



HELICOPTER SAFETY ADVISORY CONFERENCE

January 24, 2013

Four Points by Sheraton

New Orleans, LA

MINUTES

INTRODUCTION

- Chairman Mark Fontenot called the meeting to order at 08:30 and welcomed members and guests.
- Read Antitrust Statement ([attachment #1](#))
- Introduction by Attendees

HSAC WORK GROUP COMMITTEE REPORTS

Flight Following / ADSB – Terry Gambill

- Flight Following / ADSB Committee Notes ([attachment #2](#))
- Andy Roy, Aviation Spectrum Resources, Inc. ([attachment #3](#))
- Frequency Cards will be green. Working on a digital version. Contact Dave Robinson: drobinson@erahelicopters.com and (337)764-9020
- Super Bowl – TFRs
- Las Vegas – TFRS

Technical Committee – Pat Roberts

- RP Committee joined the Technical Committee during this meeting.
- **Walter Chartrand, Aviation Marketing Services: “Fuel: A critical component to safe flight – A review and discussion on the critical components of:”**
 - Basic Refining
 - Overview of Quality Control Procedures
 - Safe Storage and Maintaining Quality
 - Fueling Operations
 - Transportation Offshore
 - Maintaining Quality at Remote Locations
 - Steps flight Crews can take to ensure Quality Fuel
 - Ten questions – answers on page #4 ([attachment #4](#))



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- Josh Simar, PHI Inc. – Fuel Quality (*attachment #5*)
 - Vulnerability: Quality of fuel from vendor. Quality of fuel delivered to the dock and dispensed into fuel transporters
 - Third Party personnel: Level of awareness with offshore personnel
 - Transporters: Design process
 - Training: Requirement to develop a training standard
 - Coordinating with Precision IBC on transporter footprint, markings, decals and discharge port
 - Need to improve process, improve standards, and train personnel to developed standards

Aerial Observation Committee (AOC) – Cort Andrews

- Tom Buchner: Safety Statistics
- Draft RP: *Fatigue Management for Aerial Observation* (*attachment #6*)

HSAC Committee Reports

- Treasurer's Report (*attachment #7*)

Safety – Terry Kaufman

- **“Green Deck”** – clearance required

Government Liaison – Steve Smeltzer

- Richard Gossen: GCR, Inc. rgossen@gcrincorporated.com (504) 451-0510
- Joe Danielle, Lockheed Martin

Heliport and Airways – Ken Kersker

- Lt. Colonel Jeff Ragusa: OUTREACH PROGRAM, John C. Stennis Space Center, May 18, 2013. There will be a C-130 on display and C-130 drop. If companies want to display aircraft, contact Lt. Col Ragusa at jjragusa@gmail.com , Jeffery.ragusa@us.af.mil, (office) 228.377.1944, (mobile) 985.807.3030
- Helideck Parking Area Paint Scheme – Patrick Bosman (*attachment #8*)
 - Need two more operators to participate on the committee.
 - Photos – need standard
 - Still work to be done, coordination between operators and owners
 - Goal is to have RP ready for inclusion in RP2L rewrite.



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RP2L Update – Bob Williams (*attachment #9*)

- Request for data has been distributed. (*attachment #10*)
- RP2L draft: April 1st
- RP2L meeting: April 18th
- RP2L completion: December 31, 2013

Chairman, Mark Fontenot, presents service award to Bob William





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Industry Liaison – Larry Lippert

- Russell Roy, RigStat ([attachment #11](#))
- Carolyn Smith, GOSDA ([attachment #12](#))

ADS-B Program Update – Chris Tracy, FAA

Fish Spotters – Joe Fain; Omega Protein; (337.258.5552); j_c_fain@yahoo.com

Answers to Ten Questions:

1. Hydrocarbons
2. 1859 in Titusville, PA
3. Approximately 3-gallons
4. American Society of Testing and Material
5. Distillation
6. DOT standards and product grade specific – dedicated to Jet A
7. Specific gravity
8. Coalesor / Separator filter and Water Absorbing filter monitor
9. One year
10. Water

Next HSAC Meeting will be May 8th and 9th, 2013 – Hilton Lafayette; 1521 West Pinhook Road; Lafayette, LA 70503 (337) 235-6111



HSAC

HELICOPTER SAFETY
ADVISORY CONFERENCE



32nd Anniversary



1978-2010

Antitrust Checklist

So we should always...

- Not discuss competitive cost, production, market analysis or other competitive trade sensitive data
- Have an agenda
- Report to our own counsel any concerns that we have of variation from the agenda
- Keep minutes for a record of our discussions

HSAC ANTI TRUST STATEMENT

The Sherman Act and the Clayton Act are federal statutes which make certain agreements in restraint trade illegal. Violators can be subject to criminal penalties and large monetary damages. The purpose of antitrust policies is to restrict communications concerning cost, production or other trade sensitive information which could be the foundation for such illegal agreements.

HSAC ANTI TRUST STATEMENT

■ Trade Associations / Industry Groups

Trade associations are generally recognized as a legitimate forum for competitors to share ideas which promote the efficiency of the industry.

Example:

- How to do things safer, better, more efficiently.
- However, any discussion which involves the use of cost information (even historical) or other competitive information should not take place without specific authorization of antitrust counsel.

Advances in Helideck Lighting



Currency – Direction

- Is the current committee forums efficient
- Is there a new direction or area that we should focus on
- What is the best way to help eliminate accident and incidents?
- Is the HSAC providing the necessary information and support to each member?

ATTACHMENT #2

HSAC ADS-B/Flight Following Workgroup Minutes

New Orleans

January 23, 2013

Aeronautical Frequency Committee

The committee members were briefed on the October, 2012 AFC meeting in Charleston, SC.

Aviation Spectrum Resources (ASRI) Briefing

Andrew Roy of ASRI briefed the workgroup on what ASRI does, and the regulations associated with ASRI.

There are 208 ASRI assigned frequencies for helicopter use in the United States. 156 of those assigned frequencies are in the Gulf of Mexico, and 139 of those are assigned to 4 companies.

Frequency bands 128.825 thru 132.000 and 136.500 thru 136.975 are controlled by ASRI, and can be obtained through ASRI for Aeronautical Operational Control purposes only. These frequencies cannot be used for CTAF purposes.

CTAF frequencies must be obtained through the FAA.

Andrew also brought a spreadsheet of the frequencies on the HSAC frequency card which belong to ASRI. There are several on there from various operators that ASRI doesn't show a license for. Each operator needs to check the ones shown for them to be sure they are licensed, and in the correct location.

ADS-B

Plans are to have ADS-B, Communication, and AWOS on Keathley Canyon 875 by mid-2014.

Ship Shoal 354 AWOS will be operational in a couple of months, and at that time South Timbalier 301 AWOS will be shut down.

West Delta 27 AWOS is operational and fully commissioned, but the phone says it is in test mode.

ASRI Briefing on VHF Communications Interference

There are four major causes of interference:

1. Congestion
2. Environmental issues
3. Large antennas and no natural barriers
4. Limited antenna real estate
 - a. High Island A350 has antennas of four major operators on the same tower.

ASRI has investigated 25 reports of interference in or along the Gulf of Mexico in the last year. 8 were due to atmospheric ducting, 5 due to improper installation, 11 due to improper use i.e., use of frequency not licensed for location, and 1 technical issue.

Lockheed Martin Flight Service

Joe Daniele from Lockheed Martin Flight Service briefed the workgroup on their new flight planning website.

Attendees:

Terry Gambill	PHI
Kiwi Alexander	RLC
Pete Talbot	Bristow
Andy Roy	ASRI
Chris Wheatley	ASRI
Chris Martone	Chevron
David Robinson	ERA
Joe Daniele	Lockheed Martin Flight Service
Martha Wood	Lockheed Martin Flight Service
Carl Youngblood	Lockheed Martin –FAA Contract
Glenn Meier	FAA
Allan Overbey	FAA
Mike Freyaer	Honeywell
Kent Morris	Honeywell/Sky Connect



ASRI

Aviation
Spectrum
Resources, Inc.

ATTACHMENT #3

Aviation Spectrum Resources, Inc.

Presentation to the HSAC

Andrew Roy – Director, Engineering Services
Chris Wheatley – Overseas Frequency Manager

Scope

- ASRI overview
 - The company
 - Aeronautical Frequency Committee
 - VHF communications services
- VHF spectrum management
 - US usage
 - Gulf of Mexico frequency overview
 - AFC assignment policy
 - ASRI request process
- Specific topics
 - Interference
 - Spectrum pricing



ASRI

- Originally the ARINC Frequency Management Department
 - ASRI formed as separate company on Jan 1, 2006
- The sole licensee for the Aeronautical Operational Control (AOC) frequencies in the US
 - 128.825-132.000 and 136.500-136.975 MHz
- Sponsors the Aeronautical Frequency Committee
 - Represents the interests of the aviation industry.
 - Key forum for regulatory issues
- Worldwide SELCAL registrar for ICAO

Aeronautical Frequency Committee

- ASRI sponsors and provides secretariat for industry committee
 - Membership composed of airlines and representatives of various aviation user groups
 - Allows discussion of communication related problems/solutions across multiple aviation entities
- Develops aviation industry policy related to allocation, assignment and use of radio frequency spectrum
- Supports ASRI's work in domestic and international regulatory forums

Spectrum Issues - Aeronautical

- VHF spectrum congestion
 - VDL M2 implementation
 - 8.33 kHz channel implementation and spacing
- Impact of mobile broadband on aviation
- Protection of navigational aids spectrum
- Aeronautical satellite communications
 - ADS-B
 - Unmanned aerial systems

ASRI VHF Communications Services

- Aeronautical Operational Control (AOC)
 - Communications between an aircraft and its operating agency
 - Information for safe and economical operation
 - Regulatory authority FCC (Part 87, Subpart I, 87.261) and FAA (FAR 121.99)
- Flexibility in deployment
 - Between personnel, computers or other storage or readout devices
 - Can use a third-party radio operator

AOC Examples

- Airframe/avionics monitoring data
- Engine monitoring data
- Departure-delay information
- Special medical requests
- Connecting-flight information
- Out-Of-On-In (OOOI) information
- Gate assignment
- Checklists
- Manifests
- De-icing
- Winds aloft
- Weather information
- Position information
- Flight-plan data
- Weight and balance
- Pilot dispatcher communications
- Flight progress information
- Maintenance communications
- Company ramp control clearance
- In-flight emergencies

