Husky Energy

Husky Energy Individual Panel Presentation

Offshore Helicopter Safety Inquiry

January 25-26, 2010





- Our Safety Culture
- East Coast Operations
- Regulatory Environment
- SeaRose Safety Plan
- Contracted Services and Materials
- Compliance and Performance Monitoring
- Helicopter Operations
- Emergency Preparedness
- Response to March 12th



Corporate Overview

- Fully integrated energy company with upstream, midstream and downstream operations
- 70-year track record of responsible development with operations in Canada, USA, Greenland, China and Indonesia
- Husky is committed to growing in a socially responsible manner. Safety, environmental stewardship and community participation are core values
- Husky maintains a proactive approach in a number of areas, including:
 - Health, Safety and Environment
 - Aboriginal Affairs
 - Community Investment
 - Diversity



Canada's East Coast

- Husky has been active in NL for over 25 years
- White Rose oil discovery 1984
- Opened St. John's office in 1997
- Current personnel ~ 625 including contractors
- Interests in Jeanne d'Arc Basin
 - White Rose
 - North Amethyst
 - Terra Nova
 - 17 exploration licenses
 - 22 Significant Discovery Areas



Presentation Outline



Husky Energy

• Our Safety Culture

- East Coast Operations
- Regulatory Environment
- SeaRose Safety Plan
- Contracted Services and Materials
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Our Safety Culture



Husky's Safety Culture encompasses:

- Visible Management commitment
- Understanding values and priorities
- Sound knowledge of health and safety throughout the organization
- Honest and open communication
- Respect for people
- Participation at all levels meaningful involvement of personnel
- Performance Accountability
- Learning Organization measuring performance and setting goals
- Continuous Improvement

Occupational Health & Safety Committee

The requirements for an occupational health and safety (OH&S) committee are stipulated under the Newfoundland & Labrador Occupational Health & Safety Act. Husky Energy fully support the role and function of the OH&S Committee

The OH&S Committee is an essential component of successful safety management and fundamental to creating a positive safety culture

- Organization & Function of the Committee
- Committee Training
- Activities of the Committee



Communication



Communication between employees, supervisors and management occurs on an ongoing and regular basis

The following provides some examples of the types of communications which are conducted offshore and onshore:

Meetings

- Permit to Work
- Toolbox Talk
- Departmental Safety Meetings
- OSH Committee
- Onshore/Offshore Town Hall Meetings
- Shift Handover
- Rotation Handover
- OIM meets and greets helicopters

Meetings

- Operations (Daily and Weekly)
- Weekly Management
- Incident Review Meetings
- HOIMS Custodians
- Annual Management Review
- Staff
- Contractor
- Regulator/Certifying Authority

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Management Team

Subsea

Manager,

Drilling and Completions

Marine Superintendent

> Manager, Production

Operations

Offshore Installation Manager





The organization chart shows the organization structure for Husky Energy, East Coast Operations as it currently exists.

The management team overseas all of Husky East Coast business interests and reports to the Vice-President for East Coast Operations

White Rose Project

- White Rose discovered in 1984
- Located 350km SE St. John's
- Water depth 120m
- \$2.35B Total Cost
- Major Scopes
 - Floating Production Storage and Offloading Facility
 - Subsea construction
 - Drilling and Completions
 Operations
- First oil 2005



White Rose Area



SeaRose FPSO

SeaRose FPSO

- Length 271m
- Beam 46m
- 3 main components
 - TopsidesHull

 - Turret

Topsides

- Oil, water, gas, utilities
- Power generation

Hull

- Accommodations: 90 persons
- Oil storage capacity approximately 940,000 barrels
- Tandem stern offloading system •
- Ice strengthened

Turret

Disconnectable

Other

- Passive Mooring System
- Rota 3 weeks on/ 3 weeks off

Drilling and Completions

- Mobile Offshore Drilling Units (MODUs) are used for both development and exploration drilling
- Currently, Husky operates two MODUs
 - GSF Grand Banks
 - Henry Goodrich







EXHIBIT/P-00146

Marine Operations and Services (Logistics)

- Provide support to offshore facilities
 - Production, Drilling and other operations
- Support includes:
 - Personnel movement
 - Transport of materials and supplies
 - Standby vessel
 - Tanker operations
 - Ice management
 - Aerial surveillance
- Manage the following resources
 - Helicopters
 - Supply vessels
 - Tankers (2)





