Drilling	N/A	N/A
6	Russell Gallen	Gallen	[signature]	" "		
7	Murray ~~Barr~~	Barr	[signature]	" "		
8	Kyle ~~Mead~~	Mead	[signature]	KD		
9	Cody	Barber	[signature]	Kuukpik DLG		
10	Ingamar	Johanson	[signature]	Kuukpik Drilling		
11	Carlon	Fagerstad	[signature]	KD		
12	Twer	King	[signature]	KD		
13	Jeremy	Cole	[signature]	KD		
14	Raymond	Nix	[signature]	KD		
15	Matt ~~Coutser~~	Coutser	[signature]	KD		
16						
17						
18						
19						
20						

Kuukpik Drilling Training Roster

Event: Bloodborne Pathogen Program Review **Time:** 1:00 am

Location: 1000 Milne Point Road Innovation Rig **Date:** 5/2/2014

Lead By: Kegan Kiel **Signature:** [signature]

Learning Objectives: Review and discuess Kuukpik Drilling Bloodborne Pathogen Program

	First Name	Last Name	Full Name (Signature)	Company	Phone	Email Address
1	JOEL	STULL	[signature]	Kuukpik Drilling	N/A	N/A
2	Casey	Schlosser	[signature]	Kuukpik Drilling	N/A	N/A
3	ERIC	KENISON	[signature]	Kuukpik Drilling	N/A	N/A
4	Sheldon	Sweetsir	[signature]	Kuukpik Drilling	N/A	N/A
5	Dace	Tough	[signature]	Kuukpik Drilling	N/A	N/A
6	Daniel	Bannon	[signature]	Kuukpik drilling	N/A	N/A
7	Steve	Coyner	[signature]	KD		
8	Mike	Larson	[signature]	Kuukpik Drilling		
9	Andrew	Lout	[signature]	Kuukpik Drilling	N/A	
10	Alan	Lonewolf	[signature]	Kuukpik Drilling		
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Attachment 1

Citation 1-1

- Ariss Controls PLC Logic Email

From: Richard Ariss
To: Mike Leslie
Cc: Monty Myers; Paul Mazzolini; James Sweetsir; Jay Compton
Subject: [EXTERNAL] RE: PLC Logic settings for Innovation Rig (Revised from the last email)
Date: Tuesday, December 11, 2018 10:02:36 AM
Attachments: image001.png

Mike/Paul

I can confirm that Ariss Controls & Electric Inc. (ACE) remotely accessed the Innovation Rig on December 10, 2018 and installed the requested program to add a "Height Zone" limitation range into the Hydraulic Elevator "Open" function. This disables the Hydraulic "Open Elevator" function when the "Elevator Height Position" is between 3.0 feet (36") and 55.0 feet (660"), thus making the Hydraulic "Elevator Open" function inoperable between these values during Normal Rig Operations. ACE also added a means to override this limitation periodically. In addition to the 2-function control currently used for Normal Operations, ACE added a third function to override this limitation that will only be operable if the control is being held down by the driller. ACE used the same overriding control function which is currently accessible on the "Hydraulic" screen on the Driller's Station. This allows the Drillers to override the new limitations imposed during certain Rig activities. An example would be to open the Elevators after a Stand of DP has been made up and preparing to commence drilling activities. The Elevators caused undue wear on the pipe if they remain closed so it is typical to open them while drilling down the stand.

The above programming changes were remotely added into the existing rig program by ACE on December 10, 2018. They were also tested on December 10, 2018, by having ACE personnel on the telephone to the Innovation Rig and HilCorp personnel (James Sweetsir and Mike Leslie) on location testing that the Hydraulic "Elevators Open" function is disabled from above 3' (36") to above 55" (660"). The Hilcorp personnel confirmed this is working properly. The rig personnel ran the blocks from the 55' down to the 3' measurement continually trying to OPEN the Hydraulic Elevators. The Hydraulic Elevators would not open. We also tested that hydraulic elevators can open, inside the 3' to 55' zone, if you operate the hydraulic elevators with the existing two hand operation AND the Override on the Hydraulic screen.

Richard Ariss
President
Ariss Controls & Electric Inc.
780-986-1147 Office
780-991-9166 Cell
richarda@arisscontrols.com
www.arisscontrols.com

From: Mike Leslie [mailto:gleslie@hilcorp.com]
Sent: Monday, December 10, 2018 12:46 PM
To: Richard Ariss
Cc: Monty Myers ; Paul Mazzolini ; James Sweetsir ; Jay Compton
Subject: PLC Logic settings for Innovation Rig
Richard,

Hilcorp would like Ariss Controls & Technology to program a zone limitation range into our Elevator "Open" function to disable this function of opening the Elevators when the "Elevator Position" is between 3.0 feet and 55.0 feet, thus making the "Open" function inoperable between these values during Normal Rig Operations... We will also need a means to override this limitation periodically. Therefore, in addition to the 2-function control we currently have for Normal Operations, we'll need a third function to override this limitation that will only be operable if the control is being held down by the driller. I would like to suggest we used the same overriding control function which is currently accessible on the "Hydraulic" screen on the Driller's Station. This will allow the Drillers to override the new limitations imposed during certain Rig activities. An example would be to open the Elevators after a Stand of DP has been made up and preparing to commence drilling activities. The Elevators caused undue wear on the pipe if they remain closed so it is typical to open them while drilling down the stand... I've attached several photos depicting equipment positons when the new limitations are implemented, to include Elevator Position at 3.0' from floor and links are vertical, the Weight Limit Bypass function, Location of Skate at 100%, Location of Skate when laying down DP, plus distance from pipe to Skate when DP is released from Elevators and Elevator Position is 3.0'
Please review to ensure this programmed limitation will not cause, or add unsafe conditions to our operations. If approved, we are ready to commence programming via on-line services. Once implemented, all functions will be tested and Ladder Logic documents so records are accurate..
Regards,

Mike Leslie
Drilling Superintendent
Hilcorp Alaska
gleslie@hilcorp.com
Mobile: 907-382-3057
Office: 907-776-6769

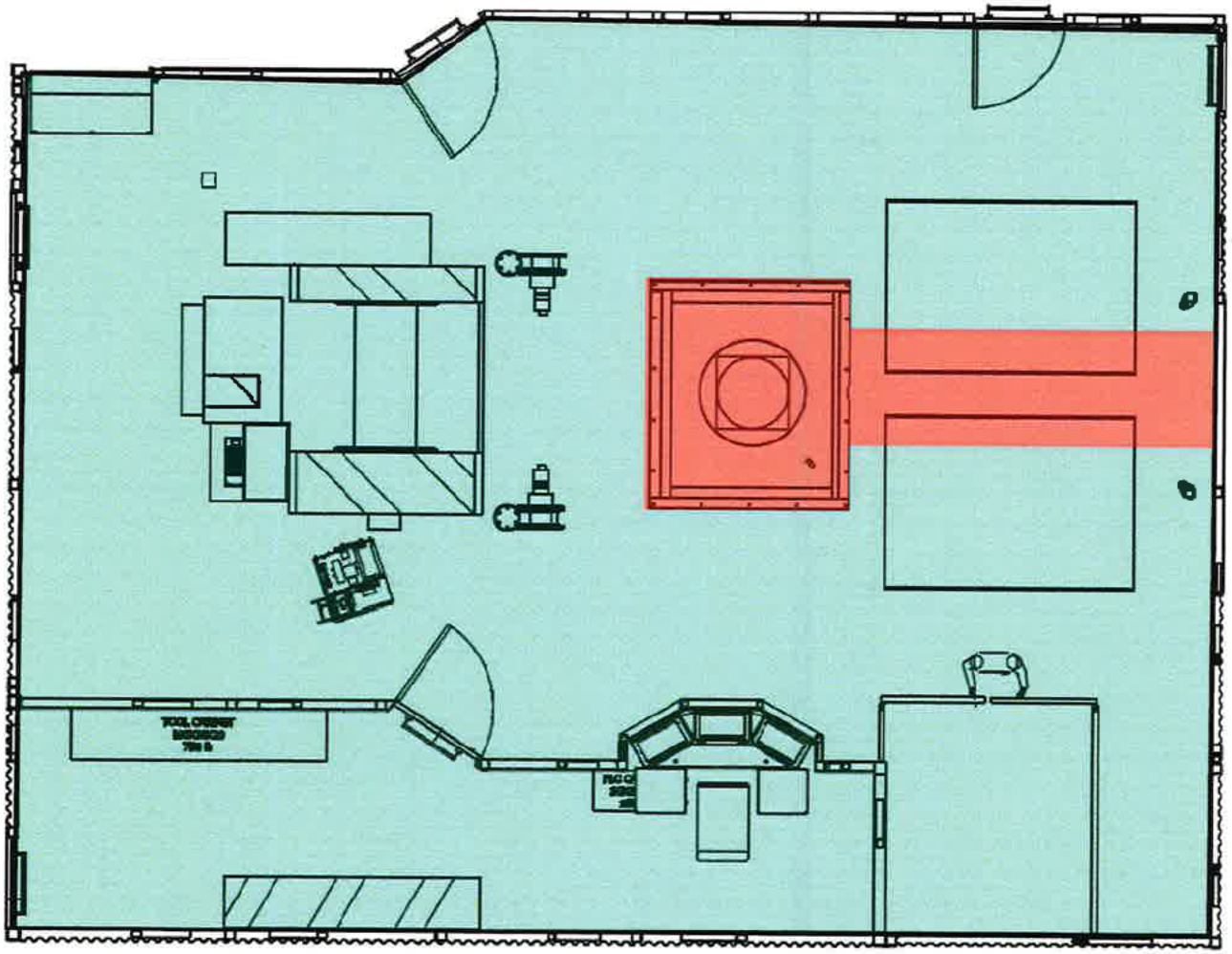
Attachment 2

Citation 1-2

- Top Drive In Motion Document
- Safe working and exclusion zone pictorial

Innovation Rig Floor

Safe Working / Restricted Work Area While Top Drive Is In Motion



Safe Working Area While Top Drive Is In Motion	Restricted Work Area While Top Drive Is In Motion

Hilcorp

KUUKPIK DRILLING

List of tasks NOT TO DO while Top Drive Is In Motion

- No doping pin on Top Drive;
- Do Not access Derrick Ladder;
- Do NOT let tongs "Ride The Pipe";
- No marking the Stump for bad hard band; When POOH wet, if crew is not done cleaning stump of mud. Top Drill is to be STOPPED +/- 20' above until all hands are clear;
- Hand Slips will NOT ride the Pipe;
- No use of Tugger when pipe is rotating;
- Man Rider Use is Prohibited;
- Do NOT use "fill up line" to fill pipe while running casing

If any other task is identified that would put an individual at risk, notify Toolpusher immediately .

12/17/2018

Inspection Report

Mon Apr 15, 2019 17:59:21 PM

RID	CSHO ID	Supervisor ID	Inspection Number	Optional Report Number	Case Closed Date
1050210	A3578	J2092	1364879		

Establishment Name	Kuukpik Drilling, LLC		Doing Business As (DBA)				
Establishment Owner Name	Private Sector	Type of Business	Corporation	Primary NAICS			213111
Site Address	1000 Milne Point PRUDHOE BAY, AK, 99734	Site Phone	(907)-279-6223	Extn		Site FAX	
Business Address	582 E. 36th Ave STE 600 ANCHORAGE, AK, 99503	Business Phone	(907)-279-6254			Business FAX	
Mailing Address	582 E. 36th Ave STE 600 ANCHORAGE, AK, 99503	E-mail				Mobile Phone	(907)-315-4423
Site Activity	Drilling	NAICS Inspected	213111			Days on Site	2
Federal EIN		DUNs		Temporary or Fixed Site?			Temporary
State Estab Id		DUNS plus4		CAGE Code			
Construction Type							

Entry	07-DEC-2018	05:45 AM	First Closing Conference	21-FEB-2019	10:00 AM
Opening Conference	07-DEC-2018	08:30 AM	Second Closing Conference		
Walkaround	07-DEC-2018	10:30 PM	Exit	08-DEC-2018	12:45 AM

Inspection Initiating Type	Fatality/Catastrophe			Secondary Type	Referral
Other Initiating Type				Inspection Category	Safety
Scope of Inspection	Partial			Reason No Inspection	
Sampling Performed?	N	SVEP	N	Expln. for No Insp.	
Federal Strategic Initiatives					
National Emphasis					
State Emphasis					
Local Emphasis					
Primary Emphasis					

Employed in Establishment	55	Walkaround?	Y	Advance Notice?	N
Covered By Inspection	22	Interviewed?	Y	Flag for Follow-up	N
Controlled By Employer	62	Union?	N	Reason for Follow-up	
Is this Company a current federal contractor?					

Parent Company Legal Name			Parent Comp Trade Name/DBA		
Parent Company Address		Phone Number		Extn	
TIN / EIN			DUNS		

CAGE Code		DUNS plus4	

Related Activity			
Activity Number	Activity Type	Satisfied	Establishment Name
1407557	FAT/CAT		Kuukpik Drilling, LLC

Related Inspections		
Inspection Number	Establishment Name	Related Inspection Type
1365178	Hilcorp Alaska, LLC	MULTI-EMPLOYER

Additional Codes			
Type	ID	Value	Description

Employer Representatives Contacted							
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**	N		
Home		**Work**	[redacted]	**Mobile**	[redacted]	**Fax**	
Email	[redacted]			**Participation**	[redacted]		
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address				**Interviewed?**	N		
Home		**Work**	[redacted]	**Mobile**	[redacted]	**Fax**	
Email	[redacted]			**Participation**	[redacted]		
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address				**Interviewed?**	N		
Home		**Work**	[redacted]	**Mobile**	[redacted]	**Fax**	
Email	[redacted]			**Participation**	[redacted]		
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address				**Interviewed?**	N		
Home		**Work**	[redacted]	**Mobile**	[redacted]	**Fax**	
Email	[redacted]			**Participation**	[redacted]		

						Conference	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address				**Interviewed?**		N	
Home		**Work**	[redacted]	**Mobile**	[redacted]	**Fax**	
Email	[redacted]			**Participation**		[redacted]	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address				**Interviewed?**		N	
Home		**Work**	[redacted]	**Mobile**		**Fax**	
Email				**Participation**		[redacted]	

Employees Contacted							
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**		Y	
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		[redacted]	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**		Y	
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		Credentials	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**		Y	
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		Credentials	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**		Y	
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		Credentials	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**		Y	
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		Credentials	
Name	[redacted]	**Job Title**	[redacted]	**Occupation**			
Address	[redacted]			**Interviewed?**		Y	

		[redacted]					
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		Credentials	
Name	[redacted]	**Job Title**		[redacted]	**Occupation**		
Address				**Interviewed?**		Y	
Home		**Work**		**Mobile**	[redacted]	**Fax**	
Email				**Participation**		Credentials	

Other Persons Contacted					
Name	[redacted]	**Role**	[redacted]	**Relationship to Employer**	N/A
Address	[redacted]		**Interviewed?**	N	
Home		**Work**	[redacted]	**Mobile**		**Fax**	
Email			**Participation**		

CSHO Signature	[redacted]	Date	4/17/19

AKOSH NARRATIVE REPORT

April 16, 2019 Inspection #1364879
Kuukpik Drilling
CSHO: Jim Pinder CSHO ID: A3578

SAFETY NARRATIVE

Kuukpik Drilling
3800 CenterPoint Dr, Anchorage, AK 99503
(907)-279-6223

Inspection #: **1364879**
Inspection Dates: 12/7/2018
Closing Dates: 2/21/2019

Site Address: Milne Point, Prudhoe Bay, AK

AKOSH Representatives:

Name	Title/Position
Jim Pinder	CSHO

Management Officials:

Name	Title/Position
Kenny Overvold	General Manager
Mark Chadwell	Operations Manager
Phil Fortner	Admin Manager
Scott Heim	Drilling Superintendent
Brendan Maguire	Chief, Organizational Manager
Sonny Kula	HSE Manager

History:

On 12/7/2018 I, Jim Pinder, was assigned by the Assistant Chief of Enforcement, Ronald Larsen to conduct an onsite inspection in response to fatal injury of an employee at Milne Point in Prudhoe Bay, Alaska.

The site is an Oil Drilling Rig located at Milne Point, Prudhoe Bay, Alaska. Hilcorp Alaska, LLC owns the oil rig and contracts with Kuukpik Drilling who provides the crew to operate the rig.

Kuukpik Drilling, LLC. is a subsidiary of Kuukpik Corporation.

Opening Conference:

On 12/7/2018, at approximately 8:15 am I arrived at Kuukpik Drilling office in Anchorage. I introduced myself to the receptionist and asked to speak to someone concerning the fatal incident at Milne Point. [redacted] introduced himself as the HSE Manager and escorted me to a conference room where we were joined by [redacted] and [redacted]. I introduced himself, presented my credentials and explained the reason for my visit.

AKOSH NARRATIVE REPORT

April 16, 2019 Inspection #1364879

Kuukpik Drilling

CSHO: Jim Pinder CSHO ID: A3578

At approximately 8:30 am I conducted the Opening Conference. I explained the nature and purpose of the inspection as well as all of the items on the inspection checklist. [redacted] granted permission to proceed with the inspection.

I departed Anchorage at 2:50 PM and arrived in Prudhoe Bay, Alaska at approximately 4:30 PM and was greeted by a transport driver from Kuukpik Drilling. The ride from the airport to Milne Point took approximately 1 ½ hours. Upon arriving, I was escorted to a conference room where Management from Kuukpik Drilling and Hilcorp Alaska were waiting with the crew members that were present at the time of the accident.

Employee interviews were conducted onsite

Walk-around:

At approximately 10:30 PM the walk-around inspection started on the drill rig where the incident occurred. Photographs were taken of all the equipment involved in the incident and of the control panel located in the control room. [redacted] with Kuukpik Drilling and [redacted] with Hilcorp Alaska described the different parts of the drill rig and the job duties of each crew member on the rig floor. They then explained the process of pulling the pipe from the ground and placing it on the skate, which was taking place at the time of the accident.

Closing Conference:

On 2/21/2019 at approximately 10:00 am, a Closing Conference was held in a conference at Kuukpik Drilling office in Anchorage with [redacted], [redacted], [redacted], [redacted] and [redacted]. During the closing conference the 11 items on the closing conference worksheet were read aloud with an emphasis on employee Whistleblower protections and the 15 working day time limit. I explained and encouraged the use of consultation and training available through AKOSH. Copies of the closing conference, employer responsibilities, OSHA consultation fact sheet, request for consultation, workers compensation memo were provided.

Evaluation of Health and Safety Program

Code:	0 = Nonexistent	1 = Inadequate	2 = Average	3 = Above Average
A. Safety Program			X	
B. Safety training			X	
C. Drill Rig SOP			X	

AKOSH NARRATIVE REPORT

April 16, 2019 Inspection #1364879
Kuukpik Drilling
CSHO: Jim Pinder CSHO ID: A3578

Conclusions:

Based on the inspection findings and employee interviews the following alleged violations were noted.

Serious:

1. Safe employment - 5(a)(1)
2. Suspended loads – walking/working under
3. Bloodborne Pathogens - methods of compliance/housekeeping
4. Ladders – standing on cap (top)
5. Ladder - metal spreader

Violation Worksheet

Print Date : 04/16/2019

Inspection Number	1364879
Opt. Insp. Number	

Establishment Name	Kuukpik Drilling, LLC				
DBA Name					
Type Of Violation	Serious	**Citation Number**	1	**Item/Group**	1 /
Number Exposed	62	**No. Instances**	*1*	**REC**	
Special Enforcement?			**Employer's Relationship to Hazard**	All	
Standard	AS 18.60.075(a)(4)				
Substance Codes			**Photo/Video Number**		
Alleged Violation Description	AS 18.60.075(a)(4): 18 Health, Safety, and Health 60 Safety 075 Safe employment (a) An employer shall do everything necessary to protect the life, health, and safety of employees including, but not limited to; (4) furnishing to each employee employment and a place of employment that are free from recognized hazards that, in the opinion of the commissioner, are causing or are likely to cause death or serious physical harm to the employees. (b) An employee shall comply with occupational safety and health standards and all regulations issued under AS 18.60.010 - 18.60.105 that are applicable to the employee's own actions and conduct. EXAMPLE: Employees are exposed to struck by/caught between hazards as a result of the employer's failure to ensure that all employees are protected from recognized hazards at their place of employment. On 12/7/2019, The Driller who is in charge of the normal operations of the crew, was training a co-worker in the control room while removing drill pipe from the ground. The Driller was verbally describing a pipe release procedure to the trainee, when he inadvertently released the pipe, causing it to fall approximately 28 feet striking and fatality injuring an employee who was working in the danger zone.				
Recommended Abatement Action	While performing training duties, reduce production to a safe operating speed.				

Penalty

Severity	High
Severity Justification	Death, permanent disability, chronic or irreversible illness
Probability	Greater
Probability Justification	Employee was fatality injured

Number of Times Repeated			
Gravity	High	**Gravity based Penalty**	12934.00
Multiplier		**Size**	30%
Good Faith		**History**	10%
Quick Fix			
Calculated Penalty	8148.00	**Proposed Penalty**	8148.00
Proposed Penalty Justification:			

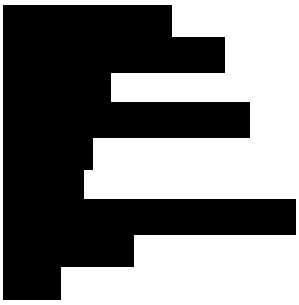
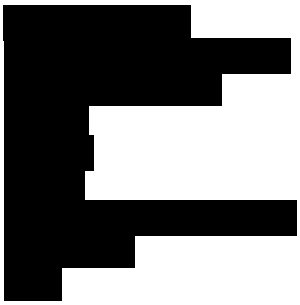
Abatement Details

Days to Abate	15 Wkg Days	**Abatement Status**	
User-entered Abatement Due Date		**Date Abated**	
Abatement Documentation Required?	Yes	**Date Verified**	
Abatement Completed Description:			

MultiStep Abatement

Type / Other Type	Days to abate	User entered Abatement Due Date	Completed(status)	Verify Date

Employee Exposure

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
1	6	Kuukpik Drilling, LLC		6.00 month	12 hrs Daily	Over 6 feet
1	6	Kuukpik Drilling, LLC		1.00 year	12 hrs Daily	In control room of Drill Rig

1	6	Kuukpik Drilling, LLC		2.00 month	12 hrs Daily	within 6 feet
1	6	Kuukpik Drilling, LLC		1.00 month	12 hrs Daily	within 6 feet
1	6	Kuukpik Drilling, LLC		2.00 month	12 hrs Daily	within 8 feet

20. **Instance Description**: A. Hazard B. Equipment C. Location D. Injury/Illness E. Measurements

a) **Hazards-Operation/Condition-Accident**: The driller maintained console control while viewing the rig floor and crew through the control room windows while operating the drilling console and verbally describing his actions to a co-worker he was training when he accidently opened the 2-stage opening mechanism, causing the elevator to open and releasing the pipe.

The driller's attention was split between the routine task of operating the control console as part of normal operations, and training a co-worker. The driller's attention was not fully on the task of simultaneously operating the hydraulic elevators and top drive controls.

b) **Equipment**: Drill rig

c) **Location**: Milne Point, Prudhoe Bay, Alaska

d) **Injury/Illness (and Justifications for Severity and Probability)**: Death or permanent disability

e) **Measurements**: 28 Feet above rig floor

23. **Employer Knowledge**: Employer Safety Manager, Sonny Kula stated that the procedure that was being followed was normal operating procedures.

24. **Comments**: If the driller would have been focusing on his duties and the employees stayed out of the danger zone, this accident would not have happened

25. **Other Employer Information**: Hilcorp Alaska

MEMORANDUM
DEPARTMENT OF LABOR
AND WORKFORCE DEVELOPMENT

STATE OF ALASKA
Labor Standards & Safety
Division,
Occupational Safety & Health

TO: Dr. Tamika L. Ledbetter
Commissioner

DATE: March 21, 2019

THRU: Cathy Munoz
Deputy Commissioner

THRU: Terre L. Gales
Deputy Director

PHONE: (907) 269-4961

FROM: Ronald Larsen
Assistant Chief of Enforcement

SUBJECT: Permission to use General Duty Clause, Kuukpik Drilling
Inspection # 1364879

Alaska Occupational Safety and Health (AKOSH) requests authorization to issue a citation for a serious violation of the general duty clause AS 18.60.075(a) (4) to Kuukpik Drilling for its failure to protect an employee from hazards associated with an Oil and Gas Well Drilling Operation.

On Friday, December 7, 2018, a 35 year old employee was struck in the head and died while working for Kuukpik Drilling at Milne Point in Prudhoe Bay, Alaska. He was working as part of an 11 man crew that was removing pipe from the ground and placing it in a pipe shed located on a lower level. As part of this repetitive process, the end of certain pipes is marked with spray paint prior to being lifted out of the ground. While spray painting the employee routinely walked around the pipe placing him directly in the danger zone of the previously removed pipe.