AOC is not

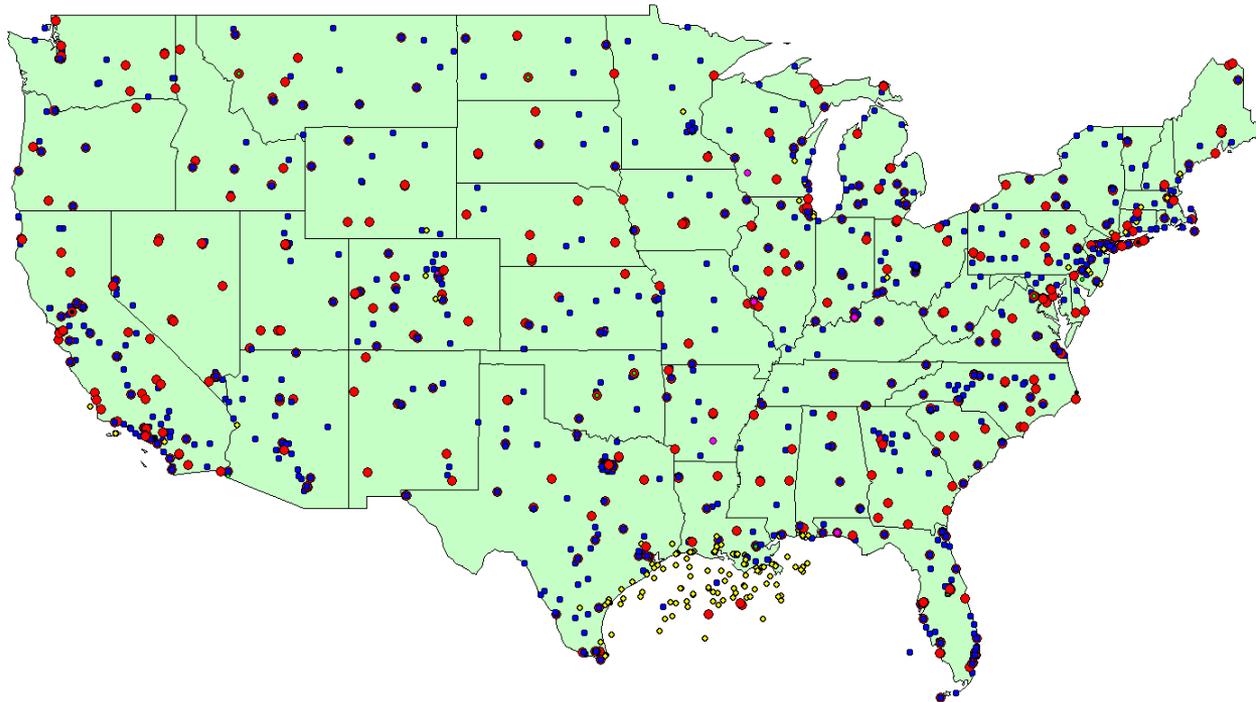
- Public correspondence
- Personal messages
- CTAF
- UNICOM
- ATC functions*



Federal Aviation Communication Services

- Federally owned and managed frequencies
- Primarily for Air Traffic Services (ATS)
 - ATC in all aviation environments
 - Automatic Terminal Information Service
 - Automatic Weather Observation Systems
 - Ramp Control (in movement areas)
 - CTAF, UNICOM and MULTICOM

ASRI LICENSED STATIONS CONUS



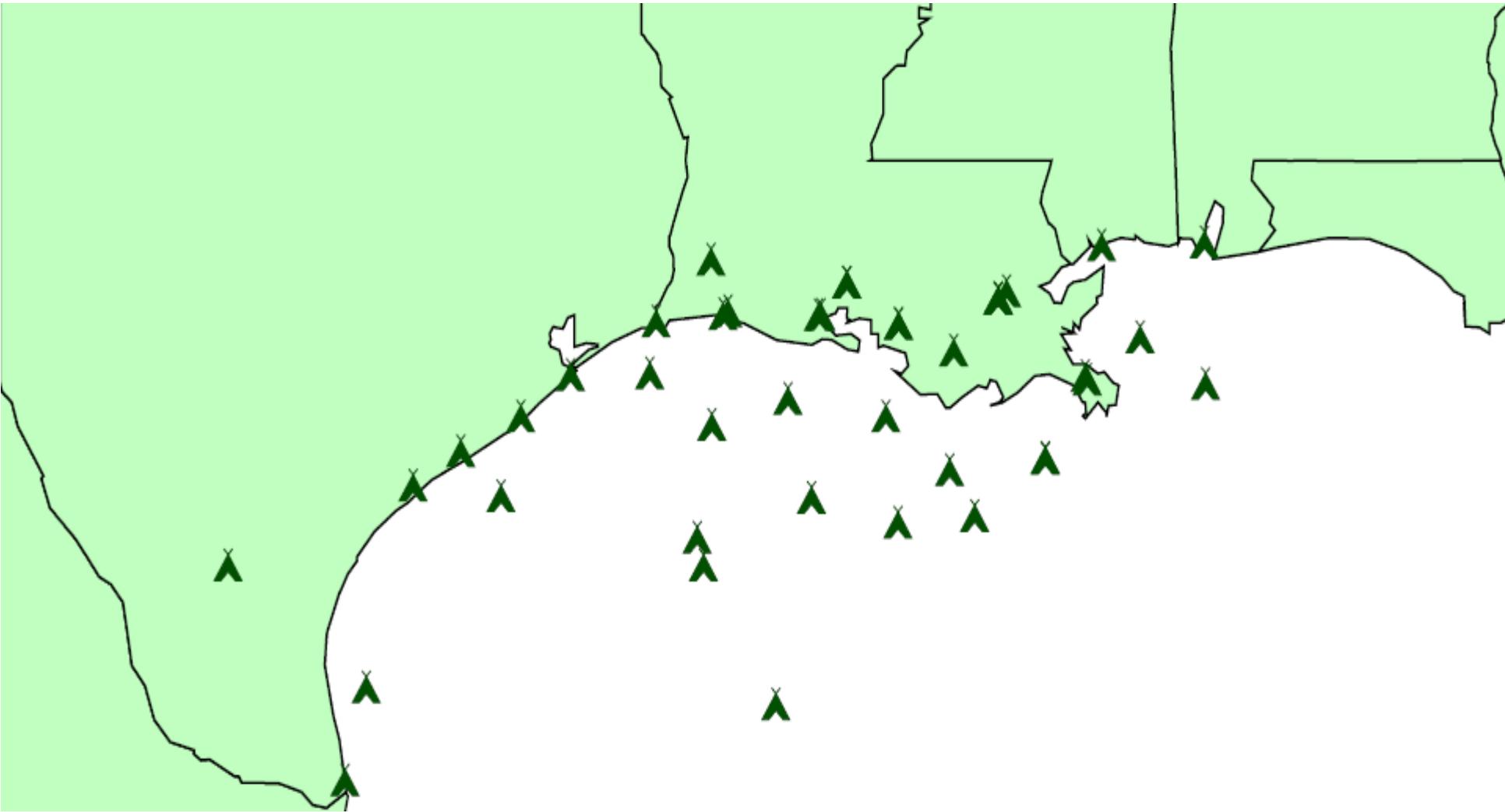
Who uses ASRI Frequencies?

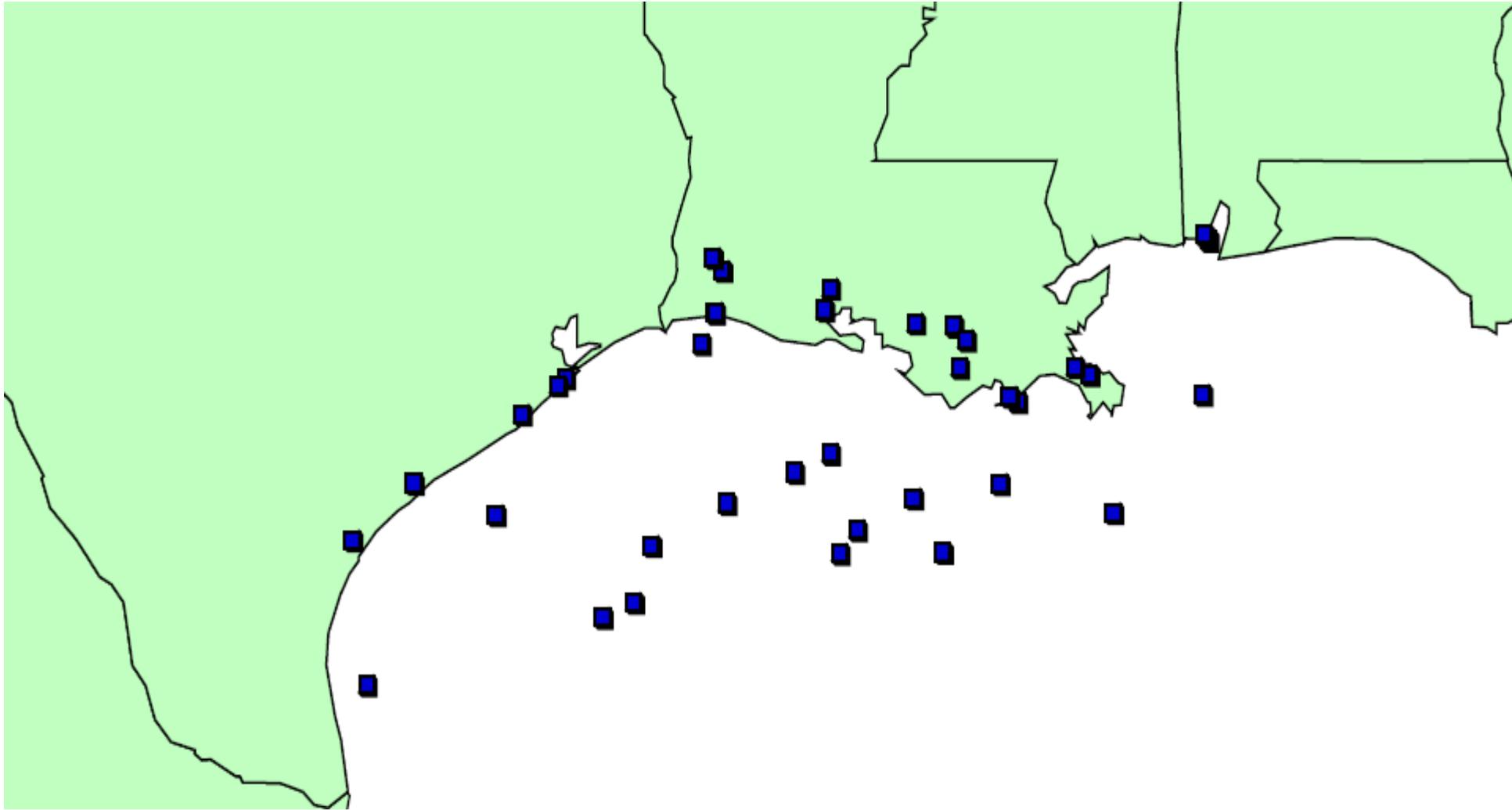
- Nearly 1,000 ASRI customers nationwide
 - Private corporations
 - Airlines
 - FBO's
 - DSPs
 - ARINC
 - SITA