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Marine Operations and Services (Logistics)

Aviation

- Average flight time 1.5 hours (one way)
- Up to 16 passengers per flight (weight dependent)
- Approx. six flights per week (@21 flight hours)
- Additional flights scheduled as necessary for technical or equipment needs

<u>Marine</u>

- 6-10 vessels, depending on activity
- Supply vessel transits 18 hours (one way)
- Personnel transported via vessel when travel via helicopter is not available, typically due to weather
- Vessels continually transport cargo, fuel, water and other supplies







Passenger Movements (Helicopter / Vessel)



With exception of 2009, approximately 10 percent of passenger movements are conducted by vessel.

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White Rose Offshore Operations





Regulatory Environment



C-NLOPB Atlantic Accord Act

- Regulations
- Guidelines
- Compliance with international recommended practices (CSA/NFPA/API/ASME)

DNV Independent Certifying Authority

Issues all statutory certificates by verifying compliance with C-NLOPB / TCMS Regulations Transport Canada Marine Safety (TCMS) Canada Shipping Act

- Regulations
- Publications
- IMO Conventions

EXHIBIT/P-00146

Certification for White Rose Production Operations



Work Authorizations



Date	Authorization	Scope	Facility / Vessel
2005	Production Operations Authorization	White Rose Production	SeaRose FPSO
2006	Drilling Program Authorization Renewal	White Rose Drilling Program	GSF Grand Banks
2007	Project Development Authorization	North Amethyst Glory Hole Construction	Jan de Nul, Vasco da Gama
2007	Geophysical Work Authorization – Vertical Seismic Profiles	White Rose Development	Atlantic Towing / Maersk Vessels
2007	Well Operations Program Authorization	White Rose and Exploration	GSF Grand Banks
2008	Geophysical Work Authorization – 3D Seismic	White Rose, Development and Exploration	CGG Veritas, Veritas Vantage
2008	Diving Program Authorization	SeaRose Stern Tube Repair	Atlantic Towing, Osprey
2008	Drilling Program Authorization	Exploitation Program	Transocean, Henry Goodrich
2009	Project Development Authorization	North Amethyst Installation	Technip, Deep Pioneer
2009	Diving Program Authorization	North Amethyst Installation	Technip, Wellservicer
2009	Diving Program Authorization	SeaRose Repair and Maintenance Program	Atlantic Towing, Atlantic Hawk / Pro Dive Attender
2009	Project Development Authorization	North Amethyst Installation	Jumbo, Jumbo Javelin Heavy Lift Vessel
2009	Operations Authorization - Production (Renewal)	White Rose and North Amethyst	SeaRose FPSO
2009	Project Development Authorization – Flowline Protection	North Amethyst Flowline Protection	Jan de Nul, Seahorse
2009	Geophysical Work Authorization	Glenwood Well Site Survey	Cape Harrison Marine, Anticosti
2009	Operations Authorization - Drilling	Development and Exploration	Transocean, GSF Grand Banks / Henry Goodrich

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SeaRose Safety Plan

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SeaRose FPSO Safety Plan

Section Outline:

- C-NLOPB Approval
- SeaRose Safety Plan Part 1
 - Section 1.0 Introduction
 - Section 2.0 Description of the Installation
 - Section 3.0 Organization and Management
- SeaRose Safety Plan Part 2
 - Section 4.0 Basis for Safe Operations





C-NLOPB Authorization – Safety Plan

- The Operator must demonstrate to the C-NLOPB that the approved management system / safety plan effectively identifies, assesses, and controls risk posed to worker health and safety; including the safe transport to / from the offshore installation
- The C-NLOPB's Chief Safety Officer shall approve the Safety Plan where adherence to the plan will ensure safety, health and training of persons on board the installation and preservation of the integrity of the installation (Production and Conservation regulations (s. 51(4))
- Authorization is only granted to the Operator if the Safety Plan is deemed acceptable by the C-NLOPB
- The C-NLOPB issued revised draft Safety Plan guidelines effective December 31, 2009, to assist the Operator in developing the Safety Plan