During this process the driller is in charge. He operates the machinery that lifts the pipe out of the ground. In addition, he makes certain that company policies and procedures are followed. He conducts daily shift meetings and is responsible for establishing that all personnel are aware of the safety requirements on the rig.

On the day of the incident, the driller was training another employee, dividing his attention between two processes and operating at a normal work pace. While verbally describing a pipe release procedure, he inadvertently released the pipe, causing it to fall approximately 28 feet striking the employee who was spray painting in the danger zone.

Since the driller's lack of focus on his primary duties created an unsafe work environment which led to a workplace accident AKOSH is proposing a general duty clause citation with a $8,148 penalty. The employer also violated 29 CFR 1910.181(i)(4)(ii): Material handling and storage, 29 CFR 1910.1030(d)(4)(ii)(A): Bloodborne pathogens, 29 CFR 1910.23(c)(8) and 29 CFR 1910.23(c)(2): Portable ladders. The total proposed penalty is $33,498

On behalf of Dr. Tamika L. Ledbetter

Approved: [redacted] 3/26/19

(Signature) (Date)

Violation Worksheet

Print Date : 04/16/2019

Inspection Number	1364879
Opt. Insp. Number	

Establishment Name	Kuukpik Drilling, LLC				
DBA Name					
Type Of Violation	Serious	**Citation Number**	1	**Item/Group**	2 /
Number Exposed	62	**No. Instances**	*1*	**REC**	
Special Enforcement?			**Employer's Relationship to Hazard**	All	
Standard	1910.181(i)(4)(ii)				
Substance Codes			**Photo/Video Number**		
Alleged Violation Description	29 CFR 1910.181(i)(4)(ii): 181 Derricks (i) Handling the load (4) Holding the load (ii) People should not be permitted to stand or pass under a load on the hook. Example: Employees are exposed to struck by/caught between hazards as a result of the employer's failure to ensure that employees do not walk or work under suspended loads while on the drill rig. On 12/7/2018, while working under a suspended drill pipe, an employee was fatality injured when the pipe he was working under was accidently released and fell 28 feet striking the him on the back of the head.				
Recommended Abatement Action	Prohibit employees from working under suspended loads				

Penalty

Severity	High		
Severity Justification	Death, permanent disability, chronic or irreversible illness or injury		
Probability	Greater		
Probability Justification	Employee was fatality injured		
Number of Times Repeated			
Gravity	High	**Gravity based Penalty**	12934.00
Multiplier		**Size**	30%
Good Faith		**History**	10%
Quick Fix			
Calculated Penalty	8148.00	**Proposed Penalty**	8148.00

Proposed Penalty Justification:	

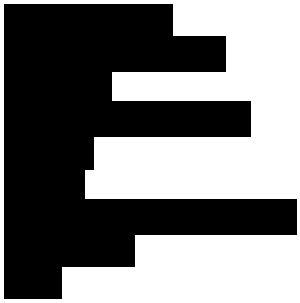
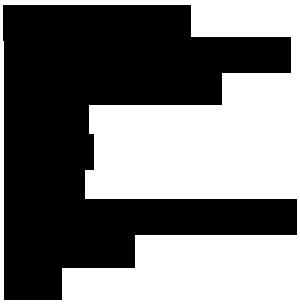
Abatement Details

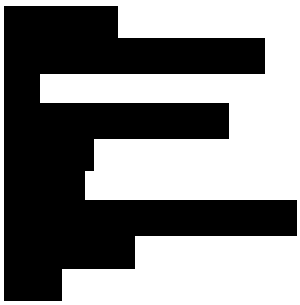
Days to Abate	15 Wkg Days	**Abatement Status**	
User-entered Abatement Due Date		**Date Abated**	
Abatement Documentation Required?	Yes	**Date Verified**	
Abatement Completed Description:			

MultiStep Abatement

Type / Other Type	Days to abate	User entered Abatement Due Date	Completed(status)	Verify Date

Employee Exposure

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
1	6	Kuukpik Drilling, LLC		6.00 month	12 hrs daily	Indirect
		Kuukpik Drilling, LLC		1.00 year	12 hrs daily	Indirect
1	6	Kuukpik Drilling, LLC		2.00 month	12 hrs daily	indirect

1	6	Kuukpik Drilling, LLC		1.00 month	12 hrs Daily	Immediate
1	6	Kuukpik Drilling, LLC		2.00 year	12 hrs Daily	Immediate

20. **Instance Description**: A. Hazard B. Equipment C. Location D. Injury/Illness E. Measurements

a) **Hazards-Operation/Condition-Accident**: As part of their assigned duties, employees walk/work under a drill pipe that is suspended in the air.

b) **Equipment**: Drill pipe

c) **Location**: Mile Point

d) **Injury/Illness (and Justifications for Severity and Probability)**: Death, permanent disability

e) **Measurements**: N/A

23. **Employer Knowledge**: Employer stated that walking/working under a suspended drill pipe is normal operating procedure on a drill rig.

24. **Comments**: Employer stated that the company procedure for working under a suspended load has been modified

25. **Other Employer Information**: Hilcorp Alaska

Violation Worksheet

Print Date : 04/16/2019

Inspection Number	1364879
Opt. Insp. Number	

Establishment Name	Kuukpik Drilling, LLC				
DBA Name					
Type Of Violation	Serious	**Citation Number**	1	**Item/Group**	3 /
Number Exposed	62	**No. Instances**	*1*	**REC**	
Special Enforcement?			**Employer's Relationship to Hazard**	All	
Standard	1910.1030(d)(4)(ii)(A)				
Substance Codes			**Photo/Video Number**		
Alleged Violation Description	29 CFR 1910.1030(d)(4)(ii)(A): 1030 Bloodborne pathogens. (d) Methods of Compliance (4) Housekeeping (ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials. (A) Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning. EXAMPLE: Employees are exposed to bloodborne pathogen health hazards due to the employer□s failure to have the contaminated working surface properly cleaned and decontaminated after contact with blood. On 12/18/18 the employer provided a video recording of the incident that occurred on 12/7/18 when an employee was fatality injured after being struck on the head by a drillpipe. After the injured employee was removed from the rig floor, other crew members wiped up the blood with rags and rinsed the floor off with water from a hose. This was observed on the video recording the employer provided, approximate time from 03:16:00 to 03:20:00.				
Recommended Abatement Action	Provide training on Bloodborne pathogens				

Penalty

Severity	High
Severity Justification	Death, permanent disability, chronic or irreversible illness
Probability	Greater
Probability Justification	without proper PPE, the likelihood that an injury or illness will occur is high

Number of Times Repeated			
Gravity	High	**Gravity based Penalty**	12934.00
Multiplier		**Size**	30%
Good Faith		**History**	10%
Quick Fix			
Calculated Penalty	8148.00	**Proposed Penalty**	8148.00
Proposed Penalty Justification:			

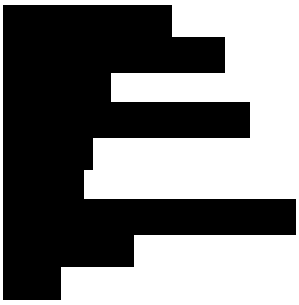
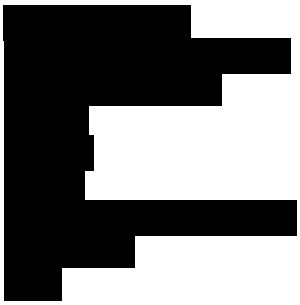
Abatement Details

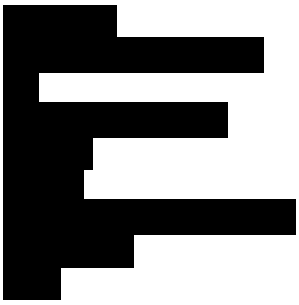
Days to Abate	15 Wkg Days	**Abatement Status**	
User-entered Abatement Due Date		**Date Abated**	
Abatement Documentation Required?	Yes	**Date Verified**	
Abatement Completed Description:			

MultiStep Abatement

Type / Other Type	Days to abate	User entered Abatement Due Date	Completed(status)	Verify Date

Employee Exposure

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
1	6	Kuukpik Drilling, LLC		6.00 month	Daily	Direct
1	6	Kuukpik Drilling, LLC		1.00 year	Daily	Direct

1	6	Kuukpik Drilling, LLC		2.00 month	Daily	Direct
	6	Kuukpik Drilling, LLC		1.00 month	daily	Direct
1	6	Kuukpik Drilling, LLC		2.00 year	Daily	Direct
1	6	Kuukpik Drilling, LLC		2.00 month	Daily	Direct

20. **Instance Description**: A. Hazard B. Equipment C. Location D. Injury/Illness E. Measurements

a) **Hazards-Operation/Condition-Accident**: After an injured employee was removed from the site, employees were instructed to clean up the accident site by wiping up the blood and picking up the contaminated rags that were left behind by the first responders. Some of the employees were wearing work gloves and some were not.

b) **Equipment**: Cleaning up bodily fluids without wearing proper PPE

c) **Location**: Milne Point, Prudhoe Bay, Alaska

d) **Injury/Illness (and Justifications for Severity and Probability)**: Possible exposure to hepatitis B or other biological pathogens.

e) **Measurements**: None

23. **Employer Knowledge**: Employer admitted to having a Bloodborne Pathogens Policy but failed to follow it

24. **Comments**: During the employee interview, it was determined that a supervisor instructed them to clean up the rig floor after the accident.

25. **Other Employer Information**: Hilcorp Alaska

Violation Worksheet

Print Date : 04/16/2019

Inspection Number	1364879
Opt. Insp. Number	

Establishment Name	Kuukpik Drilling, LLC				
DBA Name					
Type Of Violation	Serious	**Citation Number**	1	**Item/Group**	4 / a
Number Exposed	62	**No. Instances**	*1*	**REC**	
Special Enforcement?			**Employer's Relationship to Hazard**	All	
Standard	1910.23(c)(8)				
Substance Codes			**Photo/Video Number**		
Alleged Violation Description	29 CFR 1910.23(c)(8): 23 Ladders (c) Portable ladders (8) The cap (if equipped) and top step of a stepladder are not used as steps; Example: Employees were exposed to fall hazards as a result of the employer's failure to ensure the cap of a stepladder is not used as a step. This was observed on the video recording the employer provided of the incident that occurred on 2/7/2018, time frame from 22:41:11 to 22:42:30 an employee was standing on the cap of an "A" frame ladder.				
Recommended Abatement Action	Ensure employees do not stand on the cap of the "A" frame stepladder				

Penalty

Severity	Low		
Severity Justification	Temporary injures or limited disability		
Probability	Greater		
Probability Justification	Likelihood that an injury will occur is high		
Number of Times Repeated			
Gravity	Moderate	**Gravity based Penalty**	9239.00
Multiplier		**Size**	30%
Good Faith		**History**	10%
Quick Fix			
Calculated Penalty	5821.00	**Proposed Penalty**	5821.00
Proposed Penalty Justification:			

Abatement Details

Days to Abate		**Abatement Status**	Quick Fix
User-entered Abatement Due Date		**Date Abated**	12/07/2018
Abatement Documentation Required?	No	**Date Verified**	12/07/2018
Abatement Completed Description:	Employer removed employee from the ladder		

MultiStep Abatement

Type / Other Type	Days to abate	User entered Abatement Due Date	Completed(status)	Verify Date

Employee Exposure

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
1	2	Kuukpik Drilling, LLC	[redacted]	1.00 year	Daily	Indirect
1	2	Kuukpik Drilling, LLC	[redacted]	2.00 year	Daily	Indirect

20. **Instance Description**: A. Hazard B. Equipment C. Location D. Injury/Illness E. Measurements

a) **Hazards-Operation / Condition-Accident**: Standing on the cap (top) of a 6 foot, "A" frame step ladder

b) **Equipment**: 6 foot, "A" frame step ladder

c) **Location**: Milne Point, Prudhoe Bay, Alaska

d) **Injury / Illness (and Justifications for Severity and Probability)**: Falls from elevated heights can result in, but not limited to, broken bones, lacerations, and disabilities.

e) **Measurements**: 6 feet from top of step ladder to the floor

23. **Employer Knowledge**: Employer had supervisor on the rig floor when the employee was standing on top of the step ladder.

24. **Comments**: Employer provided a video recording that showed the employee standing on top of the step ladder

25. **Other Employer Information**: Hilcorp Alaska

Violation Worksheet

Print Date : 04/16/2019

Inspection Number	1364879
Opt. Insp. Number	

Establishment Name	Kuukpik Drilling, LLC				
DBA Name					
Type Of Violation	Serious	**Citation Number**	1	**Item/Group**	4 / b
Number Exposed	62	**No. Instances**	*1*	**REC**	
Special Enforcement?			**Employer's Relationship to Hazard**	All	
Standard	1910.23(c)(2)				
Substance Codes			**Photo/Video Number**		
Alleged Violation Description	29 CFR 1910.23(c)(2): 23 Ladder (c) Portable ladders (2) Each stepladder or combination ladder used in a stepladder mode is equipped with a metal spreader or locking device that securely holds the front and back sections in an open position while the ladder is in use; Example: Employees were exposed to fall hazard injuries as a result of the employers failure to ensure that the spreader bar on the step ladder is locked into place when in use. This was observed on the video recording the employer provided when an employee was standing on top of a step ladder and the spreader bar was not locked into place.				
Recommended Abatement Action	Lock spreader bar into place when using a step ladder.				

Penalty

Severity	Low		
Severity Justification	Temporary injuries or limited disability		
Probability	Greater		
Probability Justification	Likelihood that an injury will occur is high		
Number of Times Repeated			
Gravity	Moderate	**Gravity based Penalty**	9239.00
Multiplier		**Size**	30%
Good Faith		**History**	
Quick Fix			
Calculated Penalty	0.00	**Proposed Penalty**	0.00

Proposed Penalty Justification:	

Abatement Details

Days to Abate		**Abatement Status**	Corrected During Inspection
User-entered Abatement Due Date		**Date Abated**	12/07/2018
Abatement Documentation Required?	No	**Date Verified**	12/07/2018
Abatement Completed Description:	Employer removed ladder from service		

MultiStep Abatement

Type / Other Type	Days to abate	User entered Abatement Due Date	Completed(status)	Verify Date

Employee Exposure

Exposure Instance	No. Exposed	Employer	Name and Address Telephone Numbers	Duration	Frequency	Proximity
1	2	Hilcorp Alaska, LLC	[redacted]	1.00 year	Daily	Immediate
1	2	Kuukpik Drilling, LLC	[redacted]	6.00 month	Daily	Immediate

20. **Instance Description**: A. Hazard B. Equipment C. Location D. Injury/Illness E. Measurements

a) **Hazards-Operation / Condition-Accident**: Using step ladder without having spreader locked into place

b) **Equipment**: Step ladder

c) **Location**: Milne Point, Prudhoe Bay, Alaska

d) **Injury / Illness (and Justifications for Severity and Probability)**: Death from injury or permanent disability, employees were subject to falls from elevated heights

INCIDENT INVESTIGATION REPORT

Incident Name: Milne Point Drilling Fatality from Head Strike

Date and Time of Incident: December 7, 2018

Location: Milne Point Field, Alaska, E Pad, Well 35

Date of Report: December 19, 2018

Classification: Injury - Fatal

Executive Summary:

On December 7, 2018, at 03:40 AM a Drilling Rig Floorhand passed away at the Milne Point Medical Clinic as a result of injuries sustained from a blow to the head during an industrial accident. At approximately 02:28 AM the deceased worker (Injured Person – IP) was struck on the left side of his head by a joint of drill pipe that was 5" diameter X 31' in length, weighing approximately 700 lbs. A root cause incident investigation was conducted. The investigation revealed that the hydraulic elevators were opened, causing the joint of pipe to be released. The affected crew called for the facility emergency response team while rendering first aid care, followed by CPR. Trained medical responders were on the scene within three minutes and a qualified Nurse Practitioner (NP) stationed at Milne Point arrived at the scene and rendered care within nine minutes of the incident. After having transported the IP to the Milne Point Clinic, resuscitation efforts continued for a total of 72 minutes. The IP was pronounced deceased at 03:40 AM by the NP who was in consultation with the Medical Director for Beacon Occupational Health and Safety Services. Required notifications to law enforcement authorities and regulatory agencies were made beginning at 04:12 AM. The accident scene was immediately secured pending release of scene by law enforcement authorities.

Description of the Incident:

On the morning of December 7, 2018 an eleven person contract drilling crew was pulling pipe out of well and placing it in the pipe shed utilizing an alternating current (AC) drilling rig. The work crew in the immediate area (Affected Crew) consisted of:

- A Driller operating the driller's controls and a Motorman being mentored by the Driller in the drill rig doghouse
- Three Drilling Rig Floorhands (1,2,3) who performed tasks on the drill rig floor
    - Floorhand – 1 (Off Driller's Side)(ODS)
    - Floorhand – 2 (Driller's Side)(DS)
    - Floorhand – 3 (IP)(Center)
- A Derrickhand and a Roustabout working in the pipe shed

The work crew began their work shift at midnight on December 7, 2018. The crew completed their pre-tour coordination and safety meeting at approximately 00:15 AM and began normal drill rig activities of removing the drill string from well and placing single joints of drill pipe into the pipe shed. Normal drill rig activities continued for approximately two hours without any anomalies or incidents.

Immediately before the time of the incident the IP was standing on the DS of the rotary table towards the drawworks. Floorhand 1 was on the ODS of the rotary table, further towards the drawworks than the IP, but still on the rotary table. Floorhand 2 was on the DS towards the V-Door, between the rotary table and the pipe rack. The Motorman was in the Doghouse behind the Driller observing the Driller to learn driller's duties. As the Driller continued to pull drill pipe out of the well, he was verbally describing his actions to the Motorman. The Driller maintained console control, viewing the rig floor and Floorhands through the doghouse window while operating the drilling console. While the Driller continued lowering the joint of drill pipe onto the catwalk (which is in the V-Door) and describing his actions to the Motorman, the IP was walking around the rotary table while spray painting the box end of the drill pipe (the stump) in order to identify it as bad. While the IP was moving around the stump in the rotary table, the Driller actuated the 2-stage opening mechanism, causing the elevators to open. The Driller tried to stop the opening of the elevators by engaging the "close" button on the driller's joystick, while also yelling over the intercom to alert the crew. Floorhands 1 and 2 heard the yell and reacted to the Driller's warning. The IP did not appear to respond to the warning, and was struck by the drill pipe which fell approximately 28'.

Factors of Consideration:

The following conditions existed at the time of the incident:

- The contract drilling company had been operating the AC drilling rig since December 15, 2016, when the rig started drilling operations on the North Slope.
- The crew had drilling rig experience ranging from one to forty years.
- Affected crew personnel had 18 hours off duty prior to the start of the shift on 12/7/18.
- Affected crew personnel were trained in their primary duties.

Contributing Factors to Incident:

Contributing factors and root causes titles from Comprehensive List of Causes

1. Distracted by Other Concerns 4-2: Driller was mentoring Motorman while operating the drilling rig. His attention was split between the routine task of operating the control console as part of normal operations, and mentoring.

2. Routine Activity without Thought 4-8: Driller was operating hydraulic elevators while also mentoring the Motorman on the driller console. Driller's attention was not fully on the task of simultaneously operating the hydraulic elevators and top drive controls. Driller did not recall functioning the 2-stage opening mechanism of the hydraulic elevators.

3. Improper position or posture for task 1-5: IP was performing a task under a secured overhead load.

4. Engineering/Design Other 10-9(improve upon current design): Hydraulic elevators were able to be opened with no elevation restriction. Drill rig elevators are typically designed to allow the Driller to open elevators at any height for contingent operational reasons. The opening function of the elevators was designed with a 2-stage opening mechanism to prevent the Driller from inadvertently opening the elevators.

Root Causes of Incident:

1. Extreme Concentration or perception demands 4-8: Driller was performing two tasks at the same time (operating & mentoring).
2. Inadequate Implementation of Work Rules, Policies, Standards, Procedures due to Contradictory Requirements 14-3: Safe work practices were in place to limit worker exposure to overhead loads. However, while performing drill rig activities workers are exposed to secured overhead loads while the top drive is in motion and drill pipe is being moved with elevators. In this instance, IP was performing a task on the drill rig floor (i.e., spray painting bad pipe) while under a secured overhead load.

Corrective Actions of the Incident:

1. CA1: When training or mentoring on the drillers console, give verbal communications to the crew about training or mentoring and operate drill rig at reduced speed. Toolpusher must authorize mentoring or training activities, each time. – Toolpusher, Start implementation at re-start
2. CA2: Reaffirm to drillers and rest of crew that when distractions are introduced to the doghouse, Driller is empowered to stop all rig floor activities until the distraction is removed/resolved – Toolpusher, Start implementation at re-start
3. CA3: Prior to re-start, Initiate and implement hazard hunt process prior to re-starting rig operations – Toolpusher
4. CA4: Prior to re-start, conduct Pre-Start up & incident review safety meeting with rig crew – Toolpusher
5. CA5: Prior to re-start, the Company Man and Toolpusher will reinforce with crew members the long-standing message to restrict work under a suspended load. The Company Man and Toolpusher will develop a list of activities that will not be permitted while the top drive is in motion (e.g., spray painting the box end of the drill pipe (the stump) when it is in the rotary table and while the driller is manipulating drill pipe above the rotary table), maintain an updated list, and add it to JSA's as applicable.
6. CA6: Prior to re-start, discuss with Ariss Controls and Technology establishing engineering controls to ensure hydraulic elevators cannot be opened outside of the safe zone. Options include setting PLC operational limits for the hydraulic elevators. Establish safe zones with height restrictions where hydraulic elevators are able to open in conjunction with the current 2-stage opening mechanism. An override function, operated by the driller, would enable hydraulic elevators to open outside the programmed limits when required for non-routine operations.

This override would reset automatically. The new process will go through the Hazards Analysis Process before implementation. – Rig Foreman

7. CA7: Hilcorp Drilling and Kuukpik Drilling will visually inspect and conduct a function test of the elevators prior to resuming operations, and will document the inspection and testing with video and a report.

INCIDENT INVESTIGATION REPORT

Incident Name: Milne Point Drilling Fatality from Head Strike

Date and Time of Incident: December 7, 2018

Location: Milne Point Field, Alaska, E Pad, Well 35

Date of Report: December 19, 2018

Classification: Injury - Fatal

Executive Summary:

On December 7, 2018, at 03:40 AM a Drilling Rig Floorhand passed away at the Milne Point Medical Clinic as a result of injuries sustained from a blow to the head during an industrial accident. At approximately 02:28 AM the deceased worker (Injured Person – IP) was struck on the left side of his head by a joint of drill pipe that was 5" diameter X 31' in length, weighing approximately 700 lbs. A root cause incident investigation was conducted. The investigation revealed that the hydraulic elevators were opened, causing the joint of pipe to be released. The affected crew called for the facility emergency response team while rendering first aid care, followed by CPR. Trained medical responders were on the scene within three minutes and a qualified Nurse Practitioner (NP) stationed at Milne Point arrived at the scene and rendered care within nine minutes of the incident. After having transported the IP to the Milne Point Clinic, resuscitation efforts continued for a total of 72 minutes. The IP was pronounced deceased at 03:40 AM by the NP who was in consultation with the Medical Director for Beacon Occupational Health and Safety Services. Required notifications to law enforcement authorities and regulatory agencies were made beginning at 04:12 AM. The accident scene was immediately secured pending release of scene by law enforcement authorities.

Description of the Incident:

On the morning of December 7, 2018 an eleven person contract drilling crew was pulling pipe out of well and placing it in the pipe shed utilizing an alternating current (AC) drilling rig. The work crew in the immediate area (Affected Crew) consisted of:

- A Driller operating the driller's controls and a Motorman being mentored by the Driller in the drill rig doghouse
- Three Drilling Rig Floorhands (1,2,3) who performed tasks on the drill rig floor
    - Floorhand – 1 (Off Driller's Side)(ODS)
    - Floorhand – 2 (Driller's Side)(DS)
    - Floorhand – 3 (IP)(Center)
- A Derrickhand and a Roustabout working in the pipe shed

The work crew began their work shift at midnight on December 7, 2018. The crew completed their pre-tour coordination and safety meeting at approximately 00:15 AM and began normal drill rig activities of removing the drill string from well and placing single joints of drill pipe into the pipe shed. Normal drill rig activities continued for approximately two hours without any anomalies or incidents.

Immediately before the time of the incident the IP was standing on the DS of the rotary table towards the drawworks. Floorhand 1 was on the ODS of the rotary table, further towards the drawworks than the IP, but still on the rotary table. Floorhand 2 was on the DS towards the V-Door, between the rotary table and the pipe rack. The Motorman was in the Doghouse behind the Driller observing the Driller to learn driller's duties. As the Driller continued to pull drill pipe out of the well, he was verbally describing his actions to the Motorman. The Driller maintained console control, viewing the rig floor and Floorhands through the doghouse window while operating the drilling console. While the Driller continued lowering the joint of drill pipe onto the catwalk (which is in the V-Door) and describing his actions to the Motorman, the IP was walking around the rotary table while spray painting the box end of the drill pipe (the stump) in order to identify it as bad. While the IP was moving around the stump in the rotary table, the Driller actuated the 2-stage opening mechanism, causing the elevators to open. The Driller tried to stop the opening of the elevators by engaging the "close" button on the driller's joystick, while also yelling over the intercom to alert the crew. Floorhands 1 and 2 heard the yell and reacted to the Driller's warning. The IP did not appear to respond to the warning, and was struck by the drill pipe which fell approximately 28'.