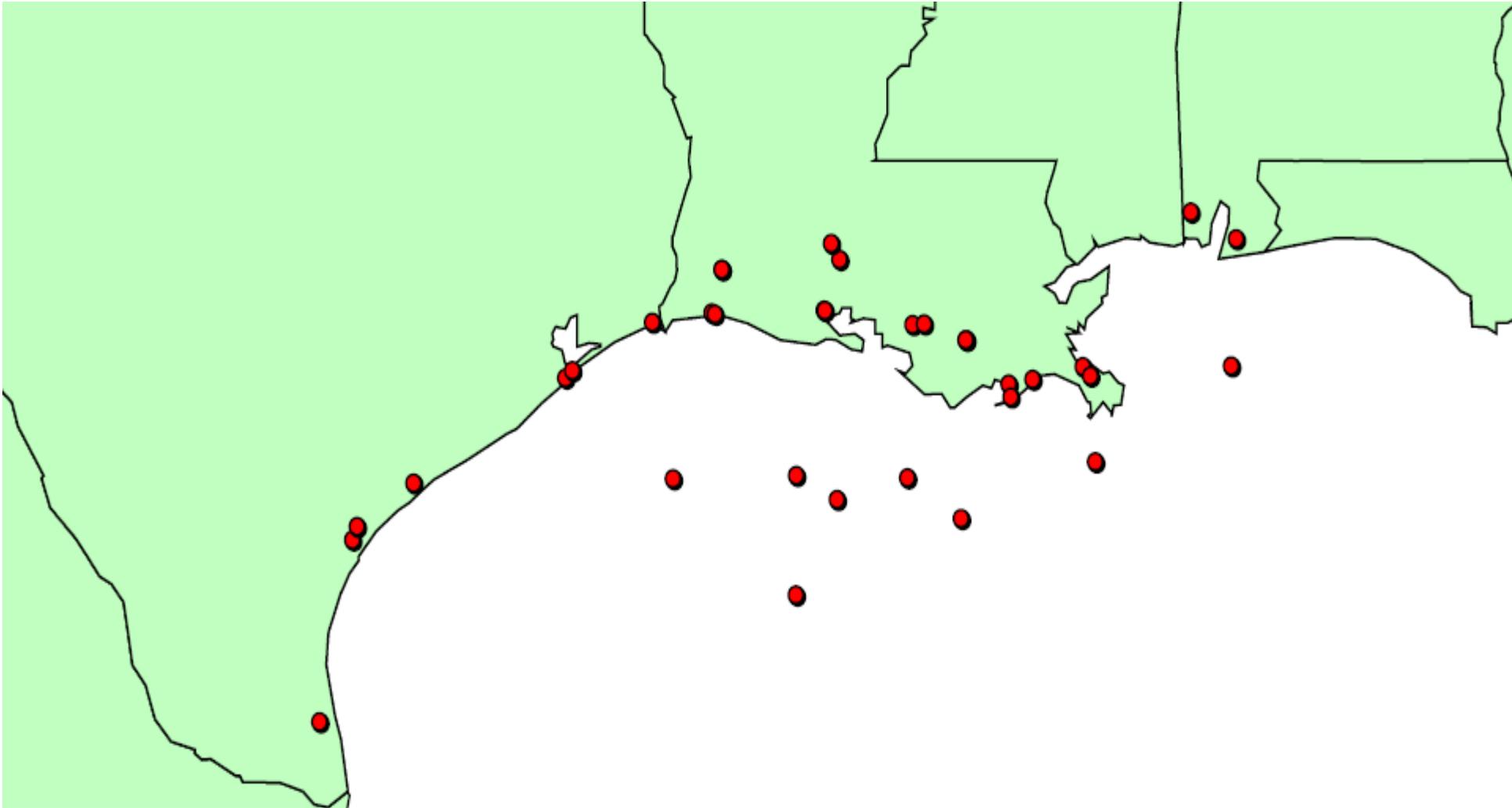


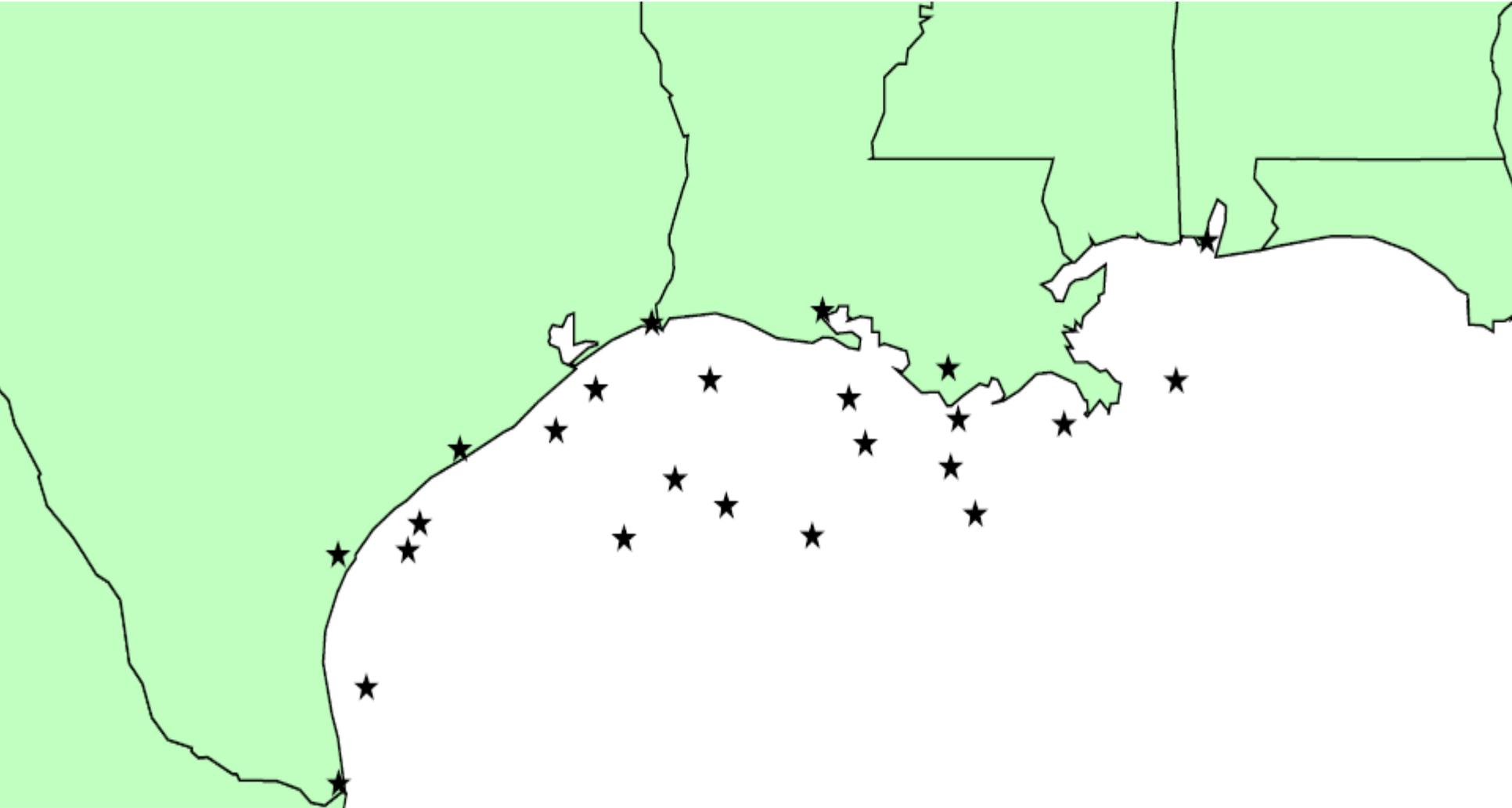
Helicopter use of ASRI frequencies

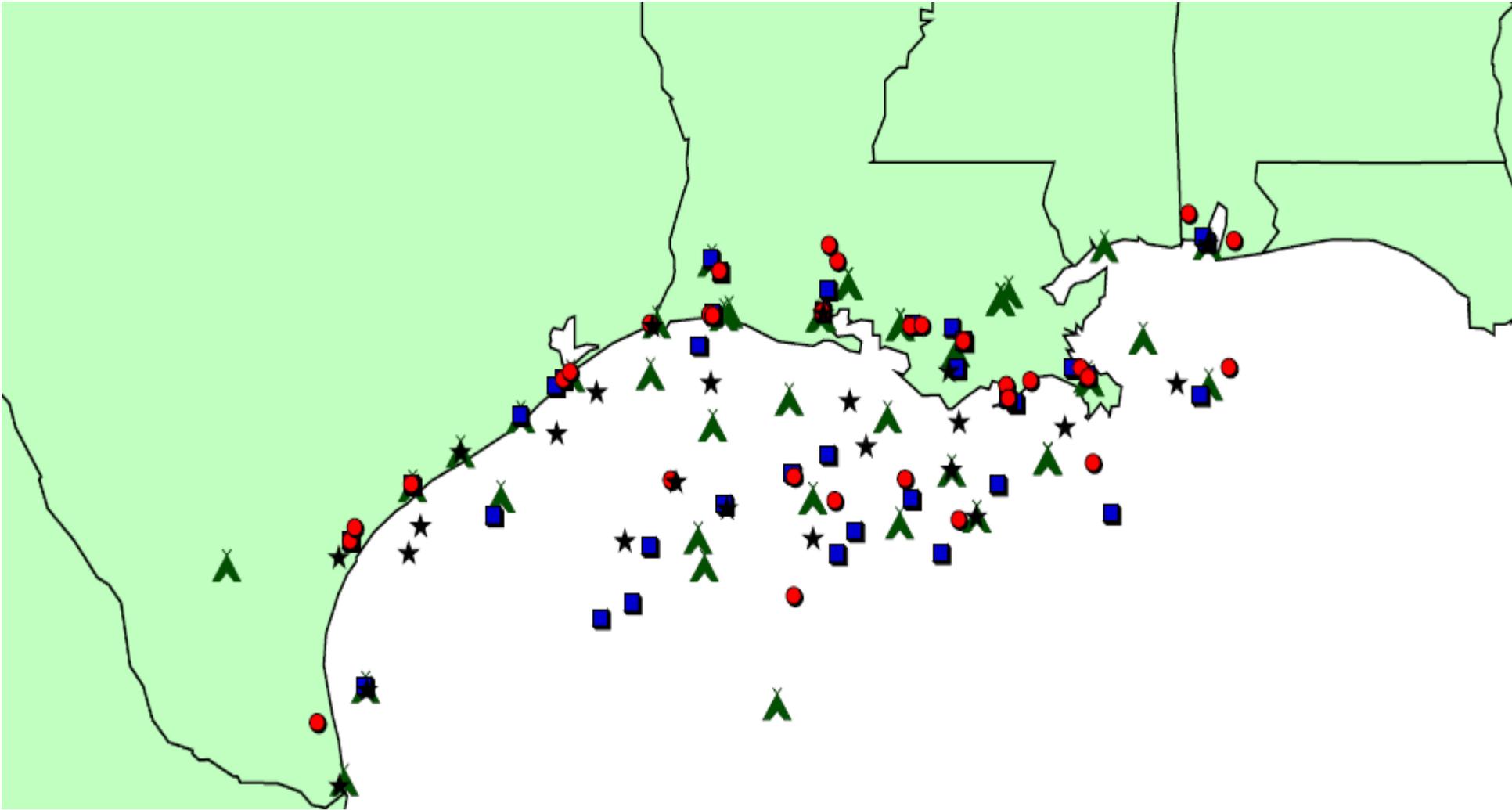
- Helicopter use nationwide
 - 52 different ASRI customers
 - 208 ASRI ground stations
 - 89 frequencies
- Helicopter use in GOM
 - 14 different ASRI customers
 - 156 ground stations
 - 68 different frequencies