EXHIBIT/P-00146

SeaRose Safety Plan - Part 1



Section 1.0 Introduction to the FPSO Safety Plan

The SeaRose FPSO Safety Plan

- Applies to operations from the SeaRose FPSO on the White Rose Field
- Demonstrates how Husky Energy will operate the SeaRose FPSO production facility safely and in accordance with the requirements of the relevant regulations
- Addresses safety matters for helicopter transportation operations, shuttle tanker operations and standby and support vessel as they interact with the FPSO



SeaRose Safety Plan - Part I

Section 2.0 Description of the Installation

This section of the Safety Plan describes the field layout as well as the systems, processes and equipment utilized for the production of crude oil from the White Rose field. The main systems include:

- Environmental Conditions
- Hull and Marine Systems
- Turret
- Process Facilities (Topsides)
- Control Systems
- Utility Systems
- Escape and Evacuation
- Logistical Support
- Helideck
- Subsea Facilities





EXHIBIT/P-00146

SeaRose Safety Plan - Part I





SeaRose Helideck

Regulatory Compliance

- Transport Canada TP 4414
- UK CAA CAP 437
- DNV Ship rules (HELIDK Notation)

Structural

- Has accommodated the following helicopters:
 - Cormorant (CH149)
 - Sikorsky S-92A
 - Sikorsky S-61
 - Eurocopter AS 332 Super Puma



SeaRose Helideck





- 1 x Pumper
- 2 x Handlers

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Integrity Management Helideck / Helifuel System

- Inspected annually by DNV on behalf of C-NLOPB and Transport Canada
- Pre-flight checklist completed by Husky crew to confirm readiness for flight operations. Includes fuel quality check

System	Maintenance/Inspection	
Helifuel System	 Monthly/quarterly/annual maintenance by the offshore crew. Annually by an independent body 	
Fire Fighting arrangements	 Inspected monthly and certified annually 	
Life Saving Arrangements	Inspected monthly	
Telecommunications	6 monthly inspections and annual Coast Guard inspection	
Lighting	 Annual inspection or on failure 	
Structural Integrity	 Annual inspection by independent inspection contractor 	

• The following systems are confirmed by Husky's integrity management system:





SeaRose Safety Plan – Part I



Section 3.0 Organization and Management

This section of the Safety Plan describes the overall management and command structure for the SeaRose FPSO and field operations pertaining to the SeaRose FPSO. The section also highlights the essential management systems and documents that provide safety, risk and operational guidance to the SeaRose FPSO personnel. The main components of this section include:

- Organization and Command Structure
- Relationship with External Agencies
- Husky Operational Integrity Management System (HOIMS)
- Training and Qualifications
- Operations and Control
- Monitoring and Compliance Effectiveness
- Occupational Health and Safety
- Contingency Planning



Central Control Room

Organization and Command Structure





- Under the Atlantic Accord, the Offshore Installation Manager is delegated the overall authority for the safety and wellbeing of the personnel on board.
- In the event that the facility disconnects and becomes a vessel, that authority will be delegated to the Vessel Master as per Transport Canada regulations.
- Responsibility for helicopter operations on board the installation fall under the direction of the Marine Supervisor and the Marine Department

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Safety Management

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Management System

Husky Energy is committed to:

- Ensuring its employees and contractors return home safely to their families at the end of each working day; and,
- A culture of continuous improvement

Husky's safety and risk management system is based on three fundamental components:

- Health, Safety and Environmental (HSE) Policy
- Husky Operational Integrity Management System (HOIMS)
- East Coast Management System (ECMS)





Health, Safety and Environmental Policy

HSE Policy

- Outlines the company's intentions with regards to the protection of people, the environment and it's assets.
- Describes expectations for maintaining operational integrity.
- Mandated by our Chief Executive Officer and our Vice President for East Coast Operations.

The HSE Policy describes the following key requirements:

- Leadership and commitment;
- Personal responsibility in preventing harm
- Compliance with legislation and internal standards
- Performance measurement





Husky Operational Integrity Management System (HOIMS)

- HOIMS is a set of corporate management system Aims and Expectations that include aspects of Health and Safety, the Environment, Quality, and Process Safety Management.
- HOIMS brings together essential principles and standards to minimize the risk of adverse impact to Husky
- HOIMS is about
 - Everyone going home safely after every shift
 - How we all behave / do our jobs / integrity of our actions


EXHIBIT/P-00146

The 14 Elements





HOME | PRESIDENT'S MESSAGE | ABOUT HOIMS | HOIMS CUSTODIANS | HELP | EAST COAST MANAGEMENT SYSTEM (ECMS)