Factors of Consideration:

The following conditions existed at the time of the incident:

- The contract drilling company had been operating the AC drilling rig since December 15, 2016, when the rig started drilling operations on the North Slope.
- The crew had drilling rig experience ranging from one to forty years.
- Affected crew personnel had 18 hours off duty prior to the start of the shift on 12/7/18.
- Affected crew personnel were trained in their primary duties.

Contributing Factors to Incident:

Contributing factors and root causes titles from Comprehensive List of Causes

1. Distracted by Other Concerns 4-2: Driller was mentoring Motorman while operating the drilling rig. His attention was split between the routine task of operating the control console as part of normal operations, and mentoring.

2. Routine Activity without Thought 4-8: Driller was operating hydraulic elevators while also mentoring the Motorman on the driller console. Driller's attention was not fully on the task of simultaneously operating the hydraulic elevators and top drive controls. Driller did not recall functioning the 2-stage opening mechanism of the hydraulic elevators.

3. Improper position or posture for task 1-5: IP was performing a task under a secured overhead load.

4. Engineering/Design Other 10-9(improve upon current design): Hydraulic elevators were able to be opened with no elevation restriction. Drill rig elevators are typically designed to allow the Driller to open elevators at any height for contingent operational reasons. The opening function of the elevators was designed with a 2-stage opening mechanism to prevent the Driller from inadvertently opening the elevators.

Root Causes of Incident:

1. Extreme Concentration or perception demands 4-8: Driller was performing two tasks at the same time (operating & mentoring).
2. Inadequate Implementation of Work Rules, Policies, Standards, Procedures due to Contradictory Requirements 14-3: Safe work practices were in place to limit worker exposure to overhead loads. However, while performing drill rig activities workers are exposed to secured overhead loads while the top drive is in motion and drill pipe is being moved with elevators. In this instance, IP was performing a task on the drill rig floor (i.e., spray painting bad pipe) while under a secured overhead load.

Corrective Actions of the Incident:

1. CA1: When training or mentoring on the drillers console, give verbal communications to the crew about training or mentoring and operate drill rig at reduced speed. Toolpusher must authorize mentoring or training activities, each time. – Toolpusher, Start implementation at re-start
2. CA2: Reaffirm to drillers and rest of crew that when distractions are introduced to the doghouse, Driller is empowered to stop all rig floor activities until the distraction is removed/resolved – Toolpusher, Start implementation at re-start
3. CA3: Prior to re-start, Initiate and implement hazard hunt process prior to re-starting rig operations – Toolpusher
4. CA4: Prior to re-start, conduct Pre-Start up & incident review safety meeting with rig crew – Toolpusher
5. CA5: Prior to re-start, the Company Man and Toolpusher will reinforce with crew members the long-standing message to restrict work under a suspended load. The Company Man and Toolpusher will develop a list of activities that will not be permitted while the top drive is in motion (e.g., spray painting the box end of the drill pipe (the stump) when it is in the rotary table and while the driller is manipulating drill pipe above the rotary table), maintain an updated list, and add it to JSA's as applicable.
6. CA6: Prior to re-start, discuss with Ariss Controls and Technology establishing engineering controls to ensure hydraulic elevators cannot be opened outside of the safe zone. Options include setting PLC operational limits for the hydraulic elevators. Establish safe zones with height restrictions where hydraulic elevators are able to open in conjunction with the current 2-stage opening mechanism. An override function, operated by the driller, would enable hydraulic elevators to open outside the programmed limits when required for non-routine operations.

This override would reset automatically. The new process will go through the Hazards Analysis Process before implementation. – Rig Foreman

7. CA7: Hilcorp Drilling and Kuukpik Drilling will visually inspect and conduct a function test of the elevators prior to resuming operations, and will document the inspection and testing with video and a report.

IADC WELLSHARP

IADC Well Control Accreditation Program

Certificate of Completion

The individual below has successfully completed a well control course at an institution accredited by the International Association of Drilling Contractors.

[redacted]
Trainee Name

Drilling Operations, Supervisor, Surface
Course Name

Drilling Operations, Workover Completions, Supervisor
Supplement Name

13 April 2017
Completion Date

13 April 2019
Expiration Date

Mining and Petroleum Training Service, University of Alaska
Training Provider

[redacted]
ID Number

907-786-6413
Telephone Number

[redacted]
Instructor Name

Certificate Number: C4167D58-E7713E

IADC WELLSHARP

This individual has successfully completed a well control course at and institution accredited by the International Association of Drilling Contractors.

For scheduling training or replacement of lost card, please call the training provider with information provided on this completion card.

To verify validity, please visit the IADC website:

www.iadc.org/wellsharp

IADC WellSharp Course Completion Card

Trainee Name [redacted]

Course Name Drilling Operations, Supervisor, Surface

Supplement Name Drilling Operations, Workover Completions, Supervisor

Completion Date 13 April 2017 Expiration Date 13 April 2019

Provider Mining and Petroleum Training Service, University of Alaska

Provider # 00125545 Phone # 907-786-6413

Instructor Name [redacted]

Certificate Number: [redacted]

TRAINING LOG

NAME

[redacted]

COURSE

- BOP Supervisory Level
- First Aid, CPR, AED
- Fit Test MSA ULTRA ELETE
- Kuukpik Drilling 4 Day Rig Pass
- Kuukpik Drilling Refresher Rig Pass

INSTRUCTOR

[redacted]

PASS...

- Pass
- (blank)

TAKEN

- Yes
- (blank)

DATE OF TRAINING	NAME	COURSE	INSTRUCTOR	TAKEN	PASS/FAIL	NOTES
09/27/2016	[redacted]	Kuukpik Drilling 4 Day Rig Pass	[redacted]	Yes	Pass	
09/30/2016		First Aid, CPR, AED		Yes	Pass	
04/10/2017		BOP Supervisory Level		Yes	Pass	
01/24/2018		Kuukpik Drilling Refresher Rig Pass		Yes	Pass	
07/21/2018		Fit Test MSA ULTRA ELETE		Yes	Pass	

Appendix A – Training Requirements

Training	Position	Frequency
North Slope Training Coop/or Refresher	All	Yearly
Confined Space Entry NSTC	All	Yearly
Hazard Communication NSTC	All	Yearly
Hearing Conservation NSTC	All	Yearly
Ionizing Radiation (Norm) NSTC	All	Yearly
Lockout/Tag-Out NSTC	All	Yearly
Management of Change / Risk Assessment	All	Yearly
Respiratory Protection NSTC	All	Yearly
Respiratory Protection Annual Medical Approval/Fit Test	All	Yearly
ASH Handbook	All	Yearly
Hot Work, Confined Space, Work Permits	All	Yearly
Energy Isolation Lockout Tagout	All	Yearly
Forklift Training	Operators	3 years
Waste Management	All	Yearly
Kuukpik Drilling's Employee Handbook	All	Yearly
Kuukpik Drilling's HSE Plan	All	Yearly
Kuukpik Drilling's Procedures & Guidelines	All	Yearly
Fire Extinguisher Portable	All	Yearly
Emergency Response Plan	All	Yearly
Atmospheric Testing Devises	All	Yearly
H_2S	All	Yearly
BOP Surface/Subsea Training Expiration	Toolpushers	2 Years
BOP Training	Drillers	2 Years
BOP Training	Relief Drillers	2 Years
8 Hr. Hazwopper Training (at customer request)	All	Yearly
Behavior Based Safety Systems (KSOC)	All	2 Years
First Aid	All	2 Years
CPR	All	2 Years

Hilcorp
Energy Company

EQUIPMENT INSPECTION REPORT

Date of Inspection: 12-14-18

Equipment ID: SN: 124439.... I-Rig ID# 124440

Equipment Name: Blohm + Voss (Forum) Hydraulic Elevators

Equipment Description: Mode# VES-CL 250 Hydraulic Elevator, PN 612900-Y-H-TF

Location: Innovation Rig MPU E-35 Unit: Milne Point

Inspected as following

Verify DP Insert Bushings have matching SN 118757. GOOD - Measure Insert Bushings tolerance to verify within spec. GOOD – Verify Hose condition. GOOD – Verify condition of keepers and Safety Wire. GOOD – Verify condition of Safety Latch and Latch is engaging correctly. GOOD – Found Elevator "Close" Position Indicator Mechanism washed, or plugged internally (Does not affect operation of Elevator). Install new Indicator Mechanism and test same. GOOD – Measure Actuating cylinder pins and bore for wear. Found to be within tolerance, but changed to new cylinders as Preventative Maintenance. GOOD – Function test Elevator while empty and on Drill Pipe to verify operation. GOOD – Found one Cylinder retaining Pin had been replaced by threaded bolt. Replaced with correct Pin and retaining nut. Secure same with Cotter Pin. GOOD -

Recommendation / Suggestions:

Elevator was inspected and confirmed to be in good mechanical condition.

Elevator was function tested and confirmed to operate as designed.

Minor Preventative Maintenance was performed after inspection and then operation was again tested to confirm elevators operate as designed.

[redacted]: Hilcorp Drilling Superintendent 2017 to present, Drilling Foreman 2006 to 2016, Tool Pusher 1998 to 2006, Driller, Derrick man, Roughneck 1981 to 1998... First exposed to using this model and type of drill pipe hydraulic elevator while working as a Derrick man in 1995...

[redacted] Drilling engineer since 2001. Burlington Resources from 2001-2005. ConocoPhillips 2006-2008. Chesapeake Energy 2008, ConocoPhillips 2009-2012, Hilcorp Alaska 2013-2017, Drilling Manager Hilcorp Alaska 2018-present.

INSPECTED BY: [redacted] DATE: 12-14-18

DESIGNATION: DRILLING SUPERINTENDENT SIGNATURE: [redacted]

APPROVED BY: [redacted] DATE: 12.14.2018

DESIGNATION: DRILLING MANAGER SIGNATURE: [redacted]

Floorhand

Floorhands work directly under the Driller. Exposure to extreme environmental conditions is expected. Floorhands respond quickly to directions, work to maintain the organization of the rig floor, endeavor to stay 2 steps ahead of the driller by being prepared for upcoming work. During rig moves floorhands will be key to mobilizing and demobilizing equipment. Floorhands will operate in the cellar, rigging, managing fluid paths and nippling up/down the BOP equipment. While drilling floorhands can expect to make connections on the floor or in the derrick. While tripping pipe floorhands will make up and break out pipe, rack or tail pipe, and develop a good knowledge of drilling rig, tools, and equipment while working to maintain an incident free environment.

Duties:

- General upkeep of drilling rig mechanical equipment
- Keep rig and floor clean, organized, and return tools to their proper place
- **Verify proper safety valves, cross overs and keys are open and ready if needed**
- Handle equipment and pipe on rig floor
- Assist in rig up and rig down
- Operate tongs, iron roughneck and air hoists
- Connect or disconnect hydraulic mechanical fittings
- Work closely with service companies in the completion and servicing of wells.
- Maintain equipment on the rig floor
- Maintain the Top Drive (Daily, weekly, monthly PM)
- Fill out and submit a *Maintenance and Repair Form* after working on equipment
- Daily maintenance sheet
- Inspect tongs, slips, elevators and other tools
- Watch shakers and assist in their maintenance
- Ensure shaker area and floor area stay clean
- Daily inspection of hand tools/insure tools are in place on board
- Assist in strapping of pipe
- Keep BHA thread protector separate from DP thread protectors
- Assure cellar box does not overflow
- Weekly consumables checklist, order parts and supplies through the Toolpusher
- Know how many joints of drill pipe are on location
- Inspect bolts that hold drawworks to the derrick each hitch
- Inspect bolts that hold motors on drawworks each hitch
- Inspect tugger lines daily and make sure spooled up properly
- Mentor Roustabouts
- Performs any other duties that may be assigned

HSE Duties:

- Understand and comply with instructions given by the Driller or Toolpusher
- Work as a member of the team. Do strong work, look out for other team members, contribute in a positive way to the overall operation
- Plan each job. Know or learn the steps and tools, identify and manage the risks, execute
- Identify and wear the proper personal protective equipment for the task at hand
- Use proper lifting methods and to ask for help if loads are awkward and heavy
- Report to work in good physical condition and unimpaired by alcohol or drugs
- Address any unsafe acts or conditions (equipment) as soon as possible
- Report any injury to self or to his team immediately
- Cooperate fully in any investigation that might involve an injury, incident or near miss
- Smoke only in areas designated as safe smoking areas

Physical Standards & Demands

The employee must complete a company provided physical. This position requires very heavy lifting and prolonged standing

Qualifications:

Requires more than one year of experience related to rotary drilling rigs. This is not an entry level position in the drilling industry. Must be able to use rig tongs, an iron roughhneck and tugger.

Work Hours:

Twelve hours a day, 7 days per week, 2 weeks on / 2 weeks off, rotating work schedule. Inside 10 –12 hours, outside 0 – 2 hours. During rig moves this is opposite.

Amount of each day spent:	(Hours during a full day)
Sitting	Only during lunch
Standing	4-6
Walking	4-6

General Comments:

Normally works in one area. However, is required to move around continuously in that area.

Working Environments/Hazards:

Inside enclosed oil rig. Hazardous conditions may include wet, oily, icy steel floor, noise, steam.

While Performing Job, Employee is Required to:
(Occasionally = 1-33%; Frequently = 34-66%; Continuously = 67-100%)

Activity Required	Frequency	Comments or Activity Description
Twist	Occasionally	
Scoop/bend	Occasionally	
Squat	Occasionally	
Kneel	Occasionally	
Crawl	Very Seldom	
Climb (stairs or ladders)	Occasionally	
Walk on uneven ground	Occasionally	
Work at unprotected heights	Never	
Pushing/Pulling	Frequently	
Lift up to 10 lbs.	Frequently	
Lift 11 – 24 lbs.	Frequently	
Lift 25 – 50 lbs.	Frequently	
Lift over 50 lbs.	Frequently	
Carry up to 10 lbs.	Frequently	
Carry 11 – 24 lbs.	Frequently	
Carry 25 – 50 lbs.	Frequently	
Carry over 50 lbs.	Frequently	
Reach above shoulder height	Occasionally	
Reach at shoulder height	Occasionally	
Reach below shoulder height	Frequently	
Manual and finger dexterity	Occasionally	
Operational use of feet	Never	
Can Job be Modified?:	No	

KUUKPIK DRILLING

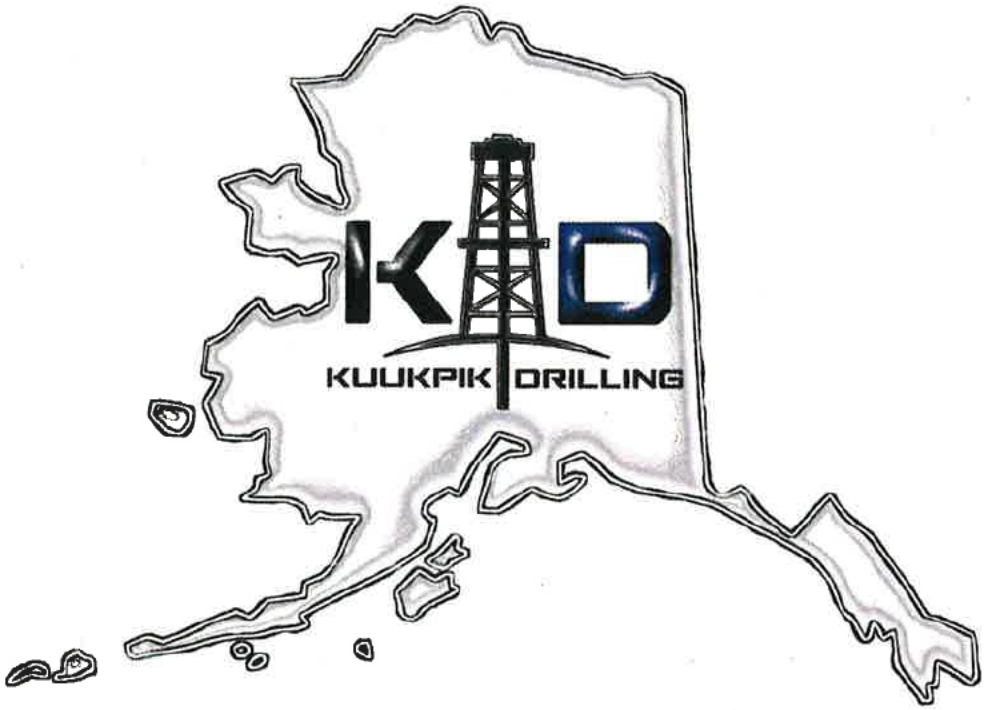
Health, Safety, and Environmental Policy

At Kuukpik Drilling, our greatest responsibility is the health and safety of our people, colleagues and the environment. We believe that each employee is responsible for creating and supporting a culture that results in an incident free work place. Our managers, front line staff and contractors receive the training, tools and empowerment as individuals, to work together, for the well being of themselves, their co-workers, and the environment.

Kuukpik Drilling Management and Employees commit to:

- Creating and maintaining a safe work environment;
- Protecting the environment that we all share;
- Conducting our business in accordance with local laws and in a socially responsible and ethical manner;
- Reviewing and adapting our practices for continuous improvement;
- Accepting responsibility and holding ourselves accountable for our actions;
- Empowering employees to exercise their Stop Work Authority.

General Manager



HSE Plan

July 1, 2016

Kuukpik Drilling Health, Safety & Environmental Policy

All Kuukpik Drilling employees are not only the most important assets of the company, they ARE the company.

The personal safety of each employee at Kuukpik Drilling is of primary importance. Active participation by Kuukpik Drilling Management, supervisors and all other employees is necessary in the prevention of accidents and incidents that may harm personnel or the environment.

All Kuukpik Drilling personnel will comply with all government laws, legislation and regulations applicable to our operations and will adhere to safe drilling practices at all times.

Management: Is responsible to provide safe working conditions and well maintained equipment at all Kuukpik facilities, ensure that all new employees receive proper orientation followed by constructive on the job training, and will hold managers, supervisors and all workers accountable for their actions.

Supervisors: Are responsible for developing the proper attitudes towards safety and the environment, both in themselves and in those they supervise. They ensure that all operations are performed with the utmost regard for the safety of all personnel.

Employees: Are responsible for wholehearted cooperation and participation with all aspects of the HSE program. They must continually practice safe work habits while performing their duties. All employees have the right, responsibility, and obligation, to use the Stop Work Authority without fear of reprisal, to mitigate observed hazards or potential hazards, and to gain a complete understanding of the task at hand.

It is paramount that each employee develops a sense of safety in our drilling operations and reciprocates this sense of safety with crew members. All personnel, from the Toolpusher to the newest employee on the job, are responsible for the prevention of accidents on the drilling rig and it is only as a team that we will be able to strive for excellence. Hence the motto:

"SAFETY STARTS WITH ME"

TABLE OF CONTENTS

1.0 Introduction

This manual covers a wide range of diverse topics and all Kuukpik Drilling employees are expected to be familiar with all covered topics. This HSE Plan will be addressed and discussed in new employee training, and copies will be available in the Toolpusher's Office. Any questions or comments about any of the material covered in this manual can be addressed at any time, to the Toolpusher or the HSE Manager.

1.1 Purpose

The purpose of the Kuukpik Drilling, Health Safety and Environmental Plan is to identify the overall objective for the successful management of HSE issues that pertain to the conduct of Kuukpik Drilling's business. By clearly describing the methods and the tools the company will use to ensure optimum HSE performance, Kuukpik Drilling will clearly define the company strategy for continuous improvement in this critical area of the business. All Kuukpik Drilling employees are responsible to understand and implement the HSE Plan in all areas of operation. Kuukpik Drilling asks that all employees join in this effort to ensure a solid progressive future, for themselves and for the company; a future based on "Best in Class" HSE performance that all can participate in and of which all can be proud.

1.2 Scope

This HSE Plan refers to a broad range of topics to include:

- Description of the HSE System
- Where to find policies, procedures, guidelines, permits that relate to the HSE Plan
- Emergency Response Plan
- Programs such as *Hearing Conservation* and *Fall Prevention*.
- Guideline for reporting and interacting with governmental and regulatory organizations
- Environmental issues and concerns
- Reporting

In many areas the topics covered will include a broad level overview and the HSE Plan will refer the employee to the actual Policy, Procedure or document for a greater level of detail. This plan touches on all aspects of Kuukpik Drilling's HSE Management System.

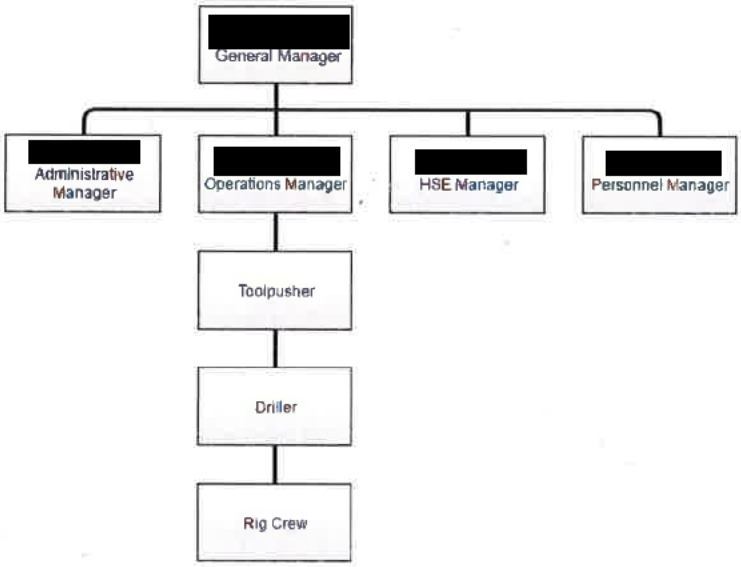
1.3 Statement of Management Commitment

The Management of Kuukpik Drilling is committed to conducting all operations in a safe and environmentally sound manner. We believe that it is critical to the survival of the company that we take no action that will endanger our employees, our customer's employees, the general public, or the environment. We intend to manage our business in a manner that places Health, Safety and Environmental integrity as the primary operational objective of the company. Kuukpik Drilling management demonstrates HSE commitment through their participation in a number of scheduled meetings to keep abreast of operations. Management personnel have established a schedule for rig site visits relative to position.

2.0 Employee Accountability and Responsibilities

To maintain a high level of HSE performance and compliance with legal requirements, roles, responsibilities, and authorities are defined, documented, and communicated in order to facilitate effective HSE management. In particular, the roles and responsibilities of those personnel who manage, perform, and verify activities having a significant HSE risk are defined and documented in this section. Effective HSE performance is a responsibility, requiring active participation for all levels of management and employees.

2.1 Organizational Structure



2.2 Roles & Responsibilities

The individual Roles and Responsibilities of Kuukpik Drilling are:

All Kuukpik Drilling Employees – Every employee is to become familiar with the Kuukpik Drilling HSE Plan and be responsible to:

- Make safety a priority and promote the importance of working safely.
- Become part of the team in attitude and work ethic and to watch out for himself and members of the team on the work site.
- For wearing the required personal protective equipment (PPE).
- Adhere to the Drug and Alcohol Policy.
- For the care and maintenance of company supplied equipment.
- Monitor work procedures while at the rig to make sure Kuukpik Drilling is in compliance with current codes of practice and current government legislation.

- Immediately report all incidents, accidents or near misses to their supervisor.
- Cooperate fully in any investigation that involves an injury, accident, or near miss.
- Immediately report any unsafe equipment or conditions to their supervisor.
- STOP an operation if the employee notices an unsafe act or condition.
- Report to work in good physical condition, not impaired by alcohol or drugs.
- Use proper lifting methods and to ask for help if loads are awkward and/or heavy.
- Fully understand and comply with instructions given by the supervisor before attempting the job.
- Obey all posted signs for "NO SMOKING" and to smoke in areas designated as safe smoking areas only.
- Understand that all third party contractors are to abide by Kuukpik Drilling's HSE Plan and address any infractions with the contractor.

General Manager - is ultimately responsible and accountable for the Kuukpik Drilling Safety Program. In this capacity, their role is to lead Kuukpik Drilling by implement safe work habits, safe work practices and safe work attitudes of all of the employees at Kuukpik Drilling.

HSE Manager - acts in an advisory capacity and report to the General Manager. His responsibilities are as follows:

- Remain current with Operator requirements and government legislation and communicate these requirements to the work site through the Operations Manager as well as directly at the work site.
- To remain current with government legislation and communicate these requirements to the work site.
- A liaison with government agencies to ensure the company is in compliance with the regulations and deficiencies are corrected and reported promptly.
- Conduct regularly scheduled HSE audits at the work site and to follow up ensuring all deficiencies are corrected.
- Maintain accurate safety records (OSHA, Near Misses).
- Manage *WorkSaver* Fit for Duty program.
- Lead the investigation of all injury accidents and provide a detailed report to management.
- Outline training requirements for personnel and ensure all personnel receive appropriate training.
- Follow up after review of all third party inspections (Customer, OSHA, DOSH, Etc.) that all deficiencies have been corrected and communicated.