Industry VHF Assignment Policy

- Policy developed by AFC to promote efficient, cost-effective utilization of the VHF spectrum
- Aircraft operators must justify channel assignments based on activity
 - Channels with peak utilization of less than 35 percent are assigned to multiple users
- Assignments are made according to physical and spectrum environment
 - Other users
 - Frequency separation criteria

First Step: The ASRI Website

- Visit ASRI at www.asri.aero
- Complete the Ground Station Frequency Request Form
 - Used for any frequency request
- Give us a call

The screenshot displays the ASRI website interface. At the top left is the ASRI logo with the text "Aviation Spectrum Resources, Inc." and a "Members Area" link at the top right. A navigation menu includes "HOME", "ABOUT US", "OUR SERVICES", "CUSTOMER SERVICE", "AFC MEMBERSHIP", "FORMS & DOCUMENTS", and "CONTACT US". The main content area is titled "ASRI Services" and lists several options: "ASRI Ground Station Administration Service (AGSA)", "Selective Calling (SELCAL)", "FCC License Assistance", "AGSA", "AGSA Online Payment", "Ground Station Frequency Request Form", "Ground Station Activity Reporting System (GSARS) Form", "Ground Station Interference Report", "Ground Station Supplies Request Form", "Ground Station Manual (PDF)", and "AFC VHF Air/Ground Station Installation Guidelines (pdf)". The "Ground Station Frequency Request Form" is selected and expanded, showing a form with the following fields: "Company Name *", "Headquarters Street Address *", "City *", "State *", "Zip *", "Billing Address", "(if different than headquarters)", "City", "State", and "Zip". Below these fields is a section for "Point of Contact" with a "Name *" field.

Frequency Assignment process

- What we need to assign a frequency
 - Returned signed contract
 - Completed license coordination sheet
- Frequency Selected
 - Temp authority is sent
- License is applied for at the FCC
- FCC issues radio license

ASRI Temporary Frequency Assignments

- ASRI can assign a temporary frequency in the event of an emergency
 - Hurricane evacuation
 - Deicing
 - short term assignment



AVIATION SPECTRUM RESOURCES, INC.

TEMPORARY AUTHORITY

USE TEMPORARY CALL SIGN KUF6 TO AUTHORIZE USE OF ANY FEDERAL COMMUNICATIONS COMMISSION TYPE-ACCEPTED TRANSMITTER WITH POWER OUTPUT NOT TO EXCEED 55 WATTS ON FREQUENCY 130.775 MHZ FOR OPERATIONAL CONTROL VOICE COMMUNICATIONS, AT THE FOLLOWING LOCATION(S):

STATION REP.
TEL. NO.
TX LOCATION: EUGENE ISLAND 215, GULF OF MEXICO
CONTROL POINT: ALTITUDE RESTRICTION: HO
ANTENNA HEIGHT: NOT TO EXCEED CURRENT ANTENNA STRUCTURE HEIGHT, OR 20 FEET ABOVE OTHER STRUCTURE.

THIS TEMPORARY AUTHORITY EXPIRES 180 DAYS FROM DATE OF ISSUE. POST AT PRINCIPAL CONTROL POINT PENDING RECEIPT OF RADIO STATION LICENSE AVIATION SPECTRUM RESOURCES, INC. ORIGINAL FCC AUTHORIZATION IS ON FILE AT:

AVIATION SPECTRUM RESOURCES, INC.
2551 RIVA ROAD
ANNAPOLIS, MD 21401
410-266-4800

ASRI TEMPORARY AUTHORITY IS ISSUED ONLY AS A COURTESY. ALL FREQUENCY ASSIGNMENTS ARE SUBJECT TO CANADIAN COORDINATION, AND FINAL AUTHORITY OF THE FEDERAL COMMUNICATIONS COMMISSION (FCC). IMPLEMENTATION OF FACILITIES PRIOR TO RECEIPT OF A FCC LICENSE IS DONE AT THE RISK AND EXPENSE OF THE CUSTOMER.

REGARDS,
(Original Signed by)
Patricia Baton

Summary

- Large demand for AOC frequencies
 - Distinct requirements for use and assignment
 - High concentration in Gulf region
 - Temporary assignments available in emergencies
- AFC working to support aviation interests
 - Encourages participation by organizations with industry wide issues
 - Provides coordinated means to support aviation

Questions?

Andrew Roy

410-573-3366

ACR@asri.aero

Chris Wheatley

410-266-4142

CCW@asri.aero

www.asri.aero

Requested discussion topics

- Interference issues
- Overseas spectrum pricing

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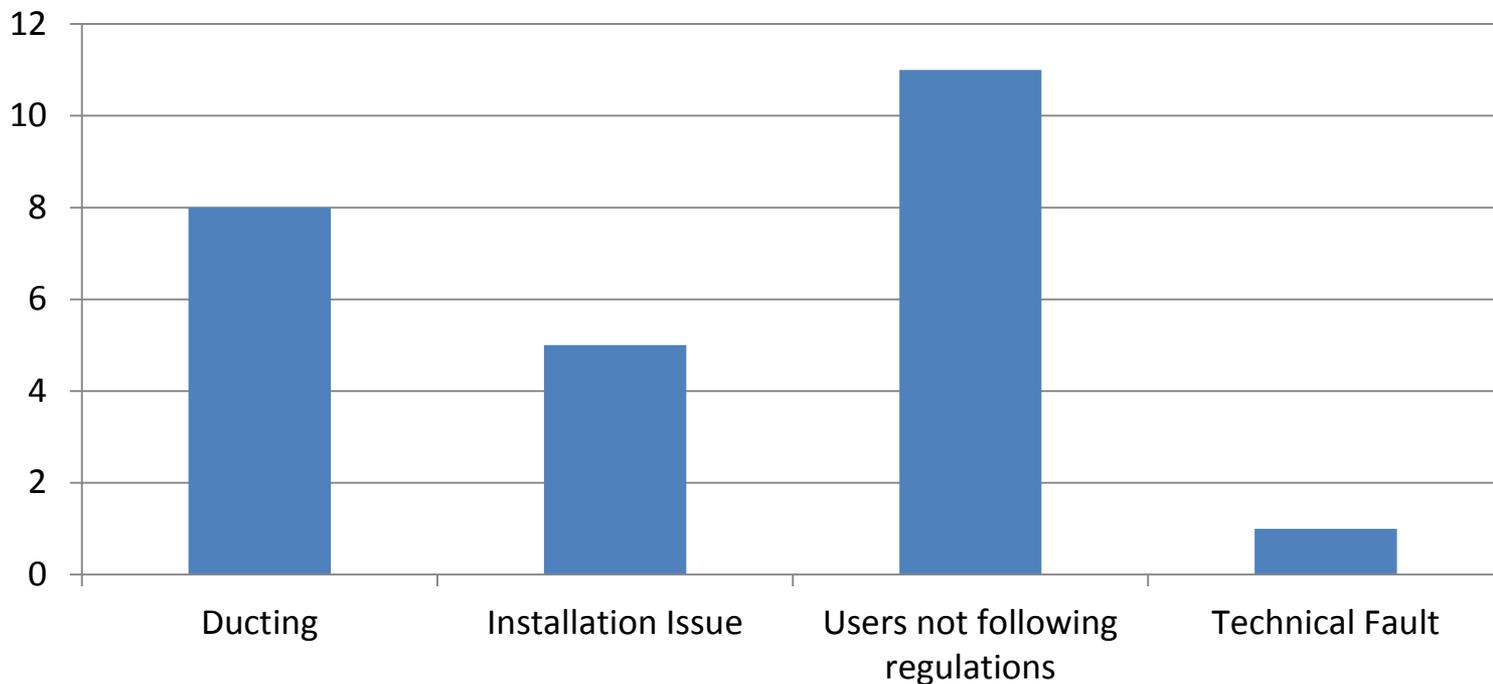
VHF Communications Interference

Interference in the GoM

- GoM region highly prone to interference
 - Congestion
 - Environmental conditions
 - Large antennas and no natural barriers
 - Limited antenna ‘real estate’