HOIMS > H



HOIMS - "A set of corporate aims and expectations for identifying and reducing risk to personnel, the environment, assets, and reputation, to as low as reasonably practicable." 1. Leadership, Commitment and Accountability

2. Safe Operations

- 3. Risk Assessment and Management
- 4. Emergency Preparedness
- 5. Reliability and Integrity
- 6. Personnel Competency and Training
- 7. Incident Management
- 8. Environmental Stewardship
- 9. Management of Change
- 10. Information, Documentation and Effective Communication
- 11. Compliance Assurance and Regulatory Advocacy
- 12. Design, Construction, Commissioning, Operating and Decommissioni
- 13. Contracted Services and Materials
- 14. Performance Assessment and Continuous Improvement

© Husky Energy - Husky Operational Integrity Management System

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East Coast Management System

- Corporate and East Coast policies establish essential expectations as described in the HSE Policy and HOIMS
- The East Coast Management System provides a systematic, structured and disciplined approach to the management of health, safety and the environment to meet these expectations
- The ECMS is comprised of policies, procedures, practices, work instructions and supporting documentation to address business and operational needs specific to its operations
- The Husky ECMS is available to personnel through web access onshore and offshore





East Coast Management System









<u>Aims</u>

- Prevent incidents by identifying and minimizing workplace and personal health risks.
- Promote and reinforce all safe behaviours

- Safe system of work including safe work practices and procedures
- Systems are implemented for the safe use & handling of hazardous materials
- Process implemented to identify at-risk behaviors and unsafe conditions
- Provide personal protective equipment, including training & supervision
- Positive and open safety culture

Incident Management



<u>Aims</u>

- Report and investigate all incidents.
- Learn from incidents and use the information to take corrective action and prevent recurrence.

- Mandatory Hazard and Incident Reporting
- Incident Reporting and Investigation Procedure
- Training in acceptable root cause analysis techniques
- Incidents recorded and resulting actions tracked in Omnisafe
- Debriefs conducted for serious incidents
- OHS Committee review and signoff on all incident reports

Personnel Competency and Training



<u>Aim</u>

Provide assurance that personnel possess the necessary competencies, knowledge, abilities and demonstrated behaviors to perform their tasks and designated responsibilities effectively, efficiently and safely.

- Systems to define job descriptions and relevant competencies
- Training program developed based upon regulatory, industry and company needs
- Competence program to ensure personnel possess the necessary skills, knowledge and experience
- Periodic review of the training and competency requirements for personnel
- Process to monitor program effectiveness and personnel performance

Training and Qualifications

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- Regulatory
- Company
- Safety
- \rightarrow Job / Role Specific
- \rightarrow Emergency Team
 - Management Team

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- Staffing and Recruitment
- Training Procedure
- Training Competency Matrix
- Training Database
- \rightarrow Competency and Training Records
- \rightarrow Competency Assessment
- \rightarrow Training Reviews and Audits
- → Performance Planning and Review Process



Training Activities and Oversight



- Periodic review of processes and systems
- Monthly reports (4-6 month plan)
- Tracking Training completion/certification
- Training Compliance and Deficiency Reports to Management
- Manager Approval Process for Training Cancellations
- Training Effectiveness Survey
- E-Learning course development and delivery



Performance Assessment and Continuous Improvement



<u>Aims</u>

- Confirm that HOIMS processes are implemented and assess whether they are working effectively
- Measure progress and continually improve towards meeting HOIMS objectives, targets and key performance indicators

- Establish leading and lagging indicators to assess HOIMS Performance
- Conduct assessments of operations to establish the degree to which HOIMS objectives are met.
- A system for periodic review of policies and procedures to ensure appropriateness
- Management assessment of HOIMS to address the need for change and continuous improvement.









Section 4.0 Basis for Safe Operations

This section of the Safety Plan demonstrates that the Operator has adequately assessed the risk to personnel, the environment and the facility and has implemented adequate control and mitigation measure.





<u>Aims</u>

- Manage risks by performing comprehensive risk assessments to provide essential decision-making information.
- Develop and implement plans to manage significant risks and impacts to as low as reasonably practicable

- Risk is managed by identifying hazards and major incident scenarios, assessing their consequences and probabilities, and evaluating and implementing prevention, detection, control and mitigation measures to ensure that residual risk levels are tolerable and are ALARP.
- Risk assessments are conducted for appropriate activities or milestones in order to identify and address potential hazards to personnel, facilities, the public and the environment.