Toolpushers - are the onsite manager and responsible for the field administration of the HSE Plan. Their responsibilities are as follows:

- Coordinate the onsite training and orientation of all company employees.
- Provide training to all members of his crew regarding safe job procedures.
- Provide training to all members of his crew regarding mandatory use and care of personal protective equipment.
- Investigate all incidents, near misses and accidents.

- Ensure if a worker requires more medical attention than can be provided at the rig site after an incident, the worker is accompanied to a medical facility.
- Ensure that all third party personnel meet all the requirements of OSHA, DOSH, Operator, and Kuukpik Drilling.
- Attend a minimum of one Weekly Safety Meeting per week and one Pre-Tour Safety Meeting per day with each crew and provide leadership by encouraging participation by all crew members.
- Ensure that all safety equipment is available onsite and in good working condition.
- Ensure all Kuukpik Drilling and Third Party equipment is in good working condition and complies with Kuukpik Drilling, Operator, and Government standards.

Drillers – are responsible for each member of their corresponding crew. Their responsibilities are as follows:

- Hold and document a Pre-Job Safety meeting before each specialized task, e.g. cementing, testing, rig moves, etc.
- Hold a Pre-Job Safety meeting with respective crew members involved in any third party service such as deliveries of equipment and setting up of equipment, etc.
- Take the necessary time required when training an employee in an unfamiliar task.
- Provide a good example of personal hygiene, housekeeping, organizational and people skills

2.3 Drug and Alcohol Policy

Kuukpik Drilling maintains a comprehensive Drug and Alcohol Program to ensure the quality of our work force. The program includes but is not limited to pre-employment and random drug testing for all employees. It is a condition of employment that every employee is required to acknowledge and sign the Kuukpik Drilling Drug and Alcohol Policy. A copy of Kuukpik Drilling's Drug and Alcohol Policy is provided to all employees and available upon request.

2.4 Employee Handbook

Each employee receives an employee handbook upon their start with the company. As a condition of employment, each employee is required to acknowledge and sign that they have received and agree to all Kuukpik Employee policies, terms, and conditions.

2.5 Employee Evaluation and Selection

Kuukpik Drilling believes that there is a direct relationship between personnel and safety performance. Therefore, Kuukpik Drilling maintains the highest of standards when hiring and placing personnel.

A system is currently in place to select the most qualified employee for the specific job requirement. Components of the system include a Job Description, Job Posting, Training Records, resumes, fit for duty physicals, and interviews. Personnel placement is approved and authorized by Management personnel. The level of detail of the selection process is dependent on the level of the position to be filled and the risk involved.

After an offer has been extended to an employee they are presented with all of the New Hire paperwork

which includes, but is not limited, to the following documents:

- Drug & Alcohol Policy
- Employee Handbook
- FRC Policy
- Search & Seizure Policy

All of these documents are referenced in the Employee Package Checklist. The employee has to sign that they have received and understand all New Hire paperwork.

2.6 Employee Training

Specific training systems are used for basic and refresher training to meet all company and regulatory requirements. Kuukpik Drilling's training matrix describes all necessary training for individual employees. Training is documented through attendance records, test scores, and training completion recognition. All training records are stored and maintained at the Kuukpik Drilling Office. See Appendix A for the Training Requirements Matrix.

In addition to the training listed above, Kuukpik Drilling will abide by any training required by the operator. A document will be developed to bridge the two Training Programs, along with Local, State, and Federal laws and requirements.

Site specific training is also completed as required and will be addressed on a case by case basis.

2.7 Rig Orientation

Every new employee on the rig will be given a Rig Orientation. The Rig Orientation objectives are for general awareness of the rig and to give the new employee an overview of the following:

- The major components of the drilling rig.
- The function of the major components.
- The new employee's responsibilities.
- Hazards that may exist or may arise.
- Emergency Procedures.

A rig orientation checklist will be completed for all employees new to the work site including experienced personnel from other Kuukpik Drilling rigs. This checklist can be found in the Forms Book.

Before a new employee is left on their own on the rig, the Toolpusher will ensure that they know who to go to with questions, problems, or concerns.

2.8 Short Service Employee (SSE) Program

Employees with 90 days or less in experience in a specific position on a specific rig shall be considered a "Short Service Employee" (SSE). This program is in place to allow a person working a new rig or position to gain the necessary knowledge and experience required for that position on that rig.

2.9 Disciplinary Action

In order to maintain the highest level possible of health, safety and work ethics at Kuukpik Drilling, certain conditions must be met and adhered to. Some examples of these conditions include, but are not limited to:

- Drug & Alcohol Policy
- HSE Plan
- Procedures & Guidelines
- Employee Handbook
- Government Manuals
- Environmental Manuals
- Lock Out/Tag Out Manual

Disregard for any one of Kuukpik Drilling guidelines, procedures, or policies and their associated standards could result in a written reprimand, suspension, or dismissal.

2.10 Worker's Duty to Refuse Unsafe Work

Every Kuukpik Drilling employee has the right and duty to refuse unsafe work. The following points outline this responsibility:

- If the employee has reason to believe that requested work poses an "imminent danger" to any employees than the employee MUST refuse to do it.
- An "imminent danger" means any work, which is not normal for the job, or any other danger under which the employee would not normally work. An example might be asking a worker to perform a task or job more than (6) feet above the derrick floor without wearing a full body harness and lanyard. This would be against regulations and would pose a danger if the worker should slip and fall.
- As soon as the employee makes the decision to refuse any dangerous work, they must immediately notify the Driller or Toolpusher. They must explain the reasons for the decision. The Driller or Toolpusher will investigate immediately and if possible, eliminate the danger.
- The Toolpusher cannot terminate the employee for refusing to work where there is "imminent danger", or refusing to break regulations. However, the employee cannot refuse to perform work because of the risks normally associated with their occupation.
- If the Toolpusher does not agree that there is a hazard, or if they cannot agree on acceptable corrective measures, Kuukpik Drilling Management will investigate the situation and decide if any corrective action should be taken.

3.0 HSE System

The Company has an established formal framework that ensures operational HSE integrity throughout all Kuukpik Drilling activities. These make up the HSE System and include:

- Company policies
- Recommended practices
- Standard operating procedures, JSA's
- Environmental Management System
- Emergency preparedness and response plans

3.1 Policies

Kuukpik Drilling has a set of published policies that are the "laws" of the organization and can be discussed in terms of "thou shall" and "thou shall not." Disregard of Kuukpik Drilling policies is grounds for termination or suspension. These policies include, but are not limited, to:

- Drug and Alcohol Policy
- Search and Seizure Policy
- Hazard Communication Policy
- Protective Clothing Policy

3.2 Procedures

Kuukpik Drilling maintains a Procedures Manuel for each rig that describes task specific procedures for all operations. These procedures define each task performed on the rig and are specific to each rig and location. Deviation from the procedure is not permitted unless approved my Kuukpik Drilling Management and a formal Management of Change process has been completed.

3.3 Guidelines Manual

Kuukpik Drilling has a Guidelines Manual to provide a reference for day-to-day operations on the rig. These are best practices for performing routine tasks in an efficient and safe manner.

3.4 Forms/Checklists/Permits

Kuukpik Drilling has a Forms Book that provides a form or checklist for all regular operations on the rig. These documents can be easily copied for use in the day-to-day operations, activities, and tasks performed on the rig.

The Forms book also includes copies of all applicable permits that may be needed during normal operations. All employees are responsible for understanding when permits are required.

For more information about permits, see section 4.9.

3.5 Safety Metrics & Performance Measures

Kuukpik Drilling has a system for recording safety metrics. Incident frequencies are constantly being reviewed and whenever trends or problems are observed, corrective actions are taken.

Annual performance goals are set out and agreed to by the management staff of Kuukpik Drilling. This process defines the targets on which performance will be reviewed on a quarterly and annual basis. Some examples of metrics include, but are not limited to:

- OSHA Recordable Incidents
- Recordable Spills
- First Aid Visits

3.6 Local State & Federal Regulations

Kuukpik Drilling will operate within all applicable laws and regulations. Periodic reviews are conducted to determine if statute changes or additional regulations have been implemented that will

impact Kuukpik Drilling operations. The list of related laws and regulations that apply to Kuukpik Drilling operations includes, but is not limited to:

- State and Federal OSHA regulations
- Alaska environmental standards
- Federal environmental standards

4.0 Health & Safety

This section provides an overview of Kuukpik Drilling's Health and Safety systems.

4.1 Hazard Awareness

It is most important that Kuukpik Drilling employees recognize potential hazards and avoid them through proper work procedures. Employees must not place themselves in a position where an injury could occur.

DO NOT work on "live" equipment. Be sure to lockout any equipment, which can be activated locally or from a remote location. Accidental start-ups can be fatal and must be prevented. Additional information on Lock Out/Tag Out Permits can be found in the Safe Work Permits Section of this document (Section 4.9).

DO NOT become complacent. Follow safe work procedures at all times.
Working together as a team can prevent many accidents. Using a "Buddy System" with a fellow worker is recommended, each one knows where the other is working at all times and if a problem arises, help can arrive quickly. Knowledge also increases in numbers and by working with a co-worker knowledge is shared.

4.2 Risk Assessment

Risk assessment is the process by which potential hazards are identified and an analysis occurs to determine what might happen if the hazard occurs. The ability to recognize a hazard and evaluate the potential repercussions will greatly diminish accident severity.
The first step in risk assessment is to identify the hazard. This is accomplished by:

- Pre Job Safety meetings
- Job Safety Analysis (JSA)
- Training
- Work Experience

Other methods to manage risk include, but are not limited to:

- Operate all equipment within its design limits.
- Follow a safe work plan: "Plan your work and work your plan".
- Share lessons learned.

4.2.1 Stop Work Authority

Stop Work Authority (SWA) is a program designed to provide employees and contract workers with the responsibility and obligation to stop work when a perceived unsafe condition or

behavior may result in an unwanted event.

All employees have the right, responsibility, and obligation, to use the Stop Work Authority without fear of reprisal, to mitigate observed hazards or potential hazards, and to gain a complete understanding of the task at hand.

4.3 Safety Meetings

Kuukpik Drilling standard for safety meetings is at least once per week per crew with direct reference from the HSE Plan. Other topics that will be covered include Stop Cards, Lessons Learned, and Incident Alerts. This meeting is typically scheduled for one hour and is led by the Toolpusher or Driller. Safety meetings must be documented on the Weekly Safety Meeting form that can be found in the ***Kuukpik Drilling's Forms Book.***

4.4 H_2S Awareness

Hydrogen Sulfide, or H_2S, is a colorless, poisonous gas that is made from the action of acids on sulfides. It is a very common hazard found in the oil and gas industry. Exposure to this gas can be deadly, therefore, proper training and knowledge is required when working around it.

Every employee receives H_2S training that will teach the employee how to properly prepare for, identify, and react to Hydrogen Sulfide exposure. The training includes information on H_2S physical and chemical properties, as well as common sources, controls, and best practices.

Any questions about H_2S Awareness and Training should be directed to the HSE Manager.

4.5 Eye Wash Stations

Eye wash stations play an important role in eye protection should an incident occur. These eyewash stations must be readily available and well maintained.

- Eyewash stations must be mounted in the doghouse, pump house, hopper room, pipe shed, boiler room, pit area, mechanic/welding shop and near any bench grinder.
- Eyewash stations must be kept clean; especially the eyecup area.
- Eyewash bottles must be full of clear, fresh eye solution at all times.
- Eyewash stations must be checked and marked with a tag. Inspections must be completed weekly and checked off. The fluid is to be replaced every 3 months.

4.6 Personal Protective Equipment (PPE)

To minimize the risk of injury in the work place, all rig employees must comply with a minimum standard of clothing and personal safety equipment, as covered in this section. Basic information on PPE can be also be found in the ASH Handbook, and greater detail is available in the Policy Manual.

4.6.1 Fire Resistant Clothing (FRC)

Kuukpik Drilling provides all employees with the required Fire Resistant Clothing (FRC) that is required by 29 CFR 1910.132(a). Fire Resistant Clothing (FRC) must always be worn as the outermost layer during oil and gas well drilling, servicing, and production-related operations. More information regarding FRC and Kuukpik Drilling FRC Policy can be found in the *Kuukpik*

Drilling Policy Manual.

4.6.2 Hearing Protection

OSHA regulations state that protection against the effects of noise exposure shall be provided when the worker enters a Noise Hazard area. This means that a worker must be protected even if he/she is only in the area for a brief period of time. The destructive effects of noise are cumulative, i.e. (4) fifteen minute consecutive exposures will result in the same hearing loss as being exposed for one hour.

Hearing protection will be provided for all employees on the drilling rig and must be worn by employees in any area designated in a Noise Hazard Area. Most of the rig is considered a Noise Hazard Area, although there a few exceptions which include, but are not limited to:

- Doghouse
- Chokehouse
- Cellar

In general, ear plugs, muffs, etc. must be worn when DBA levels exceed 82 decibels. Double hearing protections is required when DBA levels exceed 100 decibels (as referenced in the ASH).

Hearing protection requirements are posted throughout the rig.

4.6.3 Head Protection

Employees must wear protective hardhats when working in areas where there is a potential for injury to the head from employee initiated impact or impact from falling or other moving objects. Protective hardhats designed to reduce electrical shock hazards will be worn by each employee when near exposed electrical conductors which could contact the head. Hardhats will comply with ANSI Z89.1-1986 or be equally effective.

4.6.4 Eye Protection

Safety glasses MUST BE WORN at all times and must be classified as ANSI Z87.

Eye protection will be supplied by Kuukpik Drilling to all employees. If the employee does not like the style supplied to them, then it is up to the employee to acquire their own safety glasses as long as the lenses are fog and shatter proof ANSI Z87 glasses. All eye protection must be kept in serviceable condition at all times.

If prescription eye glasses are worn for corrective vision, an eye doctor can provide a prescription for ANSI Z87 prescription eyewear. These prescription lenses must have side shields. A pair of safety glasses may be worn over a pair of prescription lenses if the prescription lenses are not ANSI Z87 approved.

During certain operations on the rig, the need for double eye protection may be required. The need for double eye protection will be identified in either a policy, procedure, or hazard analysis. Some situations where double eye protection is required is during grinding operations

and mixing caustics.

4.6.5 Hand Protection Policy

Many of the tasks involved in working around a drilling rig have the potential for causing injury to the hands. Kuukpik Drilling provides impact gloves, and all employees are required to wear an approved impact glove for all tasks on the rig. There are exceptions such as welder's gloves, electrician's rubber gloves, Neoprene gloves for handling or working with corrosive chemicals as defined in appropriate SDS, or insulated heavy gloves or mitts for outside work in extreme cold temperatures. For more information, refer to Hand Protection Policy.

4.6.6 Foot Protection

Steel toe boots must be worn at all times with exception of "Bunny Boots" or equivalent when working in extreme cold. Anti-Slip (Traction Devices) will be worn whenever walking on ice roads or pads.

4.6.7 Respiratory Equipment

Kuukpik Drilling provides two types of Respiratory Protection for its employees at the drilling site.

- Dust Masks
- Air Purifying Respirators

It is required that before an employee uses any respirator with a negative or positive pressure tight-fitting face piece; the employee must be fit tested with the same make, model, style and size of respirator that will be used.

4.7 Fall Protection

All employees who are required to work six feet or more above any ground, floor, platform or landing surface level shall wear full body harness secured at all times by means of a lanyard or an approved fall arrest device to a suitable fixed anchor point. In addition, all employees who are required to work ***four feet*** or more above any ground, floor, platform or landing surface that is above or adjacent to dangerous equipment or obstructions shall wear full body harness secured at all times by means of a lanyard or an approved fall arrest device to a suitable fixed anchor point.

4.8 Safe Work Permits

Safe work permits are devised to inform rig personnel and associated rig personnel at the rig site (sub-contractors, e.g. welders) of potential hazards that may exist in their surrounding area. They also inform of potential hazards that may exist due to their activity. The awareness is developed not only through the Safe Work Permit, but also through a Pre Job Safety Meeting (PJSM) and a Job Hazard Analysis (JSA). The permit, in conjunction with the Safety Meeting, will establish a SET PROCEDURE and SAFE WORK PLAN that will identify possible hazards.

Work permits are devised to protect the employee and all personnel at the rig. To not follow the permit or the set guidelines with the permit jeopardizes the health and wellbeing of all.

The permits are to cover and explain all hazards. The set procedures and hazard awareness within the permit are to be followed by those involved and to be recognized by those who are not directly involved (but present at the work site). Instructions and forms can be found in the ***KUUKPIK DRILLING FORMS MANUAL.***

A. TYPES OF PERMITS

1. **Unit Work Permit:** *Required when work being performed is non-routine.*

2. **Hot Work Permit:** *Activity requiring any type of work that has the potential of causing ignition of a combustible.*

3. **Non-Regulated Confined Space Entry Permit:** *Required when work or inspections are being performed in a non-regulated confined space.*

NOTE: *There may be multiple energy sources to consider in any given task and careful attention must be given to ensure that all sources are locked out, blinded, disconnected, or otherwise defeated.*

4.9 Near Misses

A near miss is an unplanned event that did not result in injury, illness or damage – but has the potential to do so. Although near misses cause no immediate harm, they can precede events in which a loss or injury could occur. Kuukpik Drilling requires the reporting of near misses in order to gain an opportunity to prevent future incidents.

When an employee witnesses a near miss, they are required to complete the form "Near Miss Report" which can be found in the Incident Packet as well as in the Forms Book. The lessons learned from the incident will be shared with all employees of Kuukpik Drilling.

4.10 First Aid Requirements

Kuukpik Drilling requires all workers to report all injuries to their immediate supervisor, no matter how minor the injury may seem. An injury, once reported, shall be recorded in a logbook, and the logbook shall include the following:

- Date & time of injury
- Date & time injury was reported
- Injured workers full name
- Injured workers date of birth
- Location and description of the incident and the cause of injury
- Description of injury
- First aid treatment rendered
- Name of first aider

4.11 Incidents

4.11.1 Incident Reporting

Kuukpik Drilling's Incident Reporting Program reports all injuries, losses and/or near misses, and investigations are completed on all accidents. Instructions and forms pertinent to Incidents can be found in the Forms Book and Incident Packets are available on all rigs with copies of all pertinent forms.

An incident is defined as any of the following:

- Near Miss
- Injury
- Spill
- Pollution
- Environmental Impact
- Property Damage

The protocol for reporting an incident includes reporting the incident to your immediate supervisor, who will then report it to Management. The Toolpusher then begins filling out the necessary and pertinent forms from the Incident Packet, which includes, but is not limited to:

- Witness Summaries
- Supervisor's Incident Investigation
- Form pertinent to the incident (spill, near miss, injury, etc.)

More info follows in the Investigation section.

4.11.2 Investigation

Initial investigations are performed by the Kuukpik Drilling Toolpushers. Upon notification, the Toolpushers complete a detailed report of the situation, including apparent cause and effect. (These forms are compiled in the Incident Packet). The crews involved will also complete full written reports leading up to and following the incident. Depending on the severity of the incident, a Taproot Investigation may be conducted. The Toolpusher and Kuukpik Drilling management will generate a summary of the report and recommended corrective actions. The Kuukpik Drilling General Manager will complete all necessary reporting to outside agencies and 3rd parties.

4.11.3 Follow Up & Lessons Learned

Kuukpik Drilling shares findings of audits and incident investigations with employees and customers to provide continuous improvement across operations. Lessons learned are routinely shared through:

- Daily morning meetings
- JSA reviews
- Pre-job safety meetings
- Weekly staff meetings
- Customer HSE Forums

- Monthly safety statistics
- Quarterly reviews
- Hazard Alerts

4.12 Emergency Response

The Emergency Response Plan is to enable a prompt, effective response to any incident or emergency. In addition, each new well location will have Emergency Contact Sheets that are specific to that area (ex. local hospitals and police). Copies of these sheets will be posted in the doghouse and in the Toolpushers unit. An additional copy will be sent to Anchorage operations.

4.12.1 Field Plan

Field emergency plans are developed site specific. All preparations for emergency are closely coordinated with the customer and other service providers on the job site.

4.12.2 Facility Plan

Kuukpik Drilling maintains a written emergency action plan for each the drilling rig. This EAP will be discussed in Rig Orientation and posted on the Rig in the Toolpusher office.

4.12.3 Fire Prevention and Protection

Fire prevention is a key factor in ensuring a safe work site. One of the easiest ways to prevent a fire is to ensure flammable and combustible materials are property stored away from ignition sources. Kuukpik drilling has approved metal safety cans and storage cabinets throughout the rig for this purpose. Other fire prevention guidelines are listed in the *Alaska Safety Handbook (ASH)*.

Kuukpik Drilling has installed type ABC multipurpose dry chemical fire extinguishers throughout the drill rig and all support modules. Fire extinguishers are inspected on a monthly bases and are hydro tested per manufacture recommendations. Fire extinguishers are typically found near the entrance and exits of all work areas. If a fire occurs, notify others prior to fighting the fire. Employees should not attempt to fight fires beyond the initial stages unless you are trained and equipped to do so. Detailed information regarding fire prevention and protection can be found in the *Alaska Safety Handbook (ASH).*

4.12.4 Agency Reporting and Public Communications

Kuukpik Drilling maintains a protocol for notification of agencies should the need arise. The general manager handles communication with the public and or the news media, in cooperation with customer and employee representatives. Any contact regarding Kuukpik Drilling operations, customers, or employees, will be directed immediately to the general manager in the Anchorage office.

4.12.5 Self-Contained Breathing Apparatus (SCBA)

SCBA are provided on each drill site for emergency use only. If a worker is down in an area

of oxygen deficiency or H_2S contamination, an SCBA must be worn by the rescuer. Prior to donning an SCBA an emergency notification must be made to ensure additional help can be coordinated.

As a result, all workers on a rig crew must be trained in the correct use of SCBA. The Toolpusher must ensure that the driller and everyone on his crew are aware of the hazards of H_2S gas or oxygen deficiency. The crew members must know how to use the SCBA and ensure that the SCBA are always ready for use.

A minimum of once a month, and at the beginning of each well, the Driller or Toolpusher, or his designate will inspect the SCBA to be sure they:

- Are clean
- Are fully charged
- Have serviceable regulators
- Are tagged with date of inspection

Instructions and forms for the inspection can be found in the Kuukpik Drilling Forms Manual.

4.13 Sign Requirements

Ensure that all rig employees, service company employees and visitors are aware of Government and Company restrictions. A constant reminder of these requirements can be found throughout the drilling rig in the form of signs. A list of signs and their locations can be found in the guidelines handbook.

4.14 Rig Inspections

There are several types of inspections completed by different employees

• Toolpushers	Daily Inspections, Weekly Inspections
• Rig crews/Toolpushers	Monthly Kuukpik Drilling Rig Inspection Checklists
• Safety Department	Regular/monthly inspections
• Operations Manager	Regular/monthly inspections

4.15 Visitors at Rig Sites

Visitors to rig sites are required to wear personal protective equipment. Anyone arranging a rig tour must check with the Anchorage office to see if any special equipment is required by the operator or company safety standards. **NO ONE** shall be allowed to wander around the drilling site without direct supervision by an experienced rig or company person. Each visitor to the rig must check in with the Toolpusher and sign in, and receive a brief orientation before going on the rig.

5.0 Environmental Management System (EMS)

Environmental protection measures will be incorporated into regular procedures regarding safety, human health, transportation, equipment, site inspection, and waste disposal. Management and field staff share responsibility for environmental protection and the incorporation of specific procedures into day to day operations, both at the office and field locations. Environmental protection measures will be considered in

the selection of the suppliers of goods and services as well as company activities.

Kuukpik Drilling will review drilling activities under their direct control for potential environmental damage, utilize procedures to minimize potential concerns and correct damage caused by our activities in a timely and effective manner. The company will discuss any unique aspects of the projects with the Operator to determine if any special equipment, procedures or training is required to undertake the project in an environmentally sound manner.

All employees of Kuukpik Drilling will be made aware of the environmental implications of the servicing industry through the use of training & procedures. These will meet or exceed existing regulatory requirements and company policy.

The HSE Manager is responsible for, and will facilitate, required training and ensure training certifications are up to date. The Toolpusher and HSE Manager are responsible for, and will facilitate, the incorporation of environmental awareness into operation procedures. ***Additional information can be found in the Kuukpik Drilling Policies Manual, Guidelines Manual, and EMS Section, the Redbook and ASH.***

5.1 Organization and EMS Oversight

The EMS of Kuukpik Drilling LLC. is based on:

- The safe, environmentally sound, maintenance and operation of its equipment and facility.
- Operational support.
- Waste management.
- Monitoring operations for environmental compliance.