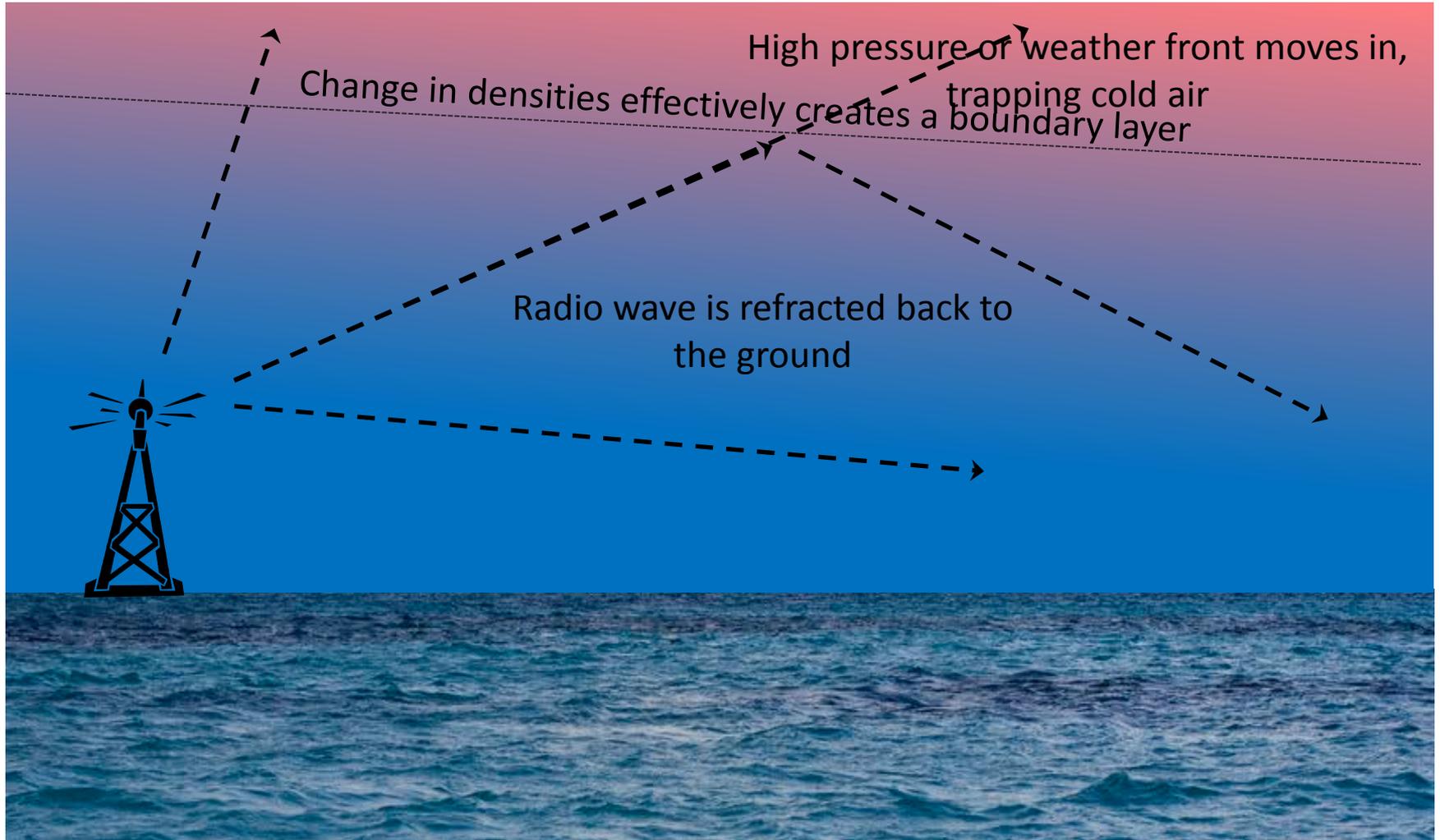
Interference Reports Received by ASRI

- ASRI has received 25 reports of interference in the Gulf since 2005

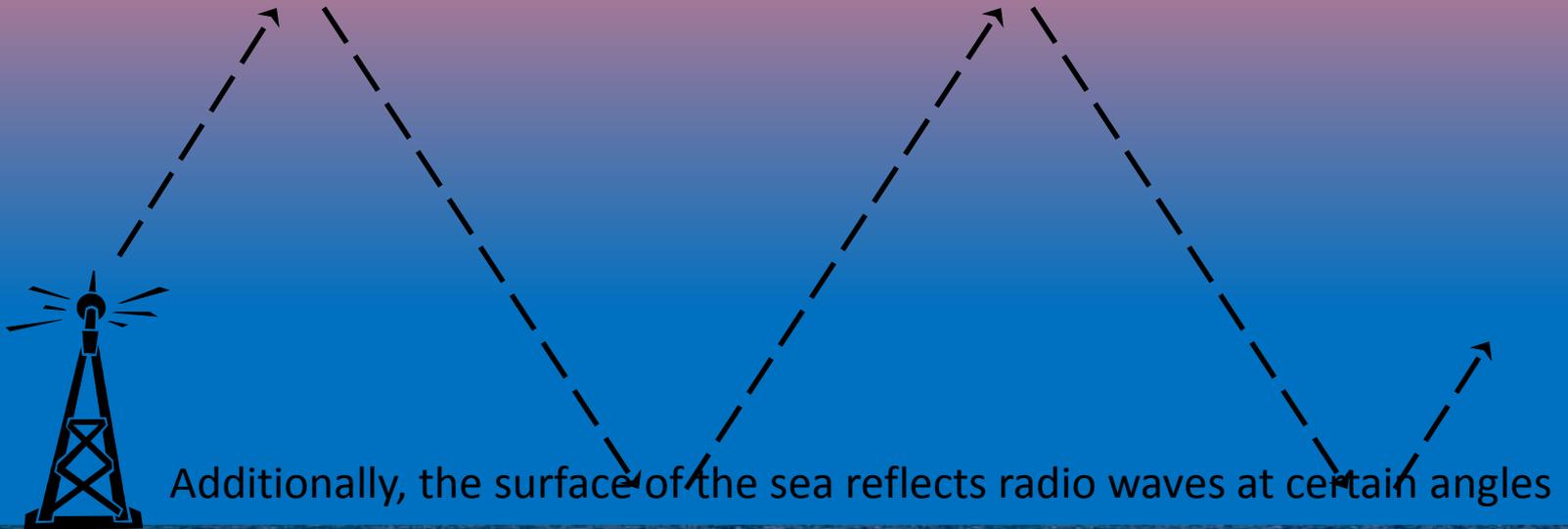


Interference Issues - Ducting

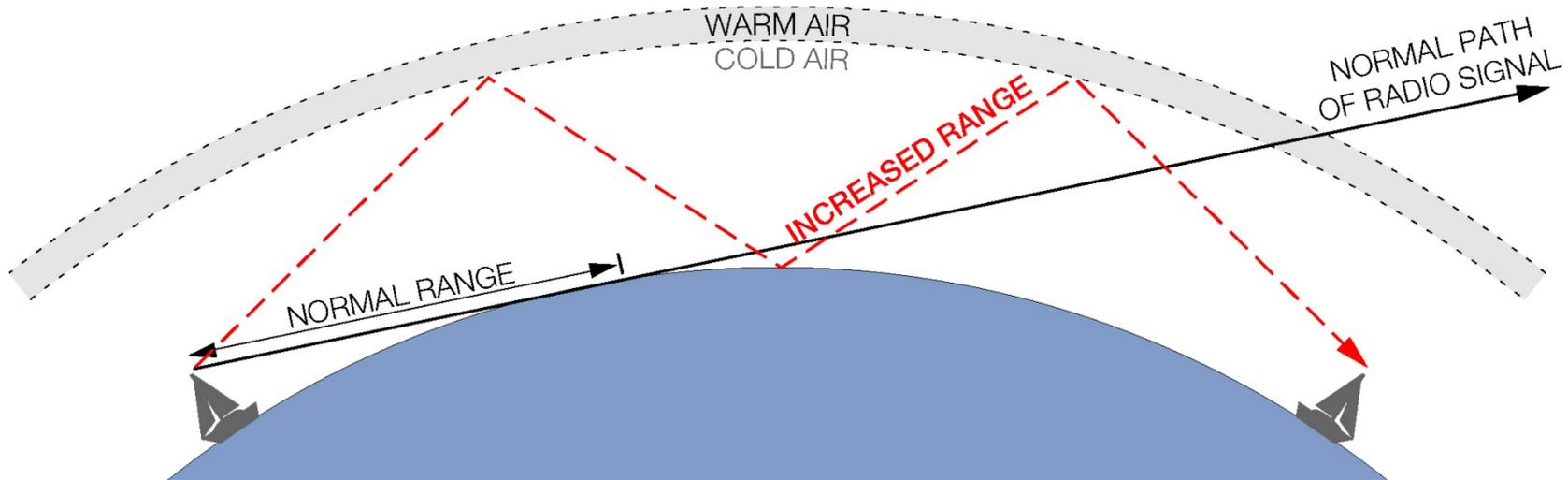
- Significantly extends radio range
 - Created by an atmospheric temperature/humidity change
 - Weather fronts or high pressure trap layers of air
- Temperature and humidity of GoM creates an ideal environment for ducting
 - Propagation difficult to predict exactly
 - Most communications susceptible to ducting



The two effects combine to create a duct for the radio waves



- Overall effect is a significant increase in range
 - Potentially up to 1000nm for ground based stations if the conditions are right



- Persistent problem/advantage in sub-tropical areas

Minimizing interference

- Implement procedures to minimize impact
 - Suitable training for all involved personnel
 - Understand conditions that lead to ducting
- Ensure installations are properly sited
 - Configuration management
- Report interference to the correct agency
 - FAA
 - ASRI

ASRI Interference Reporting Form

- Formal notification
 - Use ASRI website for initial report
 - ASRI can provide advice and information to help solve issue
- Please provide as much detail as possible
 - Report in all instances
 - Even if problem resolved
- Contact information with knowledgeable person is critical

ASRI
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Information Pages

- [About Aviation Spectrum Resources, Inc.](#)
- [About ASRI Ground Station Administration](#)
- [About the Aeronautical Frequency Committee](#)
- [ASRI Organizational Chart](#)
- [AFC Members Only](#)
- [About Selective Calling](#)
- [Selcal Processing Fee letter](#)
- [Selcal Processing Fee Schedule](#)
- [About ASRI FCC Licensing Assistance Services](#)
- [Links to Some Major Aviation Organizations](#)

AFC Handouts

- [AFC Brochure](#)
- [AFC VHF Air/Ground Station Installation Guidelines](#)
- [VHF Air/Ground Radio Installation Guidelines Slipsheet](#)

Forms

- [General Services Request: Use to ask questions, and for customer feedback](#)
- [Ground Station Activity Reporting System \(GSARS\) Online Form](#)
- [Ground Station Frequency Request Form](#)
- [Ground Station Interference Report](#)
- [SELCAL Application](#)
- [Ground Station Supplies](#)

Ground Station Interference Report

All information shall be supplied.