- Procedures are established to review existing risk assessments at specified intervals and any specified controls that are implemented to mitigate the identified risks
- Risk assessments are performed by qualified personnel including, where appropriate, suitable expertise sought from outside the immediate unit
- A clear process is established by procedure to prioritize risks to personnel, facilities, the public and the environment to enable appropriate management of the risk
- A follow-up process is in place to ensure that risk management decisions are implemented
- The risk assessment method is documented, auditable and appropriate for the complexity of the facility and/or project

HOIMS and Risk Management



HOIMS expectations are well-aligned with international standards such as ISO 31000 ("*Risk management -Guidelines on principles and implementation of risk management*", issued in 2009).



Figure 3 - Risk Management Process

Risk Management Tools



Process Hazard Analysis (PHA) Procedure		Permit to Work
 HAZOP HAZID What-If/ Checklist FMEA/FMECA Preliminary Hazard Assessment 		Safe Job Analysis
		Tool Box Talk
FOCUS Observations		
		Step Back 5x5
Simultaneous Operations (SIMOPS) Risk Assessment		
		Low Risk Task Assessment
Risk Based Inspection (RBI) Assessment Procedure	ļ	

EXHIBIT/P-00146

Field Observation Continuously Upgrading Safety (FOCUS)

Safety FOCUS is a **BEHAVIORAL** safety process.

"To continuously improve the safety performance of Husky Energy through the identification, observation, and reduction of at-risk behaviors and hazardous conditions."





Helideck Team Toolbox Talk – Helicopter Operations

30 Minutes Prior to Arrival

- ✓ Crane secured in rest.
- ✓ Prepare helideck.
 - \checkmark Lower handrails.
 - ✓ Check for loose items and debris.
 - ✓ HLO to confirm daily checklist completed.
- Helideck crew to assemble on helideck.
- Identify incoming and outgoing cargo and any hazardous items or cargos which are heavy / large sail area / lightweight / delicate / cumbersome, etc. and require special consideration.
- ✓ Weather forecast and manifest in hand and ready for pilots.
- HLO confirms "Green Deck" to pilots. Confirm helicopter approach direction before Helideck crew taking position.

Helicopter Arrival

- ✓ Action in event of SeaRose GPA.
- ✓ Identify new Helideck crew members.
- ✓ Weather conditions and special precautions.
- ✓ Anti-collision light.
- ✓ Crew members assigned to chocks.
- ✓ Crew members assigned to baggage and freight.
- Crew member assigned to passengers.
- ✓ Crew members assigned to fuel.
- Avoid tail rotor and PITO tubes / approach to helicopter from front and side only.
- ✓ HLO to confirm location of baggage (shared flights).

Re-fuelling Helicopter

- ✓ Ensure all passengers disembarked prior to refueling ops commence.
- Crew members assigned to fueling operations.
- ✓ Fireman assigned to extinguisher.
- Bonding wires for re-fueling connection and disconnection.
- ✓ Fueling to commence on pilots command only.
- ✓ No radio comms during refueling.
- ✓ Fuel samples for pilot inspection (before and after).





Helicopter Departure

- Refueling equipment to be clear of deck and station secured.
- Crew member assigned to escort passengers to Helideck. Await permission from HLO before proceeding onto Helideck.
- Crew member assigned to check passenger seatbelts and head count.
- Assist passengers with immersion suits if required.
- Crew assigned to baggage and freight loading, and securing of doors.
- ✓ Crew assigned to remove chocks on HLO command.
- Crew stand down on pilot notification or 5 minutes after departure.

Post Helicopter Operations

- ✓ Fuel sample dated and secured.
- ✓ Return handrails to normal position.
- ✓ Transport excess baggage to heliadmin.

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Contracted Services and Materials



<u>Aims</u>

- Ensure contractors and suppliers perform in a manner that is consistent and compatible with our policies and business performance standards.
- Ensure contracted services and procured materials meet the requirements and expectations of Husky's standards.