The EMS System includes managing all operations in a way that protects the environment, health and safety of all employees, customers, and the public. Compliance with our Environmental Management System requirements is a condition of employment. Kuukpik Drilling first-line supervisors have the responsibility to operate their facility and field operations in a safe and environmentally sound manner.

5.2 Accountability & Responsibilities

The Environmental Management System will be implemented and run by Kuukpik Drilling management and employees. Additional support for identifying program elements and processes will be provided by third party consultants.

5.2.1 Company Management

The General Manager will monitor the performance of EMS efforts through timely communications with the Operations and the HSE Manager. He will measure progress made toward the goals set forth in the HSE Plan.

The Operations Manager will monitor the Performance of EMS efforts through timely communications with the HSE Representative, and Rig Toolpushers. He will measure progress made toward the goals set forth in the HSE Plan.

5.2.2 Field Management

Rig Toolpushers will be responsible for the administration of Kuukpik Drilling, EMS system. Duties will include:

- Overall analysis of potential job-related environmental concerns before operations begins.
- Ensure training of all Kuukpik Drilling employees on environmental issues prior to actual field work.
- On-going environmental education through weekly meetings and scheduled training.

As part of their work assignment, Rig Toolpushers will conduct employee orientation to explain the EMS System, compliance issues, and other site-specific environmental regulations. Rig Toolpushers have the authority to warn/discipline or terminate (depending on the severity of the violation) those employees who do not follow Environmental programs or regulations. The Toolpusher is also responsible for data collection and record keeping necessary to document the progress made toward the goals established in the Kuukpik Drilling HSE Plan. Rig Toolpushers will report to the Operations Manager.

5.2.3 Contractors and Service Providers

Contractors working under the direction of Kuukpik Drilling personnel will be expected to comply with all elements of the Kuukpik Drilling EMS. Pre work evaluation of contractors will be completed by the HSE Manager to ensure that the requirements of the EMS are communicated. Where necessary, Kuukpik Drilling will ensure that contractor personnel are trained to work within the EMS system.

5.3 Environmental Requirements

Kuukpik Drilling has accomplished a thorough series of assessments to determine how company operations can affect the environment. In addition, a review of regulatory requirements has been conducted to identify local, state, and federal laws relating to the conduct of Kuukpik Drilling operations. Environmental requirements will be reviewed on a yearly basis to determine if changes to operational controls will be required.

5.3.1 Identifying Environmental Requirements

5.3.1.1 Annual Audit

The Kuukpik Drilling self-assessment is conducted by management personnel with input from the Rig Toolpushers and equipment operators. The annual audit is a comprehensive study of Kuukpik Drilling operations as relate to environmental issues. This yearly evaluation will be conducted to ensure that it is fit for purpose and no changes have occurred.

5.3.2 Compliance with Environmental Requirements

5.3.2.1 Compliance Matrix

The Kuukpik Drilling compliance matrix identifies compliance issues that relate to Kuukpik Drilling operations, and is located in Appendix B. The compliance matrix will be reviewed during annual audit or upon any change in operational activities.

5.3.3 Communicating Environmental Requirements

5.3.3.1 Management

Kuukpik Drilling management will continuously monitor changes in state and federal environmental laws. In addition, Kuukpik Drilling will maintain a working interface with customer HSE managers and programs. Modifications of the EMS resulting from changes identified through these activities will be documented through the MOC process.

5.3.3.2 Employees

Employees working with the Kuukpik Drilling EMS will receive initial training in the system and will receive yearly update training thereafter. Performance measures and progress toward the goals and objectives for the system, along with changes and improvements, will be communicated during weekly HSE meetings.

5.3.3.3 Contractors and Service Providers

Third party sub-contractors will be provided with an overview of the Kuukpik Drilling EMS prior to the commencement of work. When necessary, an interface document will be developed to ensure compliance with the EMS requirements.

5.3.3.4 Customers

Changes to the EMS will be communicated to Kuukpik Drilling customers on an annual basis. Improvement opportunities will be identified and interface issues discussed during quarterly performance reviews.

5.4 Assessment, Prevention and Control

5.4.1 Operational Assessment

5.4.1.1 Environmental Aspects

Kuukpik Drilling has compiled a list of its environmental aspects to identify how our operations interact with the environment. It is used to develop programs for environmental compliance and performance improvement. See Appendix C (Environmental Aspects Worksheet).

5.4.1.2 Chemical Inventory

A basic chemical inventory has been established for Kuukpik Drilling operations. Only products that have been reviewed and found to be the most environmentally sound for the application will be used. Chemicals provided by the customer will be reviewed on a case by case basis to determine if any adverse environmental consequences could be realized by their use in Kuukpik Drilling equipment. Procedures have been developed to control the purchasing, storage and disposal of chemicals used in Kuukpik Drilling operations.

5.4.1.3 Air Emissions

Air emissions from fuel burning equipment will be minimized thru the use of low sulfur fuel provided by the customer. Fuel consumption records will be kept for

customer as per established procedures and communicated to the customers for permit compliance purposes. Procedures have been developed for the maintenance and operation of diesel burning equipment to prevent unnecessary emissions.

5.4.1.4 Waste Water

Waste water from the camp operation is collected in a holding tank and disposed of by way of approved septic disposal contractors. Designated areas of the Kuukpik Drilling pad for clean snow storage have been established to ensure that run off water from the pad will not be contaminated. Containment berms are inspected and cleaned to prevent accumulation of contaminated fluids. Procedures have been developed for addressing waste water handling for Kuukpik Drilling operations.

5.4.1.5 Waste Stream

Kuukpik Drilling has compiled a list of the company specific waste stream and developed a program for the disposal of each item as recommended by law. The waste stream will be reviewed periodically to ensure it is accurate and fit for purpose. See Appendix D – Waste Stream Identification.

5.4.2 High Exposure Activities

5.4.2.1 Drilling

The primary business function of Kuukpik Drilling is the drilling and completion of oil and gas wells. To accomplish this task the drilling rig uses a system of fluid circulating equipment to treat and pump drilling fluids down the well. The handling of these fluids is managed through a system of operating procedures and monitoring. When properly applied, these procedures will ensure the integrity of the pumping system and the well treatment process.

5.4.2.2 Rig Moves

Another activity undertaken by Kuukpik Drilling is the dismantling, movement and reassembly of the drilling rig. Rig move operations are planned so as to minimize the amount of waste fluids, and to provide the customer with a controlled waste stream from the process. Disposal of all waste fluids is the responsibility of the customer.

5.4.3 Inspections

To ensure a clean and environmentally sound operation Kuukpik Drilling conducts a series of quality control audits at all levels of the organization. All inspections are documented and included in the EMS review system.

5.4.3.1 Management Inspections

Kuukpik Drilling Managers conduct monthly audits to ensure the integrity of the EMS system. These audits include work site visits, system assessments, document reviews and feedback sessions with the crews to identify areas for improvement or action.

5.4.3.2 Field Supervisors Inspections

Kuukpik Drilling Rig Toolpushers conduct random inspections of ongoing operations. In addition, weekly shop audits are conducted by maintenance personnel to ensure the proper waste handling process is being enforced and that no gaps exist in the EMS system. Another key aspect of the random inspections is to ensure compliance with customer waste stream handling guidelines.

5.4.3.3 Rig Operators Inspections

Each operator is to complete a daily inspection on his equipment to ensure operational integrity. Furthermore, this inspection is documented using a standard Kuukpik Drilling equipment condition checklist. The checklist system identifies potential mechanical problems that may cause environmental impacts.

5.4.3.4 Action Items and Follow-Up

Action items developed from inspections, audits, and investigations will be dated and tracked by the Rig Toolpushers. The Drilling Superintendent and HSE Manager will monitor progress toward completion of action items weekly.

5.4.4 Management of Change

All significant changes within Kuukpik Drilling operations are reviewed for operational integrity and EMS compliance before implementation.

5.4.4.1 Equipment Changes

Any modification to Kuukpik Drilling equipment will be documented using the MOC protocol. System changes are reviewed by management and where necessary the original equipment manufacturer is consulted.

5.4.4.2 Chemical Changes

Chemicals used for maintenance at Kuukpik Drilling facilities will be reviewed for harmful effects to employees or the environment. It is the policy of Kuukpik Drilling to use environmentally safe products whenever possible and to review changes to the current approved chemicals used. Chemical purchases are reviewed for their potential effect on the environment, employees, and to control the waste stream generated from their use.

5.4.4.3 Procedure Changes

Management of change will be used to document and review changes to Kuukpik Drilling standard operating procedures. SOP's will be reviewed periodically to ensure that Kuukpik Drilling personnel use the safest and most secure methods that have been identified.

5.4.4.4 Purchasing Changes

All changes for parts and equipment purchases will be managed through Kuukpik Drilling Management. Deviation from OEM parts and Kuukpik Drilling standard equipment will be evaluated before purchase to ensure compatibility and equal or

better operational performance.

5.5 Environmental Incidents and Investigation

All abnormal discharges to the environment will be reported to management and investigated to identify actions to prevent reoccurrence.

5.5.1 Reporting Environmental Incidents

All environmental incidents regardless of size or volume will be reported to Kuukpik Drilling management for proper notifications and follow up. Each employee is expected to report and/or immediately resolve any environmental nonconformance they identify.

5.5.1.1 Customer Requirements

Discharges to the environment inconsistent with customer guidelines will be immediately reported to the proper customer representative utilizing the customers established reporting guidelines.

5.5.1.2 Notification Protocol

All releases resulting from company operations will be reported to the customer representative and the Kuukpik Drilling Rig Toolpusher. The on duty Rig Toolpusher will notify the Kuukpik Drilling General Manager who will then notify the appropriate agencies if necessary.

5.5.2 Investigating Environmental Incidents

Kuukpik Drilling will participate in any investigation of environmental damage caused by Kuukpik Drilling operations to customer-controlled locations. Kuukpik Drilling will aggressively investigate any environmental damaged to public, private, or company owned property that is a result of Kuukpik Drilling operations. Kuukpik Drilling management and employees will cooperate fully with any inquiry conducted as a result of company operations.

5.5.3 Corrective and Preventive Actions

Each investigation will identify corrective measures to prevent a similar occurrence. In addition, each corrective action will be communicated throughout the organization to ensure that all employees are notified as to the findings and corrective measures to be implemented throughout Kuukpik Drilling operations.

5.6 Training Awareness and Competence

5.6.1 Employee Training

Each Kuukpik Drilling employee shall undergo company sponsored basic field operations training as provided by approved sources of the North Slope Training Cooperative. In addition, each employee will be trained specifically on the equipment he will be expected to operate and maintain. Environmental training will consist of customer orientations and spill response and reporting as outlined in the Kuukpik Drilling EMS documents. Employees will be instructed in all facets of the EMS systems and roles and responsibilities

5.15 Waste Transfer and Disposal

As a matter of policy, Kuukpik Drilling will not remove waste materials from the customer's operational area. All residual waste and equipment contamination will be handled through the customers approved waste handling system BEFORE Kuukpik Drilling equipment leaves the job site. In addition, waste generated by Kuukpik Drilling outside the customer's operational area will not be transported to the customer's job site.

The waste stream generated by Kuukpik Drilling within its own operations is handled as per the guidelines set forth in the Kuukpik Drilling Waste Management System. The prime objective of this system is to maintain the status of "Exempt Small Quantity Generator" for Kuukpik Drilling operations.

6.0 Operational Safety

6.1 Site Maintenance

Kuukpik Drilling will actively reduce site cleanup requirements resulting from their activities by the ongoing use of equipment maintenance and correct disposal procedures during operations.

Spills and other environment hazards will be reported to the Toolpusher, and where required, to the appropriate government agency.

Employees of the company are responsible for ensuring that procedures are followed regarding:

- On site waste disposal
- Hazardous/non-hazardous waste segregation and disposal
- Recyclable and non-recyclable waste segregation

Each field site will be reviewed after work is completed to ensure that no refuse or waste materials belonging to Kuukpik Drilling remain at the site. The Toolpusher is responsible for site inspection after "Move Off" and will notify the Operator of any uncommon refuse or potentially harmful materials left on site by other contractors.

The following guidelines are to be utilized by management and field personnel to ensure that the contractor responsibilities are met:

- Spill response
- Waste disposal
- Equipment inspections
- Move on, move off inspections

Kuukpik Drilling will maintain equipment in good order and train employees in the proper handling of products in order to reduce the occurrence of potential spills and other releases.

6.2 General Rig Safety

- Handrails and stairways must be securely attached

5.10.2 EMS Revisions

Following each yearly review, deficiencies or non-conformance issues will be addressed. Opportunities for improvement and new goals and objectives will be established for inclusion in the system.

5.10.3 Communicating Evaluation Results

All results of audits and reviews will be made available to Kuukpik Drilling employees and customers. Employees will be updated through weekly meetings and updated procedures. Kuukpik Drilling customers will be notified of results through monthly operations meetings conducted by management.

5.11 Customer and Community Outreach

5.11.1 Customer Interface

Kuukpik Drilling will work closely with our customers and their agents to ensure that Kuukpik Drilling EMS complies with the requirements of customer's environmental systems.

5.11.2 Community Awareness and Involvement

Kuukpik Drilling will participate with community efforts to improve environmental performance whenever and wherever Kuukpik Drilling operations impact the community.

5.12 Spill Prevention, Control, & Countermeasures (SPCC)

Kuukpik Drilling has put together a Spill Prevention, Control, and Countermeasure Plan for Kuukpik Drilling owned rigs operating in Alaska. This plan describes the contingency plans for dealing with spills and contamination resulting from Kuukpik Drilling operations. The Kuukpik Drilling SPCC Plan does not apply to labor contracts for operator owned rigs.

The SPCC Plan is specific to each rig and located in the Toolpusher's Office.

5.13 North Slope Environmental Handbook

Kuukpik Drilling utilizes the policies and procedures outlined in the North Slope Environmental Handbook for training and operational consistency. All Kuukpik Drilling employees are required to attend classes provided by the North Slope Training Cooperative, which is the training authority of the contents of the North Slope Environmental Handbook. A copy of the Handbook is available in the Toolpushers' office.

5.14 Alaska Waste Disposal Guidelines

Alaska Waste Disposal guidelines (Redbook) are printed by the Alaska oil industry and its contractors to provide a consistent guideline for waste disposal operations. It is updated every two years and distributed throughout the industry in Alaska. A copy of the Redbook is available in the Toolpushers' office.

5.8 Records and Documentation

5.8.1 EMS Record Keeping

Records for regulated waste will be maintained at each Kuukpik Drilling facility. The HSE Manager will establish a method for the accurate documentation of the waste stream.

5.8.2 Hazardous Waste Determination

Kuukpik Drilling will manage the segregation and classification of the waste stream as outlined in the North Slope Waste handling guidelines (Red Book). Final disposal of all waste materials will be in accordance with EPA guidelines for Conditionally Exempt Small Quantity Generator. All hazardous waste determinations will be made by the HSE Manager and verified by Management before final disposal. Waste logs will be reviewed each month by Kuukpik Drilling Rig Managers to ensure Small Quantity Generator status is maintained.

5.9 Pollution Prevention

Kuukpik Drilling is committed to minimizing environmental impacts from their operation. To this end the management and employees of Kuukpik Drilling will make every effort to maintain programs for recycling and beneficial reuse of waste products. We will work closely with our customers to enhance the effectiveness of their programs relating to environmental performance.

5.9.1 Waste Minimization Program

The Kuukpik Drilling program for controlling the quantities of waste generated by our operations includes efforts in recycling, purchasing, and product substitution.

5.9.2 Recycling Program

Whenever possible Kuukpik Drilling will reuse or recycle products and materials generated during the normal conduct of business.

5.9.3 Material Purchasing Program

All chemicals and other materials will be reviewed prior to purchase to determine the effects they might have on the environment or the waste stream from Kuukpik Drilling operations.

5.9.4 Chemical Substitution Program

Kuukpik Drilling will continue to review products used throughout our operations for improved performance and environmental impact. Whenever possible, environmentally friendly products will be used.

5.10 Program Evaluation and Improvement

5.10.1 EMS Evaluation

Kuukpik Drilling evaluations will review EMS system performance, compliance with legal requirements and resource needs, through yearly reviews. Customer compliance audits and reviews will be used to ensure the compatibility of the programs used by Kuukpik Drilling employees.

required of their position. Training information can be found in the Kuukpik Drilling HSE Plan documents.

5.6.1.1 Training Documentation

Employee training will be documented and updated annually as identified in the Kuukpik Drilling HSE plan. The Rig Toolpusher, Administration Manager, and HSE Manager will maintain employee training records as described in the Kuukpik Drilling, HSE Plan document.

5.6.2 Verification of Understanding

At the end of each training module, the employee will complete a test to verify their understanding of the materials presented. Records of these tests will be maintained by the training providers under contract to Kuukpik Drilling, and will be available for review on demand. Additional training provided by customers will be maintained by their internal system and will be made available to Kuukpik Drilling upon request.

5.7 Planning

5.7.1 Incorporating EMS Requirements

Kuukpik Drilling management incorporates EMS requirements in every decision affecting our business.

5.7.1.1 Incorporation of EMS Requirements into Business Plan

Environmental issues will be included in all plans affecting the company's future development and direction. Costs associated with the EMS will be factored into budgets and timelines. Staffing levels will be considered based on EMS implementation and compliance needs.

5.7.1.2 Incorporation of EMS Issues into Equipment Design

All new equipment and any modifications to existing equipment will be engineered to address EMS needs. New technologies will be explored and where practical, will be incorporated in new and existing equipment.

5.7.1.3 Incorporation of EMS Issues into Preventative Maintenance System (PMS)

Kuukpik Drilling preventive maintenance system will continue to explore new more environmentally friendly alternatives to chemicals used for the maintenance and up keep of the fleet. Management will encourage recycling and reuse options for expendable items consumed during normal operations.

5.7.2 Targets, Objectives, and Action Plans

Each year Kuukpik Drilling management and employees will set goals for the continuous improvement of environmental performance. These goals will be shared with our employees and customers and monitored by management for progress throughout the year.

- Electrical fixtures must be explosion proof and well maintained
- Ensure that drift pins and keepers are installed on all spreaders
- Hydraulic, air and steam hoses should be inspected for leakage on a regular basis
- Ensure the area is adequately heated in the wintertime
- Keep the area clean (free from mud, oil, ice, etc.)
- Ensure workers use safe procedures when using ladders and when work is performed six feet above the deck, or four feet above any protruding objects
- Any electrical issues or problems need to be addressed by a qualified electrician.

6.3 Floors, Stairs, Handrails

- Keep floors, stairs, and walkways free of slipping and tripping hazards
- Make certain all handrails and guardrails are correctly installed and secure as soon as possible when rigging up. All openings must have temporary barriers placed across an opening if a handrail or stairway is removed for a rig move to prevent someone from falling through that opening
- Stairways must be securely fastened, placed on level footing and at the correct angle
- Stair treads should be of a non-skid bar grate and each tread must be level and have the same rise as the rest of the steps
- Sliding down handrails is prohibited
- Do not run up or down stairways and use one step at a time
- Ample lighting is required for all stairways
- When going up or down stairs, always keep one hand on the handrail and use the power grip method when descending a stairway
- Safety boots with non-skid soles and rubber heels do prevent falls
- Pallets that are used for temporary walkways must not have more than on inch spacing between the boards

6.4 Rig Floor

- All open areas must be covered, floor clean and free of obstructions
- Mats or anti-slip material should be applied to the floor working area to prevent slipping in slippery conditions
- Ensure that tong lines are kept in good condition and secured correctly
- Avoid hand traps and pinch points when working with tongs. Use the work handles provided (with thumb placement inside the handle) and work as a team
- Tong and slip dies must be clean and sharp and held in place by the die keeper. Use a tong driver when replacing dies, chisels are not acceptable. Tong dies are made of a brittle material and chip easily. Use goggles or a face shield in addition to safety glasses when removing or replacing dies
- Tongs, elevators, slips, dog collars, traveling blocks, etc. must be well maintained and inspected on a regular basis for excessive wear, loose pins, and damage
- Ensure that all guards are in place at all times when equipment is in operation
- Workers are required to leave the floor if excessive strain is used through the tongs, excessive over-pull is authorized, during jarring operations, etc.

- Drillers must have an unrestricted view of the floor area before engaging any controls
- Hoses, chains, or lines must not be handled or used anywhere on the floor while the table or topdrive is in motion
- When lifting pipe up the V-door, extreme caution must be used. The driller or qualified person must remain at the controls until the single is in the mouse hole and the lifting line is secured before engaging the table or topdrive
- Brake and transmission linkage should be checked for excessive wear and tension on a regular basis. Use lockout procedures!
- Ensure that personnel using a pipe spinner, torque wrench, survey unit, manrider winch or tugger winches are familiar with the controls before they are allowed to run the equipment

6.5 Blowout Prevention Area

- When BOP's are being installed, workmen must not be in the area where they could be injured due to swinging or dropping of the assembly. A tag line must be used for the initial placement
- To avoid serious falls, ensure that walkways are secure, free of ice and tripping hazards and inspected harnesses and SLR's are utilized
- When removing the BOP assembly, do not remove the bolts securing the BOP until:
- All lifting slings, shackles and devises have been inspected
  - The lifting sling is securely attached to the assembly
  - The slack in the hoisting line is taken up

6.6 Mud Pumps

- Because mud pumps can be started remotely, a positive lockout system must be used whenever repairs to the pumps are in progress
- The housing guards on belt driven pumps and on the belt driven pony rod oiler must be in place, in good condition, and well secured at all times
- Pressure relief valves, provided to protect the pump and lines from excessive pressure, must be fitted with a shear pin of the correct size and length, and vented to permit proper drainage to an area that will not endanger workmen
- The pressure relief valve protective cover must be secured in the closed position at all times to prevent the shear pin from becoming a projectile
- High pressure hoses must be safety chained at both ends (hobbled)
- Power must never be used to force components such as liners, rods, or pistons from the pumps
- Use the proper tools when working on pump components to prevent damage and subsequent failure
- Pump rod guards must be in place at all times
- All bleed off lines must be well secured at all times. They must be vented properly to permit proper drainage to an area that will not endanger anyone or damage equipment
- All bleed off and/or vent lines are to be fabricated to the same pressure rating as the rest of the system for which it is bleeding off or venting and periodically checked for plugging off

6.7 Mud Pits

6.8 Engines

- Lockout all power prior to doing any maintenance, adjustment, or repair, to prevent accidental start up
- Exposed rotating parts such as radiator fans, belt drives, flexible couplings, etc. must be guarded at all times
- All guards removed for maintenance purposes must be replaced prior to start up
- Ear protection must be worn when working in high noise area such as running engines, and double ear protection must be worn if noise exceeds 100dB levels
- Test engine shut-offs weekly (local and remote)
- The engine kill switch(s) must be clearly marked and known to all workmen
- Oil, diesel, mud etc. spills should be cleaned up and reported immediately
- Water hoses and wash guns must not be used to clean generators or electrical components
- Mops must be used to clean the floor areas in generator rooms providing excess water is not used
- Use extreme caution when removing radiator cap on an engine that is running or has overheated

6.9 Catwalks, Pipe Racks

- Pipe racks must be placed level on solid footings and butted firmly against the catwalk and secured. This is to prevent a foot/leg trap
- If pipe racks on the sump side are placed apart to permit access, make certain a strong secure means of rolling pipe across this access area is implemented
- When rolling tubular goods, work only from the end position, a workman on either end is the safe, efficient method. Never attempt this task while standing between pipe racks
- Ensure that effective endpins are in place at the pipe rack ends before the first tier of pipe is placed on pipe racks. Subsequent tiers must also be chocked with wedges to prevent rolling
- A chain secured across the catwalk will prevent tubular goods from sliding back down the ramp
- Everyone must remain clear of the catwalk area and V-door steps when laying down or picking drill collars and pipe
- During loading, unloading, or transferring tubular goods, workmen must not be on top of the load or between the load and the pipe racks

6.10 Boilers

- A slow warm up is recommended when firing up a cold boiler, 5 minute periods of firing at 5 minute intervals will reduce stress on the boiler as it comes up to the required pressure
- Repair leaks, etc. only after pressure has been bled off
- Water gauge glass must always be guarded to prevent breakage
- Ensure boiler blowdown and pop-off valve lines are clearly identified. These lines can be baffled or diverted to a safe area
- Water pump shafts must always be guarded
- Wear protective clothing when handling treatment chemicals and review SDS sheets
- Ensure that electrical equipment is well maintained and all covers are in place. Control panel covers must be closed
- Never store flammable material in the boiler building

- A fire extinguisher must be in place at the entrances to the boiler building
- The boiler building must be clean and tidy. Hanging clothes to dry in this area is not permitted
- Yearly inspection of boiler by a government inspector is a requirement. Boiler certificates must be kept on file
- Blow down the boiler at least each tour. (Water conditions and PH levels may dictate more frequent blow down's.) After first raising water in water glass one inch above normal, blow down until water still shows one inch in water glass
- When hooking up the electrical system, and it is found that any motor is turning in reverse, do not change the motor leads, as other electrical equipment will also be reversed. If an electrical problem occurs such as this, notify the rig electrician as only a qualified electrician is authorized to change any wiring
- Blow down lines should be plumbed into a deflector or barrel to prevent an uncontrolled release of steam and hot water

6.11 Loaders and Rolling Stock

- Never walk or work under a raised loader or forklift.
- Allow for the extra length of the loader and forklift when making turns.
- Take extra precaution when handling loose loads.
- Stay away from the outer edge when working along high banks and slopes.
- Watch for overhead wires and obstacles when you raise the loader or forklift.
- Travel with the load low to the ground and watch for obstructions on the ground.
- Do not lift or carry anyone on the loader, bucket or attachments.
- Under pressure, escaping hydraulic oil can have sufficient force to penetrate the skin, causing serious personal injury. Injuries resulting from oil penetrating the skin are very difficult to treat. Use a piece of cardboard or paper to check for pinhole leaks
- Be certain anyone operating the loader is aware of safe operating practices and potential hazards.
- Loader and forklift operators should wear the seat belt at all times, regardless of the task that is being done.
-

6.12 Wire Rope, Shackles, Hooks, Slings & Clips

We often place our safety in the reliability of the equipment. If the equipment fails, chances are there will either be damage to the equipment, or worse yet, injury to the individuals involved. Hence, equipment should be treated with respect and verified often with respect to its working capability.
In order to verify the working capability of equipment, we must be able to recognize any defects, deformation, or wrongful rigging of the material. More specifically, you must know how to use the materials at hand and in the proper fashion.