A separate form must be completed to report each instance of interference - all interference should be reported.

If you have questions, please call 410-266-4800.

Submitter's Information:

Submitter's Name:*	<input type="text"/>
Submitter's Phone:*	<input type="text"/>
Submitter's Email:*	<input type="text"/>

Administrative Information:

Licensee Name:*	<input type="text"/>
Licensee Contact:*	<input type="text"/>
Address:*	<input type="text"/>
City:*	<input type="text"/>
State:*	<input type="text"/>
Zip Code:*	<input type="text"/>
Telephone:*	<input type="text"/>
Fax:*	<input type="text"/>
Email:*	<input type="text"/>

Description & Location of System Affected:

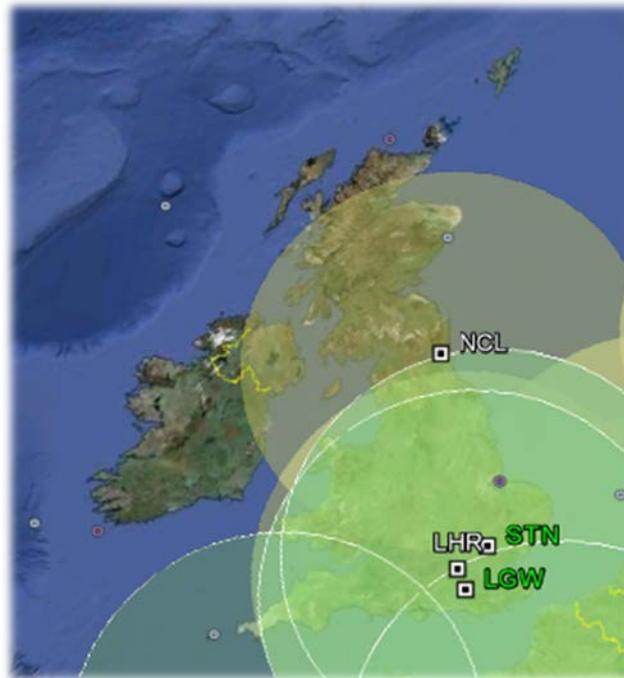
FCC Call Sign:*	<input type="text"/>
Frequency:*	<input type="text"/>
Transmitter Address:*	<input type="text"/>

ASRI

Aviation
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Resources, Inc.

Interference Questions?

Spectrum Pricing – Should we be wary of the UK’s precedent?



Background to UK Spectrum Pricing

- 3G cellphone license auction in 2000
 - UK Government made \$34Bn for licenses totaling 140MHz
- Created a high interest in the management of the spectrum.
 - Satisfy increasing demand of new technology
 - Increasing congestion densely populated country
 - Potential income was a significant motivator for UK Government
- Prof Martin Cave's audit of 2004
 - Economist background
 - Review of spectrum management, processes and band usage below 15GHz
 - Focused on the 2 biggest users; defence and aviation.

Cave Report Recommendations

- Incentivizing efficient spectrum use
 - Impose continuing economic pressure on public sector to economize
 - All requirements be met through market forces
 - Fully analyze MOD usage to encourage band sharing where feasible
- Resulted in changes for aviation bands
 - Adoption of specific pricing for VHF
 - Pressure to release radar bands

UK Spectrum Pricing Rates

- Spectrum fee is based on 2 criteria
 - Area covered and bandwidth
 - No longer based on number of emitters or operating height
- Annual rate of \$5500 per 8.33 kHz
 - Limit for coverage, but not bandwidth
 - Fee directly proportional to area covered
 - 100% of UK land mass = 100% of fee (capped)
 - 5-year phased introduction
 - 10, 20, 30, 60 & 90% increments

Implications for US aviation

- Several governments adopting a 'wait and see' approach
 - Observing the UK test case
- VHF not major incentive for the US Government at this time
 - Not a suitable band for mobile broadband
 - Lots of rumors, but no action
- Greater threat to wider spectrum
 - Loss/reduction of other aviation bands
 - Radar and navigation aids
- AFC continuing coordination with industry
 - Representation in ITU Joint Task Group for mobile broadband

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Spectrum Pricing Questions?

ATTACHMENT #4

Ten Questions

1. What is Crude Oil? _____

2. What year was the first commercial oil well drilled and where? _____

3. How many gallons of jet fuel are typically produced from one barrel (44-gallons) of crude oil?

4. What does the acronym ASTM stand for? _____

5. What is the primary method for processing crude oil into refined products called? _____

6. What is the requirement for all Over-the-Road Transport Trailers?

7. What is the ONLY field test to determine the absence of dissimilar fuel product?

8. What are the two types of Jet Fuel filtration? _____

9. How long is fuel considered “Good” before it should be rested and “On-Spec” quality assured? _____

10. What is the “Number One” contaminant in Jet Fuel?

Aviation Fuel Quality Assurance

Implementation of a Standardized
Method for Identifying Fuel
Transporter Fill & Expiration Dates

Standardized Fuel Transporter Fill Date & Expiration Markings

➤ Improving Aviation Fuel Quality Assurance

- How can we maintain the same standard of fuel quality that is delivered to the dock while awaiting shipment to or upon receipt at an offshore location?
- What are the weak points in ensuring fuel quality while stored in fuel transporters?
- What steps can we take to implement fuel quality control procedures away from fixed operating heliports or primary control facilities?
- Can we create or enhance existing procedures for marking fuel totes with fill and expiration dates?
- What is our current level of exposure and liability?
- Would implementation of a marking scheme designed to identify the fuel transporter's fill date and fuel expiration date enhance existing quality control procedures by creating awareness for dock and offshore personnel?

Standardized Fuel Transporter Fill Date & Expiration Markings

➤ Background:

- Quality Control
 - Helicopter Operators have implemented extensive quality control measures for ensuring the quality of aviation fuel at their operating bases, but have minimum control over fuel tote rotation thus increasing the probability of fuel stagnation or contamination at customer docks and offshore fuel locations.

- Tracking Fuel Transporters
 - Current “serialized” or GPS tracking systems do not provide adequate information to assist dock workers and offshore personnel in the proper rotation and distribution of fuel totes.

- Non-Standardized Markings
 - Marking schemes, if utilized, vary between Helicopter Operators
 - Inconsistency between Helicopter Operators contributes to confusion, non-compliance, and in-efficiencies in proper fuel tote rotation.

- Fuel Contamination
 - Filled fuel totes that are allowed to sit for longer than 90-120 days are susceptible to increased accumulation of water or other contaminants and pose an increased risk to dirty fuel making its way into offshore fuel systems and aircraft.

Standardized Fuel Transporter Fill Date & Expiration Markings

➤ Background:

■ Improper Rotation

- The last totes to arrive at the dock are typically the first totes shipped due to ease of accessibility for dock workers and the absence of a standardized system to aid in identifying fuel tote fill and expiration dates.
- Fuel totes that have been refilled but remain in the “back of the line” are left to sit for extended periods.
- Fuel totes arriving at offshore locations are placed in the “front of line” in the fuel tote staging area, which means they are the first to be emptied into the fuel system. Unmarked totes with aging fuel remain tucked away in the back of the staging area which significantly increases the chance for contamination.

■ Liability & Cost

- Helicopter Operators are ultimately responsible for ensuring the quality of our fuel – both onshore and offshore.
- Due to an absence of adequate and standardized visual markings on our fuel totes, we are faced with the cost of wasted fuel, suspended operations or reduced operational capability due to contaminated offshore fuel systems, as well as the increased potential for an aircraft mishap.

Standardized Fuel Transporter Fill Date & Expiration Markings

➤ Proposal

- GOM Helicopter Operators adopt a standardized system for marking fuel totes to identify the most recent fill and corresponding expiration dates in an effort to improve fuel quality management at customer dock and offshore locations.
- HSAC incorporates this standardized marking proposal, or a version thereof, in an amendment to HSAC RP #2004-02, Revision 1 (Jet Fuel Quality Control Procedures), dated 24 May 2012.

Standardized Fuel Transporter Fill Date & Expiration Markings



Part 1 of 2 – Color Chart

1. Printed Color Chart would be distributed to all Customer dock locations and offshore fueling sites.
2. The chart is designed to provide a visual aid to Dock Workers and Offshore Personnel in identifying the last fill date of the fuel totes and priority of fuel tote utilization.
3. The oldest colored tag should be loaded/shipped to offshore fuel locations and used first when transferring to an offshore fuel system.
4. A 12"x12" Color Chart could also be attached to the fuel tote as metal or vinyl decal for use as a quick reference guide.

Standardized Fuel Tote Fill Date & Expiration Markings

Part 2 of 2 – Colored Tags

1. 9” x 9” vinyl, colored decals adhered to fuel totes would indicate the safe period for fuel tote use.
2. Fuel inside totes would be restricted to a 90 day period (+/- 15 days) of use. Fuel totes filled prior to the 15th of the month would utilize the current month’s colored tag (see example #1). Fuel totes filled after the 15th of the month would utilize the next month’s colored tag (see example #2).
3. Colored tags would also include text with directions to “DO NOT USE” beyond the day and month indicated.

Example 1 : Fuel tote filled on January 10th. Current month’s tag color (January) is adhered to the fuel tote.



Example 2 : Fuel tote filled on June 21st. The next month’s colored tag (July) is adhered to the fuel tote.



Standardized Fuel Tote Fill Date & Expiration Markings

➤ Implementation

- Helicopter Operators would acquire decals through a local vendor. Or, decals could be made “in-house” in accordance with the established design guidelines.
- If acquired through a vendor, each decal would be assigned a part number specific to the monthly color and Helicopter Operator.
- During transporter refills, the old “USE BY” decals would be removed, and a new “USE BY” decal appropriate to the fill date would be adhered to two opposite sides of the tank for easy reference by dock and offshore personnel.



A decal would be adhered to two sides of the fuel transporter. Forklift side is preferable to improve awareness of loading coordinators and forklift operators, as well as offshore personnel.