- Ensure HSEQ and technical requirements are integrated in the procurement process
- Ensure the application of best procurement practices
- Ensure Contractor adherence to Husky policy and regulatory requirements
- Monitoring of contractor performance by periodic audit process
- Provide "full and fair opportunity" to business community

Contractor Procurement



Husky's procurement processes ensure integrity in its contractor / supplier selection.

At the Prequalification stage we identify those vendors that can satisfy our HSEQ and Technical requirements, and then provide ONLY those vendors with the opportunity to bid.



Aviation Contract

- Husky's contract with Cougar Helicopters was established in 2003
- The contract award followed a competitive bid process and technical evaluation
- Husky initially used the Sikorsky S-61 and Super Puma AS-332L
- Cougar recommended the S-92A for use offshore NL following an evaluation of various airframes
- In 2005, Cougar introduced the first S-92A offshore Newfoundland (Petro-Canada)
- This aircraft was adopted by Husky in 2007 following an evaluation process







Husky S-92A Acceptance

The following is a summary of the activities conducted or factors considered by Husky in adopting the Sikorsky S-92A. All decisions were made in consultation with Husky's Aviation Expert who is an external consultant to Husky.

- ✓ Monitored the performance of the Sikorsky S-92A locally
- Conducted a Cougar base inspection and S-92A aircraft inspection in April, 2005
- ✓ Conducted a Safety and Operational Evaluation of the S-92A helicopter in November, 2005
- Evaluated offshore facility helideck design for compatibility
- Aware that the C-NLOPB had accepted the S-92A aircraft as it was in use for Petro-Canada at that time
- Conducted training at Cougar with offshore crews prior to flight operations including Helicopter Landing Officer and Helideck Team
- ✓ Conducted offshore training flights

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Compliance and Performance Monitoring

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Compliance and Performance Monitoring



The primary means for obtaining assurance that contractors maintain compliance with Husky and regulatory requirements is through the audit process.

The audit process employed by Husky is designed to ensure:

- continuous engagement with Contractors from pre-qualification evaluation through provision of services or materials
- Contractors systems meet Husky's contractor HSEQ requirements, as applicable
- that an evidence-based process is applied during each audit
- consistency through the use of a standard audit checklist and auditor guidance



An annual HSEQ supplier audit plan and schedule is developed by the Husky Quality Group

The audit schedule is based on multiple factors, including;

- risk associated with contract service
- previous experience with contractor
- compliance of other non-conformances
- scope of work

Audit scope:

- Health, Safety and Environment
- Quality
- Technical
- Incident or Non-conformance
- Special Focus

Year	Audits		
2005	23		
2006	27		
2007	26		
2008	27		
2009	29		
Total	132		

Helicopter Operations Audits



The following table provides a summary of the audits conducted by Husky of Cougar Helicopters Ltd.

#	Contractor	Auditor	Date	Description
1	Cougar Helicopters	Husky Aviation Consultant	Oct-03	Safety Base Inspection
2	Cougar Helicopters	Husky Aviation Consultant	Apr-05	Safety Base Inspection
3	Cougar Helicopters	Husky Aviation Consultant	Apr-06	Safety and Operational Evaluation of the Sikorsky S-92A Helicopter
4	Cougar Helicopters	Husky Energy	Sep-06	Husky HSEQ Supplier Audit
5	Cougar Helicopters	Husky Aviation Consultant	Jun-07	Safety Base Inspection
6	Cougar Helicopters	Husky Aviation Consultant	Nov-08	Safety Base Inspection
7	Cougar Helicopters	Husky Security Consultant	Sep-09	Cougar Security Assessment
8	Cougar Helicopters	Husky, Suncor, HMDC	Oct-09	Joint Supplier HSEQ Audit
9	Cougar Helicopters	Husky Aviation Consultant	Nov-09	Safety Base Inspection

2008 Safety Base Inspection



The following is a summary of the observations stemming from the 2008 Safety Base Inspection.