6.12.1 Wire Rope

Wire ropes have numerous uses on a drilling rig and many operations are dependent on the strength, condition, and correct installation of the equipment. Thus it is essential that we have a constant awareness of the following points relating to wire rope safety.

1. Correct size and safety factor for the job

2. Properly installed and secured
3. Not weakened by abuse or damage
4. Attachments installed correctly e.g. clamps
5. Inspected on a regular basis

6.12.2 Shackles

A. Shackles

All overhead shackles should be of the bolt type and locked with a cotter pin. (4-part shackle). Shackles should be checked for wear cracks or spread between the fingers. The shackle must also have the proper bolt or pin. It is not acceptable to use a makeshift nut and bolt from the tool house. The included angle (maximum area to be used for a load) should not exceed 120 degrees.

6.12.3 Hooks

B. HOOKS

Hooks are another item that are frequently used in the wrong manner. For a single sling load, the load must be in the base of the hook. Hooks are not constructed to support a load on the tip. For a load using two or more slings, the load must also be in the base, but the included angle must not exceed 90 degrees.

Hooks used for the tugger and boom line, must have a positive locking latch. This latch is to be inspected on a continual basis. If the latch no longer locks, it must be replaced or fixed. If the latch does lock but does not fully close (leaving a gap larger than 6mm), it must be replaced (not fully closing indicates stretch, thus deformation).

The state of the hook should also be verified. If any cracks, deformation or wear is detected, the hook should be taken out of service.

A comprehensive inspection of the unit must be completed monthly and recorded in the ***Slings & Fall Protection Log***. (OSHA CFR 1910.179)

6.12.4 Slings

C. SLINGS (Wire)

The strength (load capacity) of the sling is directly related to the angle created from the intersection of the cable around any given load.

If the angle is 90 degrees, the sling capacity decreases 20 to 25%

If the angle is more than 120 degrees, the sling capacity is decreased 50% or more of its rated load capacity (only if it is lifted straight up)

When lifting tubulars off of the catwalk, the angle of intersection of the sling off of the load is usually less than 120 degrees. Even though the load capability of the sling is decreased more than 50%, the actual load is decreased due to the angle of the line as it comes out of the block. Thus, for a single line block (tugger), an item that weighs 1000 pounds requires a force of 2000

pounds to lift it straight up. As the angle increases, the force needed to lift the item in turn decreases. For a 0 degree lift, the factor is 2 (2 times 1000lb.). For a lift of 45 degrees, the factor is 1.84.

Always check for the condition of your wire rope ends. The tolerance for a fixed end is one broken strand.

D. SLINGS (Nylon)

Nylon slings need to be stored in a clean dry location out of the sunlight. This will add a considerable amount of time to their lifetime.

A comprehensive inspection of the unit must be completed monthly and recorded in the ***Slings and Fall Protection Inspection Log***. (OSHA CFR 1910.179)

The inspections must cover:

a) Webbing – frays, cuts, broken fibers, discoloration, mold, burns, pulled stitches, charring, etc.
b) Cleanliness – nylon sling to be cleaned frequently with water and mild detergent.
c) Labels – indicating date of manufacture, manufacturer, serial number and model number.
d) Stitch wear – check for breaks, frays in the threads

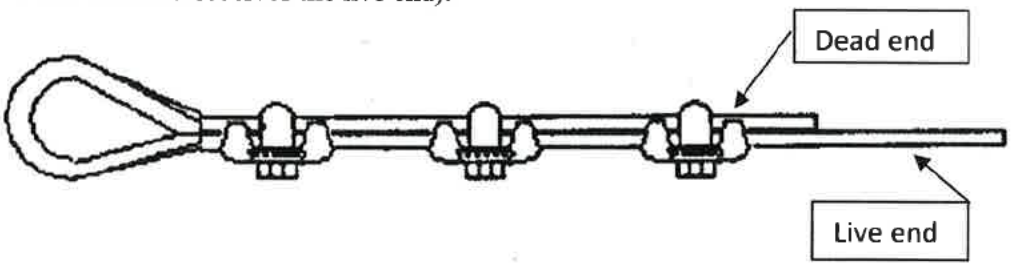
In addition to the detailed monthly inspections, the user must inspect the sling prior to each use. Any questionable characteristics or conditions found on the inspections and the unit must be taken out of service and a new unit ordered.

If the unit(s) have been stored for an extended period of time, then the unit must be inspected and noted in the ***Slings and Fall Protection Inspection Log*** prior to use.

6.12.5 Clips

E. CLIPS

First and foremost, never saddle a dead horse! An illustration below shows how to place the clips in order for this not to happen (the side of the clip with the nut is called the saddle and it is this side that receives the live end).



When placing three clips, the first clip is applied as close as possible to the loop or thimble and slightly tightened. The second clip is placed near the end but allowing for a tail. The third clip is placed evenly between the first two and all are tightened alternately until all clips have reached their recommended torque.

NOTE: ***It is prohibited to place the clips in a staggered formation***

Once the clips are installed, a test load of equal to, or greater weight than loads expected in use should be used. After the test, check and retighten the nuts.

Periodic inspections are also required. During each shift, a specified crewmember should verify for broken strands, slippage of the clips and tightness of the nuts.

The same procedures used for U-bolt clips can be applied for fist clips. Fist Grip Clips are preferable to U-Bolt clips. They cannot be installed incorrectly (upside down) and they cause less damage to the rope. It is easier to torque the nuts from both sides. Also, fewer clips are required per splice as compared to U-Bolt Clips. Fist Grip Clips have to be re-torqued after a test load. Installation must be done by a TRAINED and COMPETENT person.

Clips should always be used for connecting two different types of line together – a knot in the end of a cable passed through the eye of a chain is *not* acceptable.

Due to the constant use of the shackles, hooks, wire rope slings and clips on the rigs, it is very important that all are inspected frequently and replaced if a deformity is noticed. The price to replace a damaged item is incomparable to the repercussions that can occur if one of the aforementioned fails during a load.

For any inquiries with respect to the proper rig-up of these items or questions about the different types of equipment available, please do not hesitate to contact the Safety Department in the Anchorage office.

6.13 Housekeeping

There are many benefits to good housekeeping that go much further than hazard awareness; workplaces that have good housekeeping are pleasant to work in. Good housekeeping is part of the daily routine of the rig crew and not something that is accomplished only once a week or after nipple up. The following should be part of employees' daily housekeeping duties:

- Clean and return tools to the tool board as soon as the job is complete. This eliminates tripping hazards, wasted time looking for tools, or using the wrong tool for the job.
- Wash and clean up spills of any type (oil, water, mud, etc.) as soon as they occur or are discovered.
- Clean and coil hoses when not in use.
- Clean and hang up slings and chains that are not in use.
- Sort the used parts and discard the worn or damaged parts.
- Concentrate on finishing one job at a time; don't attempt too many things at one time leaving cluttered work areas.
- Check the parts inventory before pulling something down for repair, to avoid leaving the item apart until parts are available.
- Keep the workbenches clear of fittings, parts and miscellaneous tools. Only items that are required to complete the job should be handy.
- Sort out paint, solvents, filters and properly dispose of them to prevent fire traps.
- Clean out garbage containers on each shift.

- Clean your soiled boots and gloves as soon as possible rather than tracking it around the rig or into camp.
- Contain spillage of invert mud to minimize clean-up effort.
- De-ice or properly apply Nutplug or other traction aids to walking areas as soon as they become slick.

Good housekeeping prevents waste of all three resources: **Time, Energy, & Materials.** It also adds greatly to the appearance of the rig or work site, worker morale.

6.14 Winter Operations

Cold weather presents additional hazards during winter operations, but with awareness and good planning, injuries can be avoided.

- The design of supports used for racking stands in the bird bath normally prevents the formation of ice plugs in the stands, however, on occasion an ice plug can occur and become a projectile when pipe is run in the hole.
- Do not engage controls or equipment when steam or snow obscures visibility
- The accumulation of snow and ice can become a slipping hazard on walkways, stairways, catwalk, and work areas
- Steam and steam lines are burn hazards and have caused serious injury during winter operations
  - Never turn on the steam valve unless the nozzle is held firmly or tied down. A whipping hose and nozzle can cause serious injury
  - Hoses and connections must be well maintained. Leaks cause burns and created reduced visibility. Bleed off all steam pressure before attempting any repairs
  - Insulate steam lines where they might present a risk of contact to workmen
  - Never attempt to clean your boots with a steam hose. Severe burns to the feet and legs have resulted from this unsafe practice. Watch for other workers, and never point the nozzle at a fellow worker
  - Leave the valve open a little and bleed off water to prevent freezing
  - Exercise care when handling diesel fuel, alcohol, and gasoline during cold weather operations. The resulting burn from saturated clothing due to spillage can be severe

Work in pairs in extremely cold weather, especially when moving and rigging up, etc. Check each other for signs of frostbite and hypothermia.

6.15 Derrick Log Book

A derrick logbook shall be maintained and available at the Anchorage office. The logbook shall be kept up to date and shall contain:

1. The make, model and rated capacity of the derrick and hoisting equipment
2. A copy of the certification
3. A record of the days in service since the last certification
4. A record of visual inspections, major inspections and tests
5. A record of routine maintenance, major repairs, modifications, and alterations to the derrick and hoisting equipment
6. A record of accidents and damages. e.g. Hitting the crown, braces bent during rig moves, etc.

7. Any matter of incident that may affect the safe operation of the equipment. e.g. severe service such as jarring

Entries shall be legible, dated and signed by the Toolpusher.

7.0 Processes and Programs

7.1 Fall Protection Program

Kuukpik Drilling is dedicated to the protection of its employees from on-the-job injuries. All employees of Kuukpik Drilling have the responsibility to work safely on the job. The purpose of this program is: (a) To supplement our standard safety policy by providing safety standards specifically designed to cover fall protection and; (b) to ensure that each employee is trained and made aware of the safety provisions of the program.

This plan is designed to enable employers and employees to recognize the fall hazards on this job and to establish the procedures that are to be followed in order to prevent falls to lower levels or through holes and openings in walking/working surfaces. Each employee will be trained in these procedures and strictly adhere to them except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify the foreman of the concern and the concern addressed before proceeding.

It is the responsibility of the HSE Manager to implement the Fall Protection Program. The HSE Manager is responsible for continual observational safety checks of their work operations and to enforce the safety policy and procedures. The Toolpusher is also responsible to correct any unsafe acts or conditions immediately. It is the responsibility of the employee to understand and adhere to the procedures of this plan and to follow the instructions of the foreman. Any changes to this Fall Protection Plan must be approved by the HSE Manager.

A Fall Protection Inspection Log is kept in the Toolpushers' office for recording the monthly and annual inspections.

There are a number of procedures and situations where workers could be exposed to extreme hazards and dangers while at height. Taking precautions and ensuring that equipment and systems are available to mitigate the risks is paramount.

In order to verify the working capability of the equipment, we must be able to recognize any defects, deformation or wrongful rigging of the material. More specifically, you must know how to use the material at hand and in the proper fashion.

7.1.1 Components

Many safety components make up a successful Fall Protection program and all components have the following in common:

- Must be inspected prior to each use.

- Must be inspected monthly and recorded in the Fall Protection Inspection Log.
- If exposed to a fall, they must be inspected by a competent person and repaired or disposed of.
- If made of webbing and/or not metal it must be stored in a dry, cool location and away from direct sunlight.
- All labels and tags must be visible and legible at all times.
- If applicable, clean with a mild detergent and water and hang to dry away from heat and direct sunlight.
- Never use a wash-gun or steam to clean any items in Fall Protection.

The following sections describe each component and their use, inspection, and storage. Any further questions regarding components should be directed to the Toolpusher or the HSE Manager.

7.1.1.1 Full Body Harness

Full body harnesses provide a connection point on the worker for the personal fall arrest system. Depending on the application, they can be used as part of a system to protect the worker from falling and to limit the extent of potential injury in case of a fall.

Usage

The Full Body Harness must be used in any situation where the worker is working more than 6 feet above the floor.

Anchorage

An anchorage is a secure point of attachment for lifelines, lanyards, or deceleration devices. This anchorage shall be capable of supporting at least 5,000 pounds per employee attached.

Inspection

The inspection must cover:

- Hardware – check for damage, distortion, sharp edges, burn cracks, worn parts and carrion:
  - Buckles
  - D-rings
  - Back pad keepers
- Ease of movement of buckles.
- Webbing – check for:
  - Frays
  - Cuts
  - Broken fibers
  - Discoloration
  - Mold
  - Burns
  - Pulled stitches

  - Charring
- Cleanliness
- Labels indicating
  - Date of manufacture
  - Manufacturer
  - Serial number
  - Model number
- Stitch wear - breaks or frays in the thread.

Storage
The full body harness must be stored in a clean dry location out of the sunlight.

7.1.1.2 Basket Stretcher

Usage
A basket stretcher is designed to be used where there are obstacles to movement or other hazards: for example, in confined spaces. Typically, it is shaped to accommodate an adult in a face up position and it is used in rescue operations. The basket stretcher is to be used in all situations where immobilization is necessary above ground level.

The basket stretcher is be comprised of the following items:
- Three securing straps
- Spine board
- 4 legged vertical lifting lanyard (4-point litter harness)
- 2 taglines (7 mm kernmantle rope: twice the height of the monkey board)
- 1 25-foot sash rope.

Inspection
The inspection should note if the unit has:
- Dents
- Abrasions
- Missing components
- Excessive wear or frayed stitches
- Discoloration
- Burns
- Heat damage
- Excessive oil, paint or dirt contamination
- Been kept clean
- Webbing – no frays, cuts, broken fibers, discoloration, mold, burns, pulled stitches, charring etc.
- Stitch wear – breaks or frays in the thread.

Storage

Storage of the unit must be in a clean and dry location. On all rigs they are to be placed in the Accumulator room suspended from the ceiling.

7.1.1.3 Carabiners

A carabiner is a metal loop with a spring-loaded gate used to quickly and reversibly connect components, most notably in safety-critical systems.

Usage

Carabiners are to be used in the following ways:

- To secure equipment to the Full Body Harness in such a way that it remains secure while attached.
- To act as a junction between the double legged lanyard on the easy rider and the thimble eye on the easy rider cable.
- To use as a possible attachment point between a lanyard and a vertical or horizontal life line.
- To use as a possible attachment point between a lanyard and an anchorage point.
- To be used in conjunction with a portable self-retracting lanyard etc.

Inspection

The inspection should note if:

- There are signs of wear: discoloration, deformation, cracks, chips, abrasions or corrosion, etc.
- The units close and lock when released.
- They are rated for 5000 lb. (22 kN or 5M) and stamped.
- The units are clean.

If there are any questionable signs of malfunction or diminished integrity found on the inspection, the unit must be taken out of service and new components ordered.

7.1.1.4 Lanyards

Lanyards are flexible lines with a connector at each end used to connect the anchorage to the body support of a fall protection system. Lanyards should be connected to the back D-ring for fall arrest, located between the shoulder blades and ideally should be anchored above the worker to minimize fall distance. The worker should not walk too far from the overhead anchorage or a swing fall may occur.

Usage

- Lanyards are designated for Fall Protection only and if they are used for other purposes then they cannot be used for any Fall Protection application.

Inspection

The inspection should note if the lanyard has:

- Abrasions, cracks, cuts, breaks, discoloration, charring, heat damage, chemical damage and/or excessive stretching.
- Deformities: Run the webbing through your hands while it is under slight tension. Feel for soft spots or areas that are inconsistent with the rest of the lanyard.
- Functioning snap hook: Lanyards with either one or two snap hooks must be verified to ensure that they actually lock closed and remain so until physically opened.
- Been kept clean

Storage
The lanyards must be stored in a clean dry location out of the sunlight

7.1.1.5 Shock Absorbent Lanyards

Lanyards used for fall protection must include a shock absorber to dissipate the energy of the fall, limiting the forces on the body of the falling worker.

Usage
- Do not use the lanyard over any sharp surfaces or in areas where they may be pinched.
- May only be used in a Fall Protection application and never as a tag line.

Inspection
The inspection should note if the Shock Absorbent Lanyard has:
- Abrasions, cracks, cuts, breaks, discoloration, charring, heat damage, chemical damage and/or excessive stretching.
- Deformities: Run the webbing through your hands while it is under slight tension. Feel for soft spots or areas that are inconsistent with the rest of the lanyard.
- Functioning locking hooks (Snap Hook): Lanyards with either one or two snap hooks must be verified to ensure that they actually lock closed and remain so until physically opened.
- Been kept clean
- Webbing: frays, cuts, broken fibers, discoloration, mold, burns, pulled stitches, charring etc..
- Stitch wear - brakes or frays in the thread.
- No deformities to the pouch containing the shock absorber.
- Labels: indicating date of manufacture, manufacturer, serial number, model number, initial length and maximum fall arrest capabilities (5000 lb. and/or 22 kN).
- Does not have a total length exceeding 6 feet (including the length of the shock absorber).
- A total length different from the initial length indicated on the tag, indicating the unit has had a shock load.

Storage
The shock absorbent lanyard must be stored in a clean dry location out of the sunlight

7.1.1.6 Self-Retracting Lanyard (SRL)

Also known as "web retractors", self-retracting lanyards have the same capabilities as a shock absorbent lanyard but have the advantage of keeping an even tension on its line.

The SRL is a flexible lifeline attached to a mechanism that allows it to extend and retract under slight tension when the user moves away from and toward the device. This enables a user to work safely while moving within a recommended area at normal speeds.

Usage

- Do not use the lanyard over any sharp surfaces or in areas where they may be pinched.
- May only be used in a Fall Protection application.
- May only be used if it is deployed above your head and the work area does not exceed 30 degrees from either side of the deployment center.

Inspection
The inspection should note if the Self-Retracting Lanyard has:

- A functioning snap hook
  - This must be verified to ensure that the snap hook actually locks closed and remains so until physically opened.
- A deployed hook indicator
  - If the unit has seen a shock load, then an orange band above the hook becomes visible and the lanyard must be taken out of service.
- Webbing that has signs of: abrasions, cracks, cuts, breaks, discoloration, charring, heat damage, chemical damage and/or excessive stretching.
- Deformities: Run the webbing through your hands while it is under slight tension. Feel for soft spots or areas that are inconsistent with the rest of the lanyard.
- Has been inspected by a competent person within the last year.
- Loose screws, cracked or damaged housing,
- That it locks up if the line is jerked out and that the same line does not slip once tension is applied.
- Retracting capabilities.
- Certification and labeling visible and legible.
- Must be rated for 5000 lb. (22 kN or 5M) and stamped.
- Cleanliness.
- Check for stitch wear: breaks or frays in the thread.

Storage
The lanyards must be stored in a clean dry location out of the sunlight

7.1.1.7 Shackles

An extremely strong, U-shaped piece of equipment, a metal shackle is generally used as a connecting link in a variety of rigging, lifting, pulling and hoisting applications. A clevis pin or bolt across the opening, or a hinged metal loop secured with a locking pin mechanism keeps the shackle securely locked.

Usage
Attachment connectors between an anchor point and a fall protection device: self-retracting lifeline, lanyards etc. must be rated for at least 5000 lb. (22kN or 5M) for a single anchorage, or at least 16000 lb. (71kN) for anchorage points made for dual individual applications.

Inspection
The user must inspect the hardware prior to each use. The inspection should note if the shackle has:

- Must be rated for at least 5000 lb. (22 kN or 5M) for anchorage points made for a single individual application.
- Free from bends or twists or other features of distortion.
- Complete and with original parts: bolt, pin and cotter pin.
- Installed correctly: nut threaded and cotter pin bent over.
- Any possible bearing load or shock applied must be within the included angle.
- Free from nicks, gouges, cracks, corrosion etc.…

7.1.1.8 Climb Assist Lanyard (Ladder Climb) & Easy Rider Lanyard

Climbing lanyards and fliplines help you stay secured while climbing. The climb assist system with external counterweight aids workers and provides fall protection while climbing lengthy ladders and towers.

Usage

- May only be used in a Fall Protection application when climbing or descending a ladder.
- There must always be at least one ladder hook on the ladder while ascending or descending the ladder.
- May be applied when running the Lifeline cable back up to the crown - prior to a move etc.
- To ascend and descend the derrick during a rescue operation.
- Not to be used as a primary attachment. Use your hands and feet to climb and use the ladder climb assist as a fall arresting attachment.

Inspection

The inspection should note if the Climb Assist Lanyard has:

- Functioning snap-hook (same as snap- hook): must be verified to ensure that they actually lock closed and remain so until physically opened.
- Webbing that has signs of: abrasions, cracks, cuts, breaks, discoloration, charring, heat damage, chemical damage and/or excessive stretching.
- Deformities: Run the webbing through your hands while it is under slight tension. Feel for soft spots or areas that are inconsistent with the rest of the lanyard.
- Certification and labeling visible and legible.
- Must be rated for 5000 lb. (22 kN or 5M) and stamped.
- Cleanliness
- Check for stitch wear: breaks or frays in the thread.
- Verify the total length and compare to the length given on the tag (if total length is greater than tag length, it has most likely seen a shock load - take out of service).

Storage

The lanyards must be stored in a clean dry location out of the sunlight

7.1.1.9 Snap Hooks - Ladder Hooks

Snap hooks are the most common type of connector. They consist of a forged metal hook that closes by means of a spring loaded gate. Standard snap hooks are usually five or six inches long with a ¾" gate opening. Standard snap hooks are usually attached to fall protection equipment by means of the line being looped thru a captive eye and terminated.

Usage

- Used as part of a larger component for attachment purposes.
- Always to be attached to a D-ring, a horizontal lifeline, a carabineer, a basket stretcher point or ladder (ladder hook).
- Must not have any bearing weight or tension anywhere other than the base of the hook.
- Must never be side loaded.

Inspection

The inspection should note:

- Functioning snap hook: must be verified to ensure that they actually lock closed and remain so until physically opened.
- Free from debris or dirt that may obstruct the ease of opening and closing the hook.
- There are signs of wear: discoloration, deformation, cracks, chips, abrasions or corrosion etc....
- Must be rated for 5000 lb. (22 kN or 5M) and stamped.

Cleaning

Dip hook in warm water to dissolve any oil or grease build-up. Use a mild detergent. Wipe with a cloth.

NOTE: Do not cut the lanyard etc. off of a snap hook or ladder hook for the purpose of continued use of the hook in another application.

7.1.1.10 Synthetic Anchorage Connector

Used as a temporary anchor for attachment points in worker fall protection. The web anchorage connector is utilized by wrapping the connector around a strong structural element (i.e. derrick structural member).

Usage

- Do not use the web over any sharp surfaces or in areas where they may be pinched.
- May only be used in a Fall Protection application.
- May only be used on a stable surface: avoid attachment points that may allow for vertical slipping.
- May only be used if it is deployed above your head and the work area does not exceed 30 degrees from either side of the deployment center - anchor point.
- The anchor may only be used for one individual at a time - multiple users on the same anchor is strictly prohibited.
- All temporary anchors must be removed once the intended use is complete.

Inspection

The inspection should note:

- Must be rated for at least 5000 lb. (22 kN or 5M) for anchorage points made for a single individual application.
- The D-ring must not show excessive signs of wear: discoloration, deformation, cracks, chips, abrasions or corrosion etc.…
- Webbing that has signs of: abrasions, cracks, cuts, breaks, discoloration, charring, heat damage, chemical damage and/or excessive stretching.
- Check for stitch wear: breaks or frays in the thread.