Last Filled – January



**DO NOT USE PAST
March 31st**

Company Name (555) 123-4567

Standardized Fuel Transporter Fill Date & Expiration Markings

➤ Benefits & Cost

- By standardizing fuel tote markings, we can...
 - Increase awareness of dock workers and offshore personnel
 - Develop and maintain a GOM wide system to facilitate the proper rotation of fuel transporters
 - Improve quality of fuel at offshore fueling facilities thereby ensuring usability
 - Reduce fuel contamination and wasted deck space required to accommodate rejected fuel transporters
 - Minimize down time for Customer operations due to fuel system quality control issues
 - Mitigate risk and liability associated with fuel system contamination

- The cost of ensuring quality fuel is available at offshore locations includes:
 - Added workload for fuel personnel and increased time at the dock to accomplish the removal and addition of decals
 - Material costs to include the labor cost associated with an “in-house” production of the Color Chart graphic and Colored Tags
 - Local vendor pricing for the vinyl decals:
 - 12” x 12” Color Chart = ~ \$2.90/decals
 - 9” x 9” Colored Tag = ~ \$1.50/decals

Standardized Fuel Transporter Fill Date & Expiration Markings

➤ Proposed Action Items

- Helicopter Operators should conduct an internal review of this proposal and discuss ideas.
- Provide feedback detailing revisions and/or objections to the marking scheme.
- Once a solution has been agreed upon, a finalized version of the proposal will be submitted to HSAC for inclusion as a Recommended Practice.
- Helicopter Operators implement the marking schematic per the developed HSAC RP.

**HSAC Fatigue Management for Aerial Observation Crewmembers
(RP) # 2013-01 Rev. 23 January 2013 (DRAFT)**

Background:

With fatigue being cited more frequently as the cause of many industrial mishaps, including aviation, it is imperative to have controls in place to mitigate this risk. Aerial observation requires a well rested, alert crewmember to perform his/her duties in the safest manner possible. This section provides some considerations in putting together a comprehensive Fatigue Management Policy. Aviation fatigue management includes flight crewmembers and maintenance personnel. This section will focus on crewmembers only. For more guidance on maintenance fatigue management, see HSAC-RP-2012-1 Fatigue Management.

Recommended Practices:

A comprehensive Fatigue Management Policy is more than setting hour limits to duty days and flight periods. The policy should include an understanding and recognition of fatigue such as warning signs of fatigue and situations that are more prone to cause fatigue. There should be tips to minimize fatigue and countermeasures to deal with fatigue. Finally, there should be controls in place to ensure a well rested crew shows up for work each period. While some operations may be subject to FAA mandated guidelines which can be found at the FAA's website, www.FAA.gov, duty day and flight periods should be limited by the operator. **The following are examples to consider for inclusion in the policy.**

Flight Duty Period per day
Flight Time Limits per day
Flight Time Limits in a 7 day period
Flight Time Limits in a 28 day period
Flight Time Limits in a 12 month period
Minimum Crew Rest Period

Operators Program should include definitions of the above

Crew Rest Period is the period of time that the crewmember is entitled to free time that includes meals, recreation, and restful activities uninterrupted by official duties and includes the opportunity for 8 hours of uninterrupted sleep.

Consideration should be given to increasing crew rest periods for any over-flight of the maximum number of hours.

- Examples: Overfly by .1 - .5 hours - extend crew rest by 1 hour
- Overfly by .6 - 1.0 - extend crew rest by 2 hours
- Overfly by 1.0 or greater - extend crew rest by 4 hours

Considerations should also be given to non-standard hazards for reducing flight time limit.

Examples: night operations, IMC, extreme heat, unfamiliar routes,
abnormal amount of activity or observations

workload

other operational considerations
reference risk management doc

Recommended Practices (RP) are published under the direction of the Helicopter Safety Advisory Conference (HSAC). RP's are a medium for discussion of aviation operational safety pertinent to the transmission of product, energy exploration and production industry in the United States. RP's are not intended to replace individual engineering or corporate judgment or to replace instruction in company manuals or government regulations. Suggestions for subject matter are cordially invited.



HSAC Contributors – 2012

Airborne Energy Solutions (2009)	\$1,000
Apache Corporation	\$ 1,000
BHP Billiton Petroleum	\$1,000
Blue Sky Innovations, LLC	\$ 500
Bristow U.S. LLC	\$1,000
Chevron Aircraft Operations (2011)	\$1,000
Chevron Aircraft Operations (2012)	\$1,000
Dart Sales Inc.	\$500
Energy Transfer	\$1,000
Era Helicopters	\$1,000
Gulf Fish Spotter Safety Committee	\$500
Petrobras Americas, Inc. (2010)	\$1,000
PHI, Inc.	\$ 1,000
Skynet Communications	\$750
Suncor Energy	\$2,000
TransCanada Pipeline	\$1,000

Total: \$ 15,250



2012 HSAC Bank Account Activity 1 Jan – 31 Dec

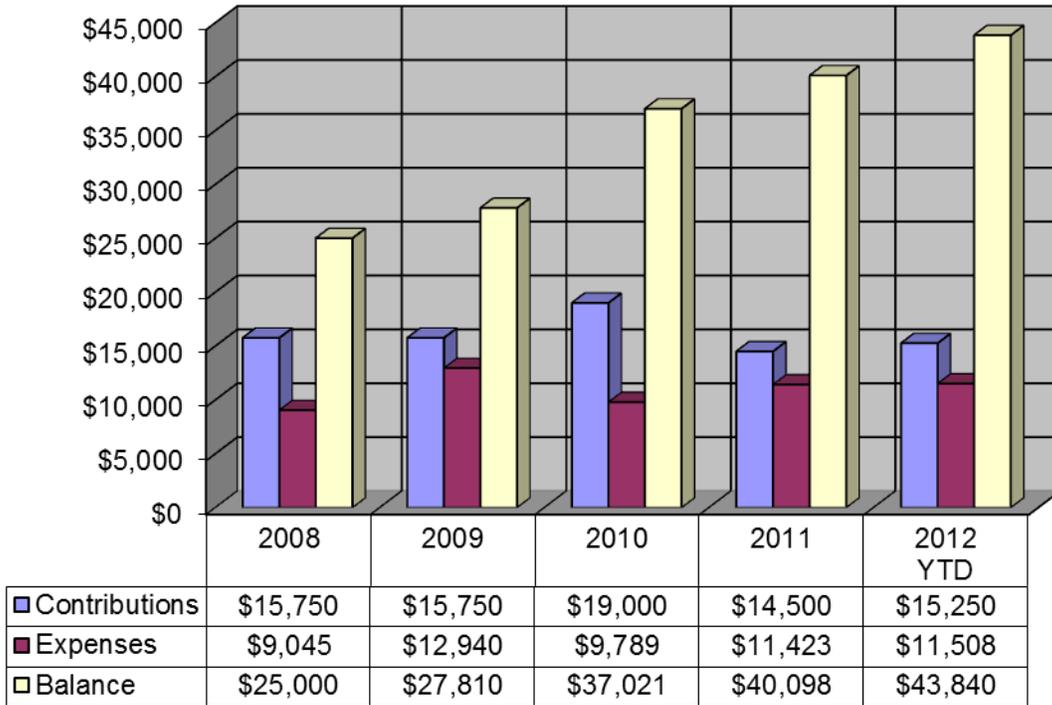
Opening Year Balance	\$ 40,098.05
Contributions	\$ 15,250.00
Expenditures	\$ 11,507.94
To Date Balance	\$ 43,840.11
Net Difference	+\$ 3,742.06



2012 Summary

1 Jan – 31 Dec

HSAC Contributions vs. Expenses





Helideck Parking Area "Markings and Procedures"





Overview

- Due to increased distances we realize that if an aircraft becomes un-serviceable while on the helideck, operations are affected.
- The ability to park a helicopter on an offshore installation and still be able to use the helideck for other helicopter movement, gives much greater operational flexibility.
- Owners currently have projects that wish to utilize a parking area attached to the helideck but have limited guidance to leverage.
- As Aviation Advisors we are asked what markings are required for safe operations to Helideck Parking Areas.
- Owners have currently developed their own processes and procedures for Parking Area markings.



Objectives

- Identify Helicopter Safety Advisory Conference (HSAC) members that are available to participate in the workgroup (WG).
- Provide Flight Crews with Helideck Parking Areas (HPA's) markings and written procedures to enhance safe operations.
- Include/add guidance and procedures for HPA's to the HSAC Recommended Practice (RP) 2008-01.
- Align the RP with current industry best practices and markings developed by structure owners and operators. Where guidance is provided in ICAO Annex 14, API RP 2L, UK CAP 437, UKHSE shall be considered.
- Within 6 months provide the final WG recommendations to the HSAC Committee for review and revision consideration of the RP.



Scope

- Definitions
- Parking Area colors
- Layout
- Parking Area (specific)
- Limitations
- Transition Area with restrictions
- Parking Area procedures
- Lighting
- Structural - Shared responsibility with API workgroup
- Tie-downs - Move to API workgroup
- Defined Helideck procedures - Move to separate RP within HSAC



Workgroup Membership

Name	Position	Company	email
Bill Schroeder	Facilitator	Chevron	billschroeder@chevron.com
Ken Kersker	Presenter	Chevron	kkersker@chevron.com
Patrick Bosman	Presenter	Shell	Patrick.p.bosman@shell.com
Kevin Tauzier	Member	Chevron	ktauzier@chevron.com
Rusty Politz	Member	Chevron	rpolitz@chevron.com
Mike Wickware	Member	BP	Michael.wickware@bp.com
		Bristow	
		ERA	
		PHI	
		RCL	
		Others	



Definitions

Parking area - An extension to the Landing Area designed to accommodate a parked helicopter where clearance is provided for hover or ground taxi.

Limited Parking Area – An extension to the Landing Area designed to accommodate a parked helicopter with limitations i.e. size, weight or obstacles.

Push In Area – An extension to the Landing Area designed to accommodate a rotors not turning helicopter that shall be ground handled including to and from the SLA.

Transition Area - An extension from the Final Approach and Take-Off area (FATO) to the parking area used to transition the helicopter to the parking area by Hover, Ground Taxi, or Towing.