ТҮРЕ	Recommendations	Status
Finding	Communication of Company Drug and Alcohol Policy to pilots could not be verified.	Closed
Finding	Inconsistencies were noted in the use of a Magnetic Whiteboard for the assignment of Stop Flying Orders and Restricted Flying Orders.	Closed
Finding	Ensure that pilots and maintenance engineers have representation on the HSE Committee	Closed
Finding	Establish target dates for actions stemming from the HSE Committee	Closed
Finding	Cougar to implement a method to ensure new pilots have reviewed old Memos and Directives.	Closed
Finding	Ensure Emergency Response Procedures are updated to reflect fleet status as required.	Closed
Finding	Maintenance Control Manual to be updated to reflect requirements pertaining to Type "B" Dispatch	Closed
Finding	Ensure safe access to emergency shower and eyewash station within the maintenance facility	Closed
Finding	Ensure that the revisions log of the amendments to the Company Operations manual are correct	Closed
OBS	Record of Pilot Training Captain's review of Flight Time & Duty Reports was not filed properly	Closed
OBS	Cougar to incorporate Internal Memo and Directives that have existed for an extended period into controlled documents	Closed
OBS	Cougar to ensure that all personnel maintenance training requirements are kept current.	Closed
OBS	Cougar to ensure that learnings stemming from emergency response exercises are incorporated into Emergency Response Procedures	Closed

Compliance Assurance and Regulatory Advocacy



<u>Aims</u>

- Ensure conformance with Corporate policies and compliance with all relevant government regulations.
- Work constructively to influence proposed laws and regulations, and debate emerging issues.

- Ensure compliance with relevant regulatory requirements
- Ensure ongoing compliance with corporate requirements
- Participate in the review and comment on proposed legislation or regulation

C-NLOPB Audits / Inspections



The C-NLOPB, administers and enforces the Act, Regulations and Guidelines pertaining to petroleum operations. C-NLOPB safety officers and conservation officers are conferred with special powers in regards to the administration and enforcement of this legislation under their jurisdiction.

These officers may audit and/or inspect the workplace at any reasonable hour, with or without advance notice for the purpose of ensuring that Husky, as Operator, is in compliance the regulations and Safety Plan.

Examples of the scope of audits / inspections include:

- Regulatory Compliance
- Safety Management
- Environmental Management
- Operating Procedures

- Facilities and Equipment
- Incident Management
- Emergency Response



C-NLOPB Reporting and Engagement

Husky, as Operator is subject to the regular reporting requirements of the C-NLOPB.

- Daily Operations Reports
- Incident Notifications and Investigation Reports
- Monthly Injuries Statistics Report
- Monthly Environmental Compliance Report
- Integrity Management Reports
- Canada-Newfoundland Benefits Report

In addition to the formal reporting requirements Husky conducts regular and special meetings with the C-NLOPB on matters pertaining to:

- Operations
- Health and Safety
- OHS Committee (Audit & Annual Meetings)
- Environment
- Canada-Newfoundland Benefits
- Other

Presentation Outline



- Husky Energy
- Our Safety Culture
- East Coast Operations
- Regulatory Environment
- SeaRose Safety Plan
- Contracted Services and Materials
- Compliance and Performance Monitoring

Helicopter Operations

- Emergency Preparedness
- Response to March 12th

Regulatory Regime for Helicopter Operations



C-NLOPB maintains jurisdiction over the Newfoundland and Labrador offshore area for petroleum operations and impose requirements on Operators under the Atlantic Accord and it's associated Regulations and Guidelines

Transport Canada Aviation maintains jurisdiction over aviation operations within Canada and imposes requirements on helicopter Operators under the Aeronautics Act and the Canadian Aviation Regulations



Helicopter Operations Manual

The Husky Helicopter Operations manual is intended to serve as a guidance to those involved in the planning and execution of offshore helicopter operations to ensure that operations are executed safely and efficiently.

CONTENTS

- Description of roles and responsibilities
- Weather Forecasting, Monitoring and Reporting
- Flight Scheduling, Travel and Authorization
- Passenger and Freight Handling
- Security
- Flight Following
- Alternate landing Sites
- Incident reporting
- Marine and Helicopter Communications and Contact information
- General Helideck operations and inspections
- Helicopter Refueling

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Helicopter Operations (Risk Management)

- Passenger Safety (Suits, HUEBA, PLB)
- Helicopter Design (Twin turbine Engines, seats, egress)
- Two pilots

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dui

TISK

- De-icing capability
- Alternative landing sites
- Health and Usage Monitoring System (HUMS)
 - Offshore installation Helideck (fire fighting equipment, lighting)

Proces

- Operational, maintenance, inspection and testing procedures
- Weather monitoring and adverse flying procedures
- Communications protocols
- Flight following (Blue Sky)
- Onshore / Offshore Emergency Response Drills
- Audits/ Inspections
- Offshore Safe Work practices
 - Pilot Training
 - Competency Assurance
 - Installation helideck team training
 - Passenger training (BST)


Presentation Outline

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- Response to March 12th



Emergency Preparedness



<u>Aims</u>

- Be prepared for an emergency or a security threat.
- Identify all necessary actions to be taken to protect people, the environment, the organization's assets and reputation in the event of an emergency or security threat.