Storage

The Synthetic Anchorage Connector must be stored in a clean dry location out of the sunlight

7.1.1.11 Wire Rope Horizontal Lifelines - Work Positioning

Horizontal Lifeline is a rope made of wire, that is attached horizontally to two or more anchors, and to which a fall arresting system or travel restraint system may be attached. They are used in horizontal fall protection applications such as buildings, tanks, derricks (laid over), and stabbing boards.

Usage

- Must be rated for at least 5,000 lb. (22 kN or 5M) for anchorage points made for a single individual application.
- Must be rated for at least 16000 lb. (71 kN) for anchorage points made for dual individual application if the distance of the life line does not exceed 60 feet in length (Lifeline).
- The elevation of the line for either the mud tank or derrick must not be less than one meter (39 inches) from the working surface at any point (Lifeline).
- The line must have an unloaded sag of no more than 6 inches and must be rated for at least 16000 lb. (Lifeline).
- Any individual hardware in direct contact with the line for personal use (shackles etc....) must be rated for 5000 lb. (22 kN or 5M).
- Never to have more than two people on the line at any given time.
- If the rope is steam cleaned or has been exposed to the elements for an extensive period of time, the line must be lubricated to prevent corrosion.

Work Positioning

A work positioning system is a system of components attached to a vertical life safety rope and includes a full body harness, descent controllers and positioning lanyards used to support or suspend a worker at a work position.

Horizontal lines that are positioned slightly above the surface as seen on the mudtank, combination and doghouse, are to fall into the same guidelines as horizontal lifelines for inspection purposes only. These lines are work positioning lines and do not meet the same standards as a "lifeline". These lines are solely for the purpose of preventing a worker nearing the edge of the work area.

The inspection should note:

- If there are signs of wear on the support posts: deformation, cracks, chips, abrasions or corrosion etc....
- Deformities to the line: kinks, burns, cuts, chemical damage and/or flattened line or excessive stretching etc....
- Thimble eyes are undamaged.
- If there are any broken strands, more than 6 broken wires in one strand lay (one complete revolution of the stand) or more than three broken wires in one strand in one lay, the cable must be replaced.
- A minimum of 4 clips must be used to secure cable ends if the Flemish rolled eye splice and galvanized thimble is not used.

7.1.1.12 Safety Cable

In fall arrest applications and procedures, there must always be a primary and secondary arresting feature. The secondary arresting feature is typically a safety cable. For example,

- The primary is the tugger.
- The secondary is the "safety cable" leading from your dorsal D-ring to the thimble eye of the man rider.

The inspection should note:

- Deformities to the line: kinks, burns, cuts, chemical damage and/or flattened line.
- Thimble eyes are undamaged.
- Snap hooks are in good operating condition and conform to the section on snap hooks.

Usage

- Termination with locking hooks to be attached to the full body harness dorsal D-ring.
- Flemish eye termination to be attached to Flemish eye thimble of tugger using a carabineer.
- Never to exceed 4 feet of total length between the harness and attachment point. Allow a maximum distance in a possible fall of 4 feet.

7.1.1.13 Escape Buggy

The escape buggy is used only when exiting from the Derrick in an emergency situation and when it is not possible or it is too hazardous to use the ladder.

The inspection should note:

- Is it accessible?
- Is it safety chained to the derrick and can it be released quickly?
- Does it have a safety cable attached to it?
- Condition of T-bar. Does it have cracked welds?
- Do the wheels turn freely?
- Does the brake function?
- Is the pin holding the interior brake shafts in good repair and secured?
- Is the brake handle on the right side of the unit?
- Has it been ridden, by whom, and for what reason?
- Is it secured with three stakes (AB.) or pull tested to 3000 lb? Or equivalent (BC).
- Does it ride on at least ½ inch line?
- Are thimble ends completed with at least 3 clips?
- Condition of thimble eyes: damaged.
- Deformities to the line: kinks, burns, cuts, chemical damage and/or flattened line or excessive stretching etc....
- If there are any broken strands, more than 6 broken wires in one strand lay (one complete revolution of the stand) or more than three broken wires in one strand in one lay, the cable must be replaced.

Usage

- If the rope is steam cleaned or been exposed to the elements for an extensive period of time, the line must be lubricated to prevent corrosion.

- The path of the escape line must not pass over any possible obstructions e.g. manifold.
- The length of the cable from the monkey board to the ground must be long enough to allow a person on the Escape buggy to touch the ground at least 20 feet before the stakes or weight.
- Usage to be logged in the Fall Protection Inspection log.

7.1.2 Fall Protection Procedure

7.1.2.1 Primary & Secondary Attachments

There must always be a primary and secondary attachment point between the individual and an attachment point either coming from a secure structure (cable etc.) or from the structure itself (hands etc.).

A person must always be attached while more than 6 feet above the floor and remain so while going from one location above the floor to another.

Primary attachment
In most applications, the primary source of fall arrest is your hands and feet. As soon as you become suspended this primary source is gone and a new one should appear in its place. This source must either be a self-retracting cable, a shock absorbent lanyard or a winch line - to name a few.

Secondary attachment
Once attached to a suitable anchor point there must always be a secondary attachment point e.g. a safety cable. This cable must be attached between the individual and another attachment point other than the primary attachment point. An example of this would be an individual hoisted with the man rider. The locking hook of the tugger would be attached to the D-ring located on the chest area of the workers full body harness (primary attachment) and a safety cable secured between the D-ring on the dorsal section of the full body harness and the thimble eye of the man rider (secondary attachment).

7.1.2.2 Safety Cables

All safety cables must have a snap hook on one end to attach to either the dorsal or chest D-ring and a thimble eye end on the other for attachment to a secondary source by way of a carabineer. All safety cables, once attached to the harness, must not have a total vertical linear distance more than 4 feet from the harness to any attachment point. i.e.: allow a maximum distance in a possible fall of 4 feet.

Cables or lanyards, (adjustable or not) that have a shock absorber incorporated in the line may not have a total vertical linear distance more than 6 feet from the harness to any attachment point. i.e.: allow a maximum distance in a possible fall of 6 feet before the fall begins to be arrested.

In all cases, keep the safety cable or lanyard no longer than the above respective

distances and always as short as possible. The shorter the possible fall, the lesser the chance of injury.

7.1.2.3 Attachments

A person must always remain attached (primary and secondary) to a fall protection device when more than 6 feet above the rig floor.

All self-retracting lifelines are considered secondary attachments and are to be attached to the dorsal D-ring on the harness.

Monkey board: While ascending to the monkey board, always attach yourself to the monkey board self-retracting lifeline prior to taking off the Crown self-retracting life line. Once the monkey board lifeline is attached then a lanyard must be attached to your D-ring on the full body harness located at the lower back area. This work-positioning lanyard is secured to the back of the monkey board and serves to restrict movement of the worker past the diving board.

Stabbing board: To remain attached at all times while transferring from the crown fall arrest to the horizontal lifeline above the stabbing board. Attachment between the horizontal line and the harness must be with an adjustable shock absorbent lanyard. The lanyard must be adjusted to allow minimal potential fall.

Crown: The crown fall arrest, as any other form of fall protection, must be used strictly in accordance with their design. At no time is a person to suspend themselves using the fall arrest cable. This cable is only intended for arresting a fall - not for suspension purposes for work activity.

Doghouse: On the doghouse roof a person needs to be attached to the horizontal lifeline or central attachment point at all times using an adjustable lanyard. This adjustable shock absorbent lanyard must be adjusted to such a length that would not allow a person to pass the boundaries of the roof top perimeter.

Horizontal lifelines: (Sump) Located on the sump side of the mudtank, it must be utilized with either an adjustable lanyard or a shock absorbent adjustable lanyard. The lanyard is to be adjusted to such a length that would not allow a person to pass the outer perimeter of the sump.

Horizontal lifelines: (Derrick) Located on both sides of the derrick on the outside edge along the walkway, it must be utilized with a shock absorbent lanyard adjusted to the shortest possible length.

A carabineer may be used on the line to allow for a more fluent movement.

When passing someone on a horizontal lifeline both must remain attached to the line at all times. To pass, simply use a second lanyard or a safety cable to attach yourself to the other side of the person you are passing before you disconnect your

main line then once again attach your main lanyard to the line once you've passed.

7.1.2.4 *Temporary Anchors*

Webbed anchors **"SYNTHETIC ANCHORAGE CONNECTORS"** are available for temporary attachment points. The anchor points can be implemented in any one of a multitude of locations throughout the derrick as long as they are not in a pinch area and are away from moving parts. The attachment areas must also be along a vertical plain and on a major cross beam/section of the derrick. These anchors are designed to accommodate one user at a time. Never have more than one person attached to a webbed anchor. Please note that these anchors must be removed once the immediate task is complete.

7.1.2.5 *Clearance Requirements*

Depending on the fall protection used, there is a minimal clearance requirement of open area below the worker.

FALL PROTECTION	Component	LENGTH
Self- Retracting Lanyards	Lanyard	4'
	Total	4'
Safety Cables	Cable	2'
	Dorsal D-ring attachment	16"
	Total	3'4"
Shock Absorbent Lanyards	Lanyard	6'
	Absorber Elongation	4'
	Dorsal D-ring to ground	5'
	Safety Factor	2'
	Total	17'

The preceding calculation takes into consideration that the dorsal D-ring is level with the anchorage point at the time of the fall.

One of the hazards of fall protection is not the actual fall, but what a person may encounter during a fall. The area below the worker must always be clear of equipment and of other personnel. The area must also be kept clear thus other personnel must be made aware where and when someone is at any height requiring fall protection.

During a rig service or any other activity requiring the use of equipment up the

stick - or at a height, stay away from the general area. If a person working at a height drops a wrench, screw driver, pin etc.... the item can become a deadly one as it falls to the ground. Therefore, a Controlled Area Zone (CAZ) should be utilized and monitored. This may include barricades, flagging and/or signs alerting other personnel to overhead work being performed.

7.1.3 Rig Rescue

The following section will cover procedures necessary to rescue an individual either in a covered confined space such as the mud tank or an open confined space such as the derrick.

The "Rig Rescue" procedures may be used in association with the Emergency Response section of the Kuukpik Drilling Safety Manual.

It is imperative that all personnel become acquainted not only with this section, but also with all sections within this manual.

Statistics show that 60% of all fatalities due to an incident are the rescuers themselves. If a rescue is not performed with confidence and knowledge and coordinated by a team leader, the chance of you the rescuer dying is higher than that of the person being rescued. Thus, personal safety for you and the members of the rescue team come first.

The steps to a rescue are:

1. Situation evaluation
2. Individual responsibility and team leader chosen.
3. Planned strategy.
4. Necessary equipment.
5. Condition of equipment.
6. Commence rescue.
7. Stabilize for transport.

The preceding list is a general template for a rescue situation. The team leader will develop and execute a rescue procedure depending on any extenuating circumstances present.

This manual is devised for those potentially exposed to a rescue situation and for those subject to a fall.

Keep in mind that the following guidelines are necessary in a rescue but are limited due to unforeseeable circumstances.

7.1.3.1 Rescue Plan

Situation evaluation:

- Clear the area of any personnel. Move them to a safe location out of the way of any possible falling objects (equipment or even personnel).
- Remove at once any immediate danger or situation that may further the severity of the incident if it can be done from ground level. This may be as simple

as shutting down the rotary, stopping the blocks or stopping any tugger movement etc....

- Determine who is injured and if possible, their condition.
- Notify the Toolpusher and then the Company Rep. in the Toolpushers absence.
- Contact the appropriate emergency personnel.
- Develop a plan to initiate rescue by first choosing a team leader.

Individual responsibility and team leader chosen

The first part to any plan, once any immediate danger to the victim is rectified, is to choose a team leader, usually the Toolpusher or Driller. Once identified, individuals to complete the team are to be assembled and given instruction on the rescue strategy. Individuals that are not necessary in the rescue are to wait out of the way of the rescue team. These individual(s) may prepare for the victim or drive out to the main road and direct the ambulance into the lease etc....

Planned strategy

It is the responsibility of the Team Leader or his designate to:

- Designate the most qualified individual(s) to initiate first contact.
- Devise a plan of rescue with his designate in accordance with any extenuating circumstances or conditions.

Necessary equipment

- According to the plan - collect all the equipment needed and determine how it will be used (application), where and how it will be attached or where it will be secured to the derrick and rescuer etc....

Condition of equipment

- Inspect all rescue equipment before use to insure the safe working condition of the equipment. Remember that most of the fatalities that occur due to a fall is from the "would be rescuer" and caused by improper use of the equipment, faulty equipment or human error.

Commence rescue

- Do not panic. The most important person in the rescue is YOU. Be aware of the dangers and treat them with respect.
- During a rescue, if the victim is unconscious, he may be panicked when he regains consciousness. Be prepared for a possible violent reaction: Most people do not remember what happened to them prior to losing consciousness. When consciousness is regained they are now dangling from their safety line and the last thing they remember is working in the derrick - expect a reaction!
- Remember: all team members more than 6 feet above the rig floor have to have primary and secondary attachment points

Stabilize for transport

- During the rescue, one of the most important things a person must always

keep in mind is stabilizing the patient and maintaining this as well as possible until emergency transport arrives. After a fall there may be injury to either the back and or neck - maintain restriction of movement in these areas as much as possible until he is immobilized on a spinal board. e.g. physically holding the persons head in a fixed and straight position until it is duct taped to the spinal board.

7.1.3.2 Emergency Rescue Equipment

- 1 Stokes basket
- 1 Spinal board
- 3 Spinal board straps
- 2 Full body harnesses
- 2 First climb systems (ladder climbs)
- 2 Tag lines (minimum height of derrick and comes with snap hooks)
- 1 Scaffold carabineer
- 5 Three inch 5000 lb. carabineers
- 2 Three foot synthetic anchorage slings
- 2 Two foot safety cables
- 1 Roll of duct tape
- 25 Feet of sash cord
- 1 Fold away stretcher: (for ground use only and only if stokes basket is unavailable)
- Escape buggy

7.1.4 Types of Rescue

In the event of a fall and consciousness is maintained, self-rescue, if there are no serious resulting injuries, can be initiated. The first part of any rescue including a self-rescue is to examine the complete situation without panicking and to yell out to make sure ground crew members are aware of your situation.

Depending on the situation, three scenarios may result:

1. Assisted self-rescue
2. Complete self-rescue
3. Retrieval

Retrieval results when the victim has lost consciousness or is unable to assist in his own rescue.

Assisted self-rescue results when the victim is able to pull himself to a ladder, girth etc. and regain his foothold and descend to the ground level. Decent must not occur until the victim has a suitable plan of descent incorporating a fall arrest device.

Complete self-rescue results when immediate hazards exist that require you to initiate self-rescue without having the time to notify anyone that you have sustained a fall. This situation may occur when a fall is sustained and your fall arresting line is pinched and could separate or when you are in the path of moving equipment etc. Immediate self-rescue may

also occur when the escape buggy is utilized. This situation is to be utilized in an emergency situation only.

In any incident, all victims are to always descend to the ground level to have the Driller and/or Toolpusher verify that victim is not injured and is able to resume their duties.

7.1.4.1 Retrieval

Suspended from the Monkey Board

1. DEVISE A RESCUE PLAN.
2. One-rescue personnel to ascend to the derrick platform using the ladder climbs.
3. To attach him to one of the many work positioning attachment points at the monkey board using either a synthetic anchor or the ladder hook on the climb assist.
4. A carabineer to be attached to the monkey board fall arrest attachment point and the man rider line to pass through the carabineer.
5. Rescuer to have a scaffold carabineer on his chest D-ring to attach with the victims dorsal D-ring.
6. A tag line to be attached to the rescuers' side D-rings.
7. The man rider to be attached to the rescuers chest D-ring (with a 2-foot safety cable attached from dorsal D-ring to the thimbled man rider end) and then lifted with the man rider.
8. The rescuer to give directions to the man rider operator at all times. If directions stop from the rescuer, then movement of the man rider is to stop.
9. Rescuer to hold himself close to the victim by clasping his legs around the victim from behind and attaching himself to the victims dorsal D-ring with the scaffold carabineer.
10. Detach the victim from his own fall arresting cable.
11. Lower the victim while suspended from the rescuer with the man rider and have the ground crew utilize the tag line to prevent the rescuer and victim from hitting any obstructions on the way down.
12. Rescuer to maintain the victims head position as stable as possible in order to minimize any possible or further neck or spinal injury.

Immobilized at the Monkey Board

1. DEVISE A RESCUE PLAN.
2. Two rescue personnel to ascend to the derrick platform using the ladder climbs.
3. Both to attach themselves to one of the many work positioning attachment points at the monkey board using either a synthetic anchor or the ladder hook on the ladder climbs.
4. Render any immediate First Aid that may be required due to any possible life threatening conditions.
5. Await the arrival of the basket stretcher guided by two tag lines from below.
6. Secure the basket stretcher to one side of the derrick or leave hanging in

the man rider.
7. Secure the victim to the spinal board, strap him in using the three nylon straps and duct tape his head to the board.
8. Place the stokes basket beside the victim and place him in the basket and secure with sash rope in a shoe lace fashion.
9. Lower the individual with the man rider and guided with two tag lines from below.

If the man rider is used to lower the victim, use a safety cable attached to the thimbled man rider end and attached to the 4-point litter harness with a carabineer.

Suspended from the derrick along its structure
1. DEVISE A RESCUE PLAN.
2. Reach his location either by way of the man rider or by manually climbing to his location using ladder climbs.
3. One-rescue personnel to attach a synthetic anchor above the suspended victim for the rescuers shock absorbent lanyard.
4. If his climb assist, shock absorbent lanyard or fall arrest line etc… is damaged from the fall and is out of service, attach a synthetic anchor around a major girth in the Derrick and attach him to it with a suitable lanyard and detach the same lanyard prior to lowering him.
5. Raise the man rider to his location guided by a tag line
6. Attach a tag line to the victims' side D-ring.
7. Attach the man rider to the victim's dorsal D-ring and use a 2-foot safety cable between the chest D-ring and the thimbled end of the man rider.
8. Direct the ground level rescue crew below to begin lowering the victim and to guide him as he is lowered.
9. The rescuer in the derrick is to be watched by a rescuer at ground level to relay any information to the Driller. Watch for snags in the man rider line or snags between the derrick and victim.
10. Another rescuer at ground level is to watch the victim being lowered to relay any information to the Driller. Watch for snags in the man rider line or snags between the derrick and victim.

Immobilized in the mud tank
1. DEVISE A RESCUE PLAN and do not enter before it is determined if the immobilization was caused by O2 deficiency and/or, H2S or LEL exposure.
2. If a gas is present, don your breathing apparatus and commence rescue proceedings.
3. If gas is present and rescue proceedings are determined to be extenuating, don a breathing apparatus to the victim and apply positive air to his unit.
4. If H2S is determined to be the cause of the person's state, then time is of absolute essence. If possible, pull the victim through the side trap doors on the tank. Do this by paying special attention to the victim's head position to minimize any possible damage.
5. If using the trap door is not an option, place the victim on a spinal board.

Strap him in and then tie him down shoelace fashion using sash cord.
6. Two workers to lift the board to a standing position in the tank below the tank floor trap door and two more individuals to lift him up through the door while the 2 men below push up.
7. The victim needs to be secure so that he does not slip through the sash cord and fall off of the spinal board.

Though a work permit is not required for a confined space rescue, nor is there the time to complete one, one should already be in place from the actual work that was being performed prior to the emergency. This permit would have outlined precautions, gas detection procedures and monitoring, and rescue procedures.

7.1.4.2 Assisted Self

Suspended from the Monkey Board

1. One-rescue personnel to ascend to the derrick platform using a ladder climb lanyard.
2. Attach a tag line to the man rider so it may be directed to the victim from the ground level.
3. The man rider to be self-attached to the chest D-ring of the victim (with a 2-foot safety cable attached from the dorsal D-ring to the thimbled manrider end)
4. Self-attach the tag line that was used to raise and direct the man rider to your chest or side D-ring to allow ground rescue personnel to direct you away from any obstructions.
5. Raise the victim so he may detach himself from the monkey board fall arrest and/or the work-positioning lanyard.
6. Lower the victim slowly.

The roll of the rescue personnel at the monkey board is primarily to assist the victim in initiating self-rescue and to insure that maneuvers made during self-rescue are correct.

Direction given to the man rider operator, are to come from the victim if possible or from one other person only.

Suspended from the derrick along its structure

1. If while suspended, and a girth or derrick component cannot be reached, have the man rider guided to you by a tag line from below and attach yourself to the man rider.
2. Incorporate the 2-foot safety cable between the thimbled end of the man rider and the chest D-ring.
3. Attach the tag line to your side D-ring in order for the ground crew to guide you down.
4. Direct the tugger man rider for your descent.

Suspended from the derrick above the tuggers reach

1. If while suspended, and a girth or derrick component cannot be reached,

have the tag line lowered to the victim and once he is attached, direct him either from above or below to a girth or derrick component.

2. Once close to the derrick, pull yourself to the structure and climb down.

7.1.4.3 Complete Self

Simply reach for a girth or derrick structure and pull yourself towards it and climb down.

If the fall arresting unit was damaged during or after a fall, stay where you are and communicate to the floor that you require a climb assist lanyard (ladder climb) before you are able to descend. Never forget the primary and secondary attachment points and all personnel, including the victim, will remain safe.

7.1.5 Shackles, Hooks, Slings, & Clips

7.1.5.1 Shackles

Usage

Shackles are used as a means of attachments between the derrick and some of its sheaves or safety lines and also used as a means of attachment between cable and equipment such as the tongs etc.

Inspection

All shackles shall be visually inspected (records not required) each day they are used or prior to use if the shackle is not in regular service. A periodic inspection (with records) shall also be made at least annually by a qualified person Fall Protection log. The inspection must cover:

- Are all overhead shackles complete with the proper bolt and locked with a cotter pin.
- Have any of the shackles been welded on. Overhead shackles that are welded to do not meet the manufactures' standards and will no longer meet their specific working load limits (WRL).
- Are there any signs of deformation; nicks, gouges, cracks, corrosion or spread between the fingers.
- The included angle (maximum area to be used for a load) should not exceed 120 degrees.
- Installed correctly: nut threaded and cotter pin bent over.

In addition to the detailed monthly inspections, the user must inspect the hardware as part of the inspection on the derrick prior to it raising and lowering AND AT REGULAR INTERVALS. Damage can occur at any time to these items since they are used regularly.

If there are any questionable signs of malfunction or diminished integrity, it is to be replaced.

7.1.5.2 Hooks

All hooks shall be visually inspected (records not required) each day they are used or prior to use if the hook is not in regular service. A periodic inspection (with records) shall also be made at least annually by a qualified person. The inspection must cover:

- All hooks to have functioning positive latches.
- A space no greater than 4 millimeters between the hook tip and its closed latch tip.
- Have any of the hooks been welded on. Hooks that have been welded to do not meet the manufactures' standards and will no longer meet their specific working load limits (WRL).
- Are there any signs of deformation; nicks, gouges, cracks, corrosion or spread between any of its components.

Usage
Hooks are another item that are frequently used in the wrong manner. For a single sling load, the load must be in the base of the hook - hooks are not constructed to support weight or pull a load on or from its tip. For a load using two or more slings, the load must be in the base and within its included angle of 90 degrees.

The user must inspect the hardware as part of EVERY DAY DUTIES ON A CONTINUAL BASIS! Damage can occur at any time to these items since they are used daily.

If there are any questionable signs of malfunction or diminished integrity, it is to be replaced.

7.1.5.3 Slings

Wire rope is often used in slings because of its strength, durability, abrasion resistance and ability to conform to the shape of the loads on which it is used. In addition, wire rope slings are able to lift hot materials.

Synthetic web slings offer a number of advantages for rigging purposes. The most commonly used synthetic web slings are made of nylon- or polyester-type yarns.

All slings shall be visually inspected (records not required) each day they are used or prior to use if the sling is not in regular service. A periodic inspection (with records) shall also be made at least annually by a qualified person. The inspection must cover:

For wire rope slings, check for:
- Not to exceed 10 randomly distributed broken wires in one rope lay or 5 broken wires in one rope strand in one rope lay.

- Severe localized abrasion or scrapping.
- Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure.
- Heat damage.
- End attachments that are corroded cracked, deformed or worn beyond 10 percent of its original integrity.
- Note: the tolerance for a wire rope ending is one broken strand.

For webbed slings, check for:

- Frays, cuts, broken fibers, discoloration, mold, burns, pulled stitches, charring etc.
- Cleanliness: sling to be cleaned frequently with water and mild detergent.
- Labels: indicating date of manufacture, manufacturer, serial number and model number.
- Check for stitch wear: breaks or frays in the thread.

The user must inspect the hardware as part of EVERY DAY DUTIES ON A CONTINUAL BASIS! Damage can occur at any time to these items since they are used daily.

If there are any questionable signs of malfunction or diminished integrity, it is to be replaced.