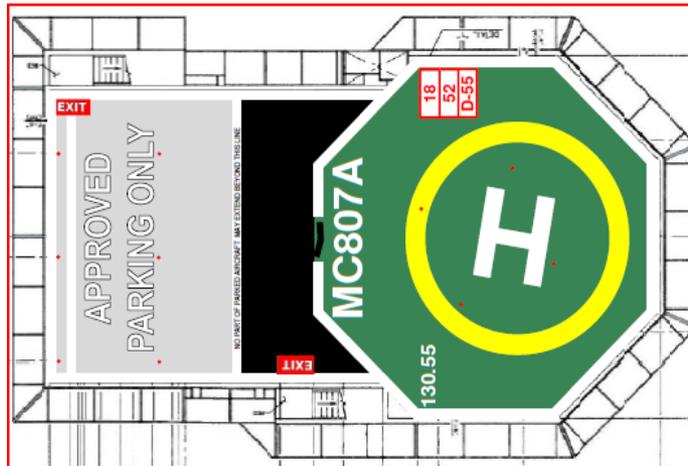
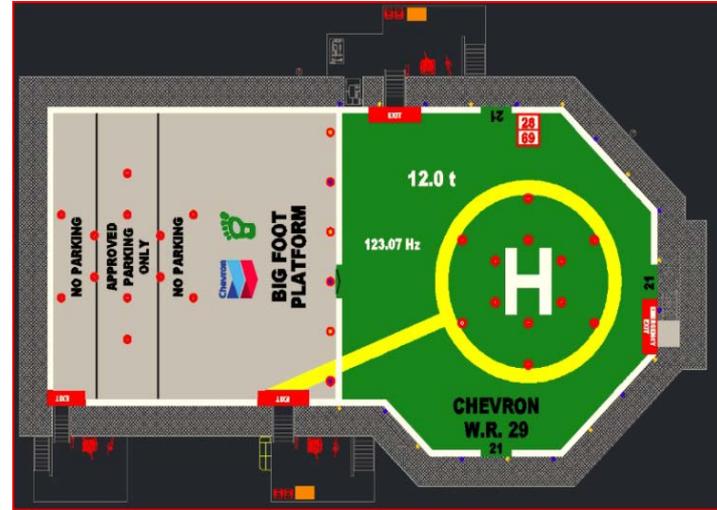
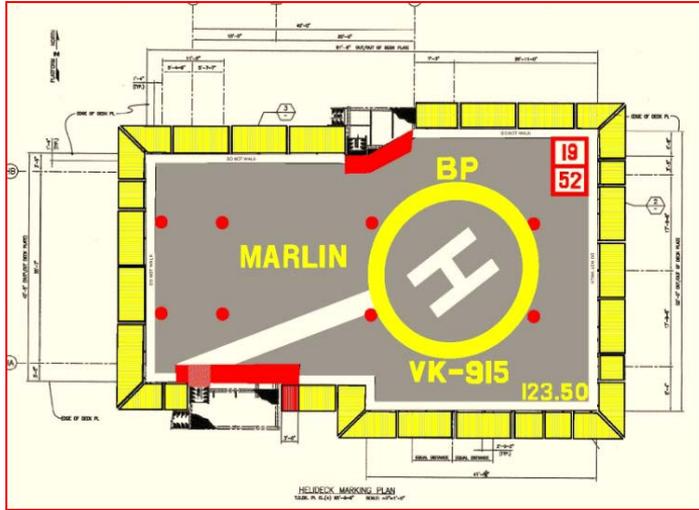
Parking Area Color

UKHSE 6.5.3 - The parking area can be clearly distinguished from the Safe Landing Area (SLA). This is best achieved by painting the parking area in a contrasting 'light' color.

WG proposal - The parking area shall be gray provided this is a contrasting color from the helideck.



Current Examples





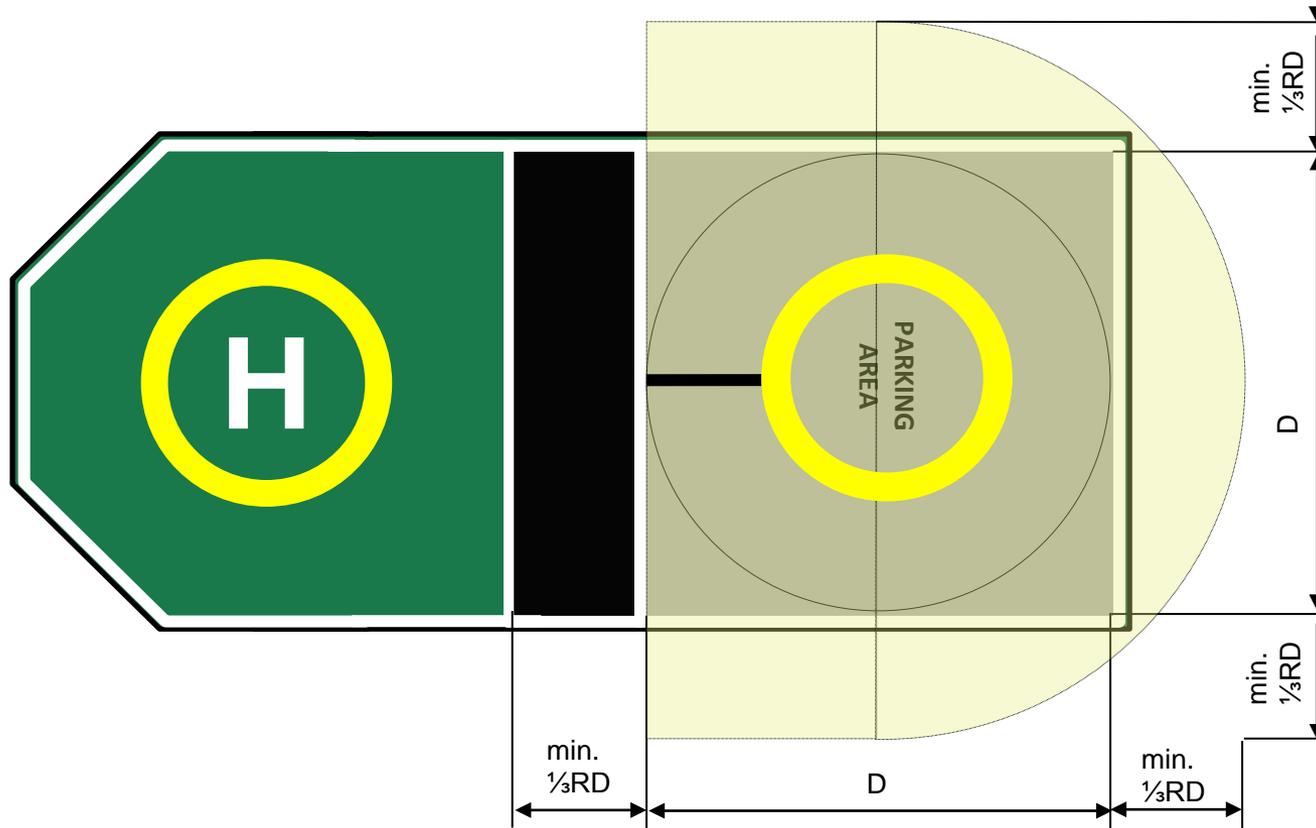


Parking Area (Specific)

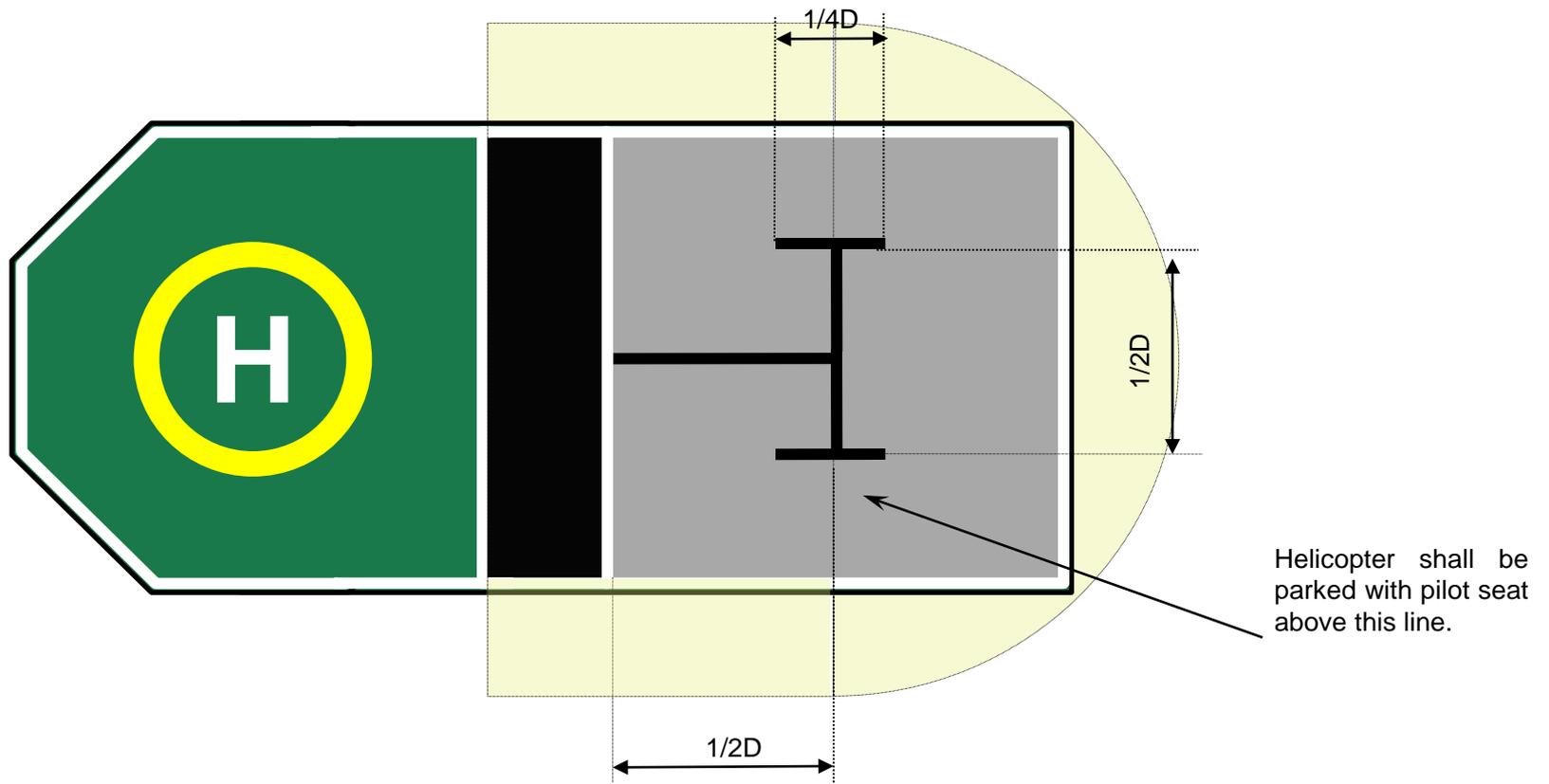
Parking and Limited Parking Areas:

- The parking area footprint (deck size) shall be a minimum of RD.
- It shall be obstacle free to the maximum D-value of the largest helicopter that can safely operate to the parking area.
- Markings shall be provided to give visual cues to the flight crew to enhance safe operations during hover and ground taxi.

No restrictions