Expectations

- Trained and committed personnel
- Comprehensive and accessible response documents
- Emergency response facilities
- Lessons learned from other East Coast Operators
- Access to resources from other Operators and agencies
- Designed to meet a range of emergency scenarios
- Performance of regular drills and exercising





Husky has developed a multi-level emergency response process which can deal with the emergency, the resulting issues, and the crisis.



Onshore Emergency Response Team







Presentation Outline



- Husky Energy
- Our Safety Culture
- East Coast Operations
- Regulatory Environment
- SeaRose Safety Plan
- Contracted Services and Materials
- Compliance and Performance Monitoring
- Helicopter Operations
- Emergency Preparedness
- Response to March 12th

EXHIBIT/P-00146

Response to March 12 - Focus

On March 12, the immediate focus was on:

- Personnel on board Cougar 491 and their ulletfamilies
- Offshore personnel and their families •
- Providing support for JRCC, Cougar and ulletoffshore facilities
- Communicating with onshore staff, regulators, • stakeholders and our contractors
- Mobilizing and preparing grief counselors ۲

Incident Coordination Centre









The response can be considered in four phases:

- The hours immediately following the incident on March 12
- The days from March 12 to March 17, 2009 when the response centre was demobilized
- The resumption of flight process which was covered in the discussion on the HOTF report
- Support to this inquiry



Response to March 12 – Early Hours

- Husky's Emergency Response Team (ERT) and Major Emergencies Team (MET) mobilized within minutes.
- Husky's Corporate Emergency Response Team (CERT) mobilized in Calgary
- Approximately 100 people within Husky supported the response
- The response team operated 24 hours a day until Tuesday, March 17

Early actions:

- Logistics lead went to Cougar to serve as interface
- Redirected ice surveillance aircraft to crash site
- Supply vessel Maersk Gabarus sailed from Bay Bulls toward crash site
- Suspended non-essential activities offshore
- Confirmed flight manifest and commenced family notifications
- Communication with onshore and offshore workers, including updates to crews by Offshore Installation Managers
- Husky helped coordinate news conferences, and senior leadership participated in all media briefings on March 12 and 13.



Response to March 12 – March 12-17

- Continued focus on needs of families
 - Family response centre established
 - Coordinated family travel to/from province
 - Interfaced with RCMP and TSB
- Grief counselors and chaplains provided onshore and offshore
- Addressed short- and medium-term needs for continued safe transport of personnel
- Established heliport briefings for personnel traveling offshore and personnel returning
- Continued communications with regulatory agencies, contractor companies and other stakeholders

Response to March 12 – Recovery Effort

- Atlantic Osprey provided to TSB and RCMP to support recovery of victims and helicopter.
- Crew complement included Husky staff and ROV contractors
- Additional Husky contractors provided equipment and personnel to assist in the recovery operation.
- Coordinated movement of recovered helicopter to TSB facility.





Lessons Learned

Debrief Sessions

• The Husky emergency response team held debrief sessions following the incident to identify areas for improvement

What worked well

- 'Families first' families were briefed in advance of each news conference / media statement
- Bringing Husky-related families to one designated location
- Support and cooperation of external agencies
- Speed with which emergency teams mobilized
- Effectiveness of previous training evident in response

Improvement Opportunities

- Monitoring of stress placed on response team members
- Ensuring sufficient resources for longer-term responses

EXHIBIT/P-00146



Closing Remarks



Husky Energy

STEPBACK 5 X 5

Pre-Task Checklist "Engage your mind before you act"

Job: Date:	
0	STEPBACK from the area of work
5	Observe for other work in area
٦	Inspect for sources of energy (mechanical, electrical, process). Physically verify, if appropriate, isolation by checking drain point
7	Step through task in your mind
	Assess if hazards are adequately controlled
J	Assess required manual handling techniques, including stretching
J	Assess if you have and are wearing pageager. Dog
]	I have performed the STEPBACK 5X5 process
igna	ature:
	(person performing work)