7.1.5.4 Clips

All clips shall be visually inspected (records not required) each day they are used or prior to use if the clip is not in regular service. A periodic inspection (with records) shall also be made at least annually by a qualified person. The inspection must cover:

- Severe localized abrasion or scrapping.
- First clip positioned as close as possible to the loop of the thimble and the remaining evenly spaced and allowing for a tail
- If they are sufficiently tight. A load test to be applied equal or greater weight on new installation and the tightness once again verified
- Orientation of the clips "never saddle a dead horse". The side of the clip with the nut is called the saddle, and it is this side that receives the live end.

The user must inspect the hardware in direct frequency of its daily use. Thus, for tongs and wire rope endings using clips, they are to be inspected daily. For clips on lifting devices such as the one securing the cable for the doghouse lifting device, they are to be inspected at least monthly and all to be indicated log book portion of this manual as part of the weekly inspections.

If there are any questionable signs of diminished integrity, it is to be replaced.

7.2 Hearing Conservation Program

All drilling rigs have areas where the noise produced exceeds 82 decibels. These areas are clearly marked by signs, which indicate the hearing protection must be worn by anyone working in this area. In general, this also applies to all areas except the doghouse and Toolpusher's well site unit. Additional information can be found in the ASH Handbook.

- Occupational Safety and Health Regulations state that any worker who will be exposed to noise levels about 82 dBA for than an eight hour period shall:
  - Have his hearing tested within six months of becoming a noise-exposed worker.
- Kuukpik Drilling may supply several types of hearing protection at work sites to try and find a comfortable fit for employees. All rigs should carry:
  - Class A ear plus (re-usable or disposable) which will provide adequate protection in all areas.
  - Ear muffs conforming to ANSI standard S3.19
- All workers will be informed of the hazardous noise areas on the work site when they arrive at the work site. They will be provided with ear plugs and shown where the ear muffs are stored. If they are unfamiliar with the type of hearing protection provided, the supervisor will show them how to wear it correctly and will also ensure that **everyone complies with wearing their hearing protection.**
- Loss usually occurs over many years and can be very gradual thus most workers do not notice hearing loss until it becomes quite significant. It is Company Policy that all employees wear hearing protection in designated areas. It is also *highly recommended* that hearing protection be worn at all times.
- Any worker that notices a sudden change in hearing after a loud noise or after an ear infection should have his hearing re-tested as soon as possible to determine if hearing damage has occurred.

Appendix A – Training Requirements

Training	Position	Frequency
North Slope Training Coop/or Refresher	All	Yearly
Confined Space Entry NSTC	All	Yearly
Hazard Communication NSTC	All	Yearly
Hearing Conservation NSTC	All	Yearly
Ionizing Radiation (Norm) NSTC	All	Yearly
Lockout/Tag-Out NSTC	All	Yearly
Management of Change / Risk Assessment	All	Yearly
Respiratory Protection NSTC	All	Yearly
Respiratory Protection Annual Medical Approval/Fit Test	All	Yearly
ASH Handbook	All	Yearly
Hot Work, Confined Space, Work Permits	All	Yearly
Energy Isolation Lockout Tagout	All	Yearly
Forklift Training	Operators	3 years
Waste Management	All	Yearly
Kuukpik Drilling's Employee Handbook	All	Yearly
Kuukpik Drilling's HSE Plan	All	Yearly
Kuukpik Drilling's Safety Manual	All	Yearly
Kuukpik Drilling's Procedures & Guidelines	All	Yearly
Fire Extinguisher Portable	All	Yearly
Emergency Response Plan	All	Yearly
Atmospheric Testing Devises	All	Yearly
H_2S	All	Yearly
BOP Surface/Subsea Training Expiration	Toolpushers	2 Years
BOP Training	Drillers	2 Years
BOP Training	Relief Drillers	2 Years
8 Hr. Hazwopper Training (at customer request)	All	Yearly
Behavior Based Safety Systems	All	2 Years
First Aid	All	2 Years
CPR	All	2 Years

Appendix B – Environmental Compliance Matrix

Environmental Discipline	Citation (Regulation, Policy, Permits)	Compliance Obligation or Task	Responsibility	Frequency	Record Keeping (Who? Where? How long?)
AIR QUALITY					
Air Quality	Air Quality Permits as required by customer	Maintain continuous fuel consumption log for customer permit requirements as required by customer.	Rig Managers	Continuous; compile for customer report	Retain fuel consumption records for each unit. Document on daily work tickets. For affected units.
Air Quality	Customer requirements for ADEC Air Quality Permit	Record the operating hours/days for all emission sources. As required by customer	Rig Managers	Continuous; compile for customer report	Retain operating hour records for customer reports as required.
WASTEWATER					
Customer Waste Fluids	UIC; AOGCC	Track volumes of customer waste fluids that require injection.	Rig Managers	As required	Volume of fluids delivered for disposal recorded on work tickets
NON HAZARDOUS & EXEMPT WASTE					
Nonhazardous waste	ADEC 18 AAC 60.010 and NSB Title 19	Accumulate and store, (dumpsters) and/or treat solid wastes to avoid creating a health hazard, litter, pollution or attracting wildlife	Kuukpik field management	Ongoing	Financial Record System tracks dumpster use.
Nonhazardous waste	ADEC 18 AAC 60.200	Ensure only permitted solid waste disposal facilities are used	Kuukpik field management	As necessary	Mechanisms are in place to ensure only permitted solid waste disposal facilities are used

Environmental Discipline	Citation (Regulation, Policy, Permits)	Compliance Obligation or Task	Responsibility	Frequency	Record Keeping (Who? Where? How long?)
NON-HAZARDOUS					
Nonhazardous waste	Policy	Provide certification training for generators, transporters and receivers of nonhazardous fluids/wastes, Customer red book training for all employees	Kuukpik field management	2 years	Certification training records retained by field management
HAZARDOUS WASTE					
Hazardous wastes	40 CFR 262.11	Make hazardous waste determination	Kuukpik Management	When wastes are first generated	Hazardous waste determination retained in files 5 yrs
Hazardous wastes	40 CFR 262	Determine monthly waste generation and storage volumes	Kuukpik field management	Monthly	Daily waste logs in office
Hazardous wastes	N/A	Label Accumulation Areas	Kuukpik field management	When initially established	N/A
Hazardous wastes	40 CFR 265.16	Arrange and coordinate RCRA (Redbook) training	Kuukpik field management	2 years	Personnel training files and training materials. Retain indefinitely
Hazardous wastes	40 CFR 263	For Kuukpik shop operations: Arrange waste transportation & disposal, maintain status of "conditionally exempt small quantity generator"	Kuukpik field management	As necessary	N/A
Hazardous wastes	40 CFR 265.174	Conduct storage area inspections if waste is present and stored.	Kuukpik field management	Weekly	Weekly inspection

Hazardous wastes	40 CFR 262.20	Complete and sign manifest that is provided by waste disposal company	Kuukpik field management	Prior to waste shipment leaving site	Completed manifest & original from TSD in files 5 yrs
Hazardous wastes	40 CFR 265 Subpart D	Update preparedness and prevention plan when changes take place to operations.	Kuukpik field management	Annually as required	N/A
Environmental Discipline	**Citation (Regulation, Policy, Permits)**	**Compliance Obligation or Task**	**Responsibility**	**Frequency**	**Record Keeping (Who? Where? How long?)**
		USED OIL			
Controlled Waste	40 CFR 279	Label all used oil containers including drip and drain pans "Used Oil"	Kuukpik field management	Prior to storing or collecting any used oil	N/A
Controlled Waste	40 CFR 279	Hot drain and crush, puncture, or dismantle used oil filters	Kuukpik lead mechanic	nonhazardous oily waste	N/A
Controlled Waste	40 CFR 279	Sample used oil and test for halogens.	Kuukpik lead mechanic	Monthly spot check	Used oil sampling results retained in used oil file
		RECYCLING & REUSE "OTHER REQUIREMENTS"			
Recycling and Reuse	Best Management Practice	Recycle waste and reuse materials where possible	Kuukpik field management	Continuous	N/A
		SPILL PREVENTION, RESPONSE & NOTIFICATION			
Spill Prevention	Best Management practices	Maintain spill response equipment for yard and shop operations	Kuukpik management	Verify during weekly inspections	Weekly inspection
		TRAINING, DRILLS, & EXERCISES			
Spill Prevention	Kuukpik and customer required training	Maintain personnel training records	Kuukpik field management	As necessary	Training records
		OIL TRANSFER REQUIREMENTS			

Spill Prevention	Kuukpik and customer policies and procedures	Maintain procedures for preventing spills during loading and offloading operations	Kuukpik field management	Continuous	Retain procedures for preventing spills during loading and offloading

OIL TRANSFER "OTHER REQUIREMENTS"

Spill Prevention	Policy Mandatory use of drip pans/surface liners	Surface liners required for all transfer operations	Kuukpik field management	During all chemical/fuel transfers	N/A
Environmental Discipline	**Citation (Regulation, Policy, Permits)**	**Compliance Obligation or Task**	**Responsibility**	**Frequency**	**Record Keeping (Who? Where? How long?)**

SECONDARY CONTAINMENT

Spill Prevention	40 CFR 112	Ensure oil tanks have secondary containment the volume of the largest single tank plus precipitation & adequate dikes berms, or walls, and made of impermeable materials	Kuukpik field management	Continuous - All tanks	Retain updated tank inventory in yard location drawing
Spill Prevention	40 CFR 112	Check tank containment areas for leaks or spills	Kuukpik field management	Weekly inspection	Retain documentation of secondary containment inspections in files for life of facility
Spill Prevention	18 AAC 75.075(c)	Maintain secondary containment areas free of debris and accumulated water.	Kuukpik field management	Continuous - but most important in the spring	Retain documentation of secondary containment inspections and corrective action in weekly inspection files

SPILL REPORTING

Spill Reporting	18 AAC 75.300 & NSBMC Title 19	Report spills to Kuukpik management and customer	Kuukpik field management	At time of spill or when reported	Spill files retained indefinitely in Kuukpik Drilling's office.
Spill Reporting	18 AAC 75.300 & NSBMC Title 19 CERCLA	Report spills to agencies	Kuukpik management	Per Kuukpik spill reporting SOP	Spill files retained indefinitely in Kuukpik Drilling's office.

CHEMICAL INVENTORY AND REPORTING

Chemical Inventories	SARA Title III	Provide additional chemical inventory data to ANC HSE	Kuukpik field management	As requested by ANC management	N/A

Appendix C - Environmental Aspects Worksheet

Activity	Process	Aspect	Impact
Rig Operations	Equipment Maintenance		Potential 1 – 5 / Severity 1 - 5
	1. Used oil disposal	Storage for recycling	Air pollution 3/4
	2. Used glycol	Storage for recycling	Water and land Pollution 2/4
	3. Contaminated diesel	Storage for beneficial use	Water and land Pollution 2/4
	4. Old battery disposal	Storage for recycling	Water and land Pollution 2/4
	5. Parts cleaning	Storage and use of solvents	Water and land Pollution 1/ 4
	6. Tire maintenance	Disposal of and recycling old tires	Land Pollution 1/1
	7. Maintenance Painting	Storage and use of paint products	Water and land Pollution 2/4
	8. Filter changes	Disposal of old filters	Water and land Pollution 2/3
	8. Welding and cutting	Heat, smoke, light radiation	Human 2/2
		Scrap iron disposal	Land Pollution 1/1
Rig Operations	Location Operations		
	1. Snow removal	Disposal of snow	Water and land Pollution 3/ 4
	2. Vehicle storage	Fuel and oil leaks	Water and land Pollution 3/5
	3. Bulk fuel storage	Leaks and fuel transfer	Water and land Pollution 3/5
	4. Oil storage	Leaks and oil transfer	Water and land Pollution 2/4
	5. Equipment storage	Fuel and oil leaks	Water and land Pollution 2/4
Vehicle Operations	Transportation Issues		
	1. Road safety	Driver qualification	Human 3/5
		Equipment condition	Human, Water and land Pollution
	2. Equipment hauling	Leaks and spills	Water and land Pollution 4/4
	3. Road engines	Engine emissions	Air Pollution 4/2

Appendix D – Waste Stream Identification

Waste Generated (Description)	Amount Generated Lbs./Month	Waste Classification (H=Hazardous, N=Nonhazardous, O=Oily, E=Exempt, U=Universal, X=Other, P=Product)	Basis of Waste Classification (A=Analytical, M=Manufacturer, L=Label, G=Generator Knowledge, O=Other [specify])	Waste Transfer or Disposal Method
Used lubricating oil	500	E	G	Recycle Facility, or Class I Disposal Well
Oily rags and absorbents	100	O	G	Incinerator
Fuel filters	20	E	G	Incinerator
Used oil filters	30	O	G	Drain
Used Glycol	50	P	G	Hold and recycle
Empty paint cans	20	N	G	Dry and put in dumpster
Paint thinner	0	H	G	Use up no waste
Used lead acid batteries	200	E	G	Recycle
Scrap iron	500	N	G	Recycle
Aerosol cans	5	E	G	Empty and place in dumpster
Cleaning solvent	0	H	M	Replenish no waste
Broken boards	100	N	G	Dumpster
Plowed snow	Unknown	N	G	Stack on pad
Old hose	200	N	G	Dumpster
Grease rags	20	O	G	Customer SAA
Absorbents	20	O	G	Customer SAA
Down hole waste fluids	Unknown	E	Customer	Customer site

Details

LICENSE DETAILS

Print Business License

License #: 291773

Business Name: KUUKPIK DRILLING, LLC

Status: ACTIVE

Business Type: LLC

Issue Date: 10/30/2002

Expiration Date: 12/31/2020

Primary Line Of Business: 23 - Construction

Primary NAICS: 236220 - COMMERCIAL AND INSTITUTIONAL BUILDING CONSTRUCTION

Secondary Line Of Business:

Secondary NAICS:

Mailing Address: 582 EAST 36TH AVE STE 600, ANCHORAGE, AK 99503

Physical Address: 582 EAST 36TH AVE STE 600, ANCHORAGE, AK 99503

Owners

KUUKPIK DRILLING, LLC

Endorsements

No Endorsements Found

Close Details | Print Friendly Version

Alaska Business License # **291773**

Alaska Department of Commerce, Community, and Economic Development

Division of Corporations, Business and Professional Licensing
P.O. Box 110806, Juneau, Alaska 99811-0806

This is to certify that

KUUKPIK DRILLING, LLC

582 EAST 36TH AVE STE 600 ANCHORAGE AK 99503

owned by

KUUKPIK DRILLING, LLC

is licensed by the department to conduct business for the period

October 15, 2018 through December 31, 2020
for the following line of business:

23 - Construction

This license shall not be taken as permission to do business in the state without having complied with the other requirements of the laws of the State or of the United States.

This license must be posted in a conspicuous place at the business location.
It is not transferable or assignable.

Julie Anderson

OSHA's Form 300A (Rev. 01/2004)
Summary of Work-Related Injuries and Illnesses

Year 2015

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	1	0	1
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
15	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	2	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Establishment information

Your establishment name: Kuukpik Drilling LLC

Street: 562 E. 36th Ave. STE 600

City: Anchorage State: Alaska Zip: 99503

Industry description (e.g., Manufacture of motor truck trailers)
Oil and Gas Drilling

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 3 8 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)
2 1 3 1 1 1

Employment information

Annual average number of employees: 32

Total hours worked by all employees last year: 71,234

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

G.M.
Title

(907) 279-6216
Phone

2/1/16
Date

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2016

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	2	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
164	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		
(1) Injury	2	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Establishment information

Your establishment name: Kuukpik Drilling LLC

Street: 582 E. 36th Ave. STE 600

City: Anchorage State: Alaska Zip: 99502

Industry description (e.g., Manufacture of motor truck trailers)
Oil and Gas Drilling

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 3 8 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)
2 1 3 1 1 1

Employment information

Annual average number of employees: 35

Total hours worked by all employees last year: 92,483

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

Title: Contract Mgr.

(907) 279-6214
Phone

Date: 1/30/17

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2017

U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	2	0	1
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
111	0
(K)	(L)

Injury and Illness Types

Total number of...	(M)		(M)
(1) Injury	3	(4) Poisoning	0
(2) Skin Disorder	0	(5) Hearing Loss	0
(3) Respiratory Condition	0	(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Establishment Information

Your establishment name: Kuukpik Drilling LLC

Street: 582 E. 36th Ave. STE 600

City: Anchorage State: Alaska Zip: 99502

Industry description (e.g., Manufacture of motor truck trailers)
Oil and Gas Drilling

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 3 8 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)
2 1 3 1 1 1

Employment Information

Annual average number of employees: 101

Total hours worked by all employees last year: 227,206

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Company executive

GENERAL MGR
Title

(907) 279-6216
Phone

1/8/18
Date

ANCHORAGE DAILY NEWS

State investigates death of oilfield worker reportedly struck by pipe

Author: **Alex DeMarban** Updated: 5 hours ago Published 15 hours ago

State agencies and oil field companies are investigating the death of a worker killed Friday in a "pipe mishandling incident" at a North Slope field operated by Hilcorp Alaska, according to a state official.

New but limited details emerged Tuesday about the early-morning fatality at Milne Point field.

Hilcorp, a company that has previously come under investigation for multiple safety violations, and contractor Kuukpik Drilling, the worker's employer, declined to provide information about the accident while the case is under investigation.

"It's a pretty emotional time for all of us," said Kenny Overvold, general manager of Kuukpik Drilling, with about 50 employees.

He said the companies are conducting internal investigations and cooperating with agencies.

"At this point we don't have anything new to release," he said.

Claire Pywell, with the Alaska Department of Labor and Workforce Development, said the fatality occurred at 3 a.m. Friday.

An investigator with the Alaska Occupational Safety Health and Division flew to the scene Friday, she said.

The victim's name has not been released, a step awaiting family notification procedures, Pywell said.

Hollis French, chairman of the Alaska Oil and Gas Conservation Commission, said he spoke with Dave Wilkins, senior vice president of Hilcorp Alaska, on Friday.

Wilkins characterized the death as resulting from a "pipe mishandling incident," according to French.

The worker was struck by heavy drilling pipe, French said.

"It looks like a piece of pipe was mishandled on the rig floor," French said.

"They were laying down pipe," he said, requiring sections of pipe to be moved during a drilling operation.

Hilcorp spokeswoman Lori Nelson provided a statement Tuesday that said "the cause of the incident is not known."

"We are deeply saddened by this news and our thoughts and prayers with their family and loved ones," the statement said.

Kenai radio station KSRM reported the incident Friday, noting that drilling operations were suspended following the fatality.

French said the AOGCC is monitoring the investigation and will review details when it's complete, he said.

The incident does not appear to be a violation of AOGCC procedures, he said.

In an earlier incident at Milne Point in 2015, the agency investigated the near-suffocation of three contractors for Hilcorp that improperly used nitrogen gas during a well clean-out, forcing oxygen to be displaced from a trailer where the men were working.

That led to a $200,000 fine from the agency. It also prompted a close look at Hilcorp missteps at its operations in Alaska, said French.

AOGCC later released a lengthy list of Hilcorp violations dating back to 2012, not long after the Houston, Texas-based company began operating in Alaska.

But AOGCC later credited the company for taking steps to prevent future problems. The improvements included the company's Cook Inlet operations, after one of its sub-sea natural gas pipelines leaked for months before sea ice cleared enough for divers to safely repair it in spring 2017.

In October, Hilcorp completed a $90 million project to move oil across the Inlet by subsea pipe instead of tankers, a step long sought by watchdog groups.

About this Author

Alex DeMarban

Alex DeMarban is a longtime Alaska journalist who covers the oil and gas industries and general assignments. Reach him at 907-257-4317 or alex@adn.com.

Comments

ANCHORAGE DAILY NEWS

State investigates death of oilfield worker reportedly struck by pipe

Author: **Alex DeMarban** Updated: 22 hours ago Published 1 day ago

State agencies and oil field companies are investigating the death of a worker killed Friday in a "pipe mishandling incident" at a North Slope field operated by Hilcorp Alaska, according to a state official.

New but limited details emerged Tuesday about the early-morning fatality at Milne Point field.

Hilcorp, a company that has previously come under investigation for multiple safety violations, and contractor Kuukpik Drilling, the worker's employer, declined to provide information about the accident while the case is under investigation.

"It's a pretty emotional time for all of us," said Kenny Overvold, general manager of Kuukpik Drilling, with about 50 employees.

He said the companies are conducting internal investigations and cooperating with agencies.

"At this point we don't have anything new to release," he said.

Claire Pywell, with the Alaska Department of Labor and Workforce Development, said the fatality occurred at 3 a.m. Friday.

An investigator with the Alaska Occupational Safety and Health office flew to the scene Friday, she said.

The victim's name has not been released, a step awaiting family notification procedures, Pywell said.

Hollis French, chairman of the Alaska Oil and Gas Conservation Commission, said he spoke with Dave Wilkins, senior vice president of Hilcorp Alaska, on Friday.

Wilkins characterized the death as resulting from a "pipe mishandling incident," according to French.

The worker was struck by heavy drilling pipe, French said.

"It looks like a piece of pipe was mishandled on the rig floor," French said.

"They were laying down pipe," he said, requiring sections of pipe to be moved during a drilling operation.

Hilcorp spokeswoman Lori Nelson provided a statement Tuesday that said "the cause of the incident is not known."

"We are deeply saddened by this news and our thoughts and prayers with their family and loved ones," the statement said.

Kenai radio station KSRM reported the incident Friday, noting that drilling operations were suspended following the fatality.

French said the AOGCC is monitoring the investigation and will review details when it's complete, he said.

The incident does not appear to be a violation of AOGCC procedures, he said.

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ANCHORAGE DAILY NEWS

Alaska News

Police: 'Equipment accident' killed 36-year-old Alaska oil field worker

Author: **Alex DeMarban** Updated: 1 hour ago Published 1 hour ago

The North Slope Borough Police Department on Thursday released the name of the 36-year-old man who died last week at a North Slope oil field, and said a preliminary investigation has determined an "equipment accident" was to blame.

Shawn Huber was pronounced dead at 3:40 a.m. Friday after the incident at the Milne Point oil field, the agency said. His death is the first workplace fatality on North Slope oil fields since 2012, according to the state Labor Department.

Huber worked for Kuukpik Drilling, a contractor for Hilcorp Alaska, the field's operator.

The companies have confirmed a Kuukpik worker was "fatally injured" in the overnight incident. But they refused to release additional details, including the victim's name or his role at Kuukpik, citing an ongoing investigation by regulatory agencies and the companies. They did not immediately respond to requests for comment Thursday.

Huber listed his address in Wasilla, public records show.

The chair of the Alaska Oil and Gas Conservation Commission, Hollis French, said Tuesday that a Hilcorp executive reported that the death involved a "pipe mishandling incident," with the worker struck by heavy drilling pipe.

A Gofundme page in Huber's name has raised more than $100,000 to help cover funeral and other family expenses. It says Huber leaves behind a wife and three children.

Huber died at the Innovation 1 drill rig, Jeffrey Brown, borough police chief, said by email.

Rescue workers responded to a report of an injured and unresponsive worker but could not revive Huber. "The preliminary investigation shows the death is attributed to an equipment accident," Brown said.

The police department's investigation remains open as it awaits autopsy results from the state medical examiner, Brown said.

"The North Slope Borough Police Department extends its condolences to the family and friends of Mr. Huber," he said.

The Alaska Occupational Safety and Health office is also investigating the incident. The AOGCC will review details of the investigation.

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Safety Alert

From the International Association of Drilling Contractors

ALERT 11 – 24

THREE DROPPED-OBJECT INCIDENTS OCCUR WHILE TRIPPING OUT OF THE HOLE

WHAT HAPPENED:

Three incidents resulted in separate dropped-object incidents. They are:

1. While the driller was picking up the pipe in the slips, the hydraulic hose on the elevators came loose and the elevators opened.
2. During a trip out of the hole the driller was in the process of setting back a stand of pipe and he opened the hydraulic elevators before the stand was fully set back. This resulted in dropping the stand on the rig floor.
3. Following jarring operations, when pulling out of the hole, the cover on the elevator hydraulic fittings came loose and fell toward the floor. The derrickman noticed the cover had moved and caught it!

WHAT CAUSED IT:

1. Quick connect fittings were substituted for the original equipment swivel connections on the hoses.
2. Inadequate procedure: A new procedure required the Driller to not touch the open switch until the stand touches the pipe rack.
3. The cover did not have a safety strap in place as did the Off-Driller's Side cover. Jarring took place for several days before a comprehensive inspection of the top drive took place.

CORRECTIVE ACTIONS: To address this incident, this company did the following:

- Remember to use the original equipment recommended by the manufacturer.
- Substituting equipment may cause serious consequences (as in the case of the quick connect vs. the swivel connect). In this case, the elevators came open while "picking up" the pipe that was still in the slips. The elevators could easily have opened up, thereby dropping a stand on someone's foot or dropping a string down the hole.
- Hydraulic elevators are nice technology with built-in conveniences; yet there are some problems that are being highlighted, such as inadvertently opening them while they are suspending pipe. In this case, the elevator's "open" function was activated and the pipe could have fallen on someone's foot.
- Top drives and auxiliary equipment vastly increase the number of potential "derrick apples" (things that can fall on floor-hands); so be sure to examine top drives daily for potential falling objects.

The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.

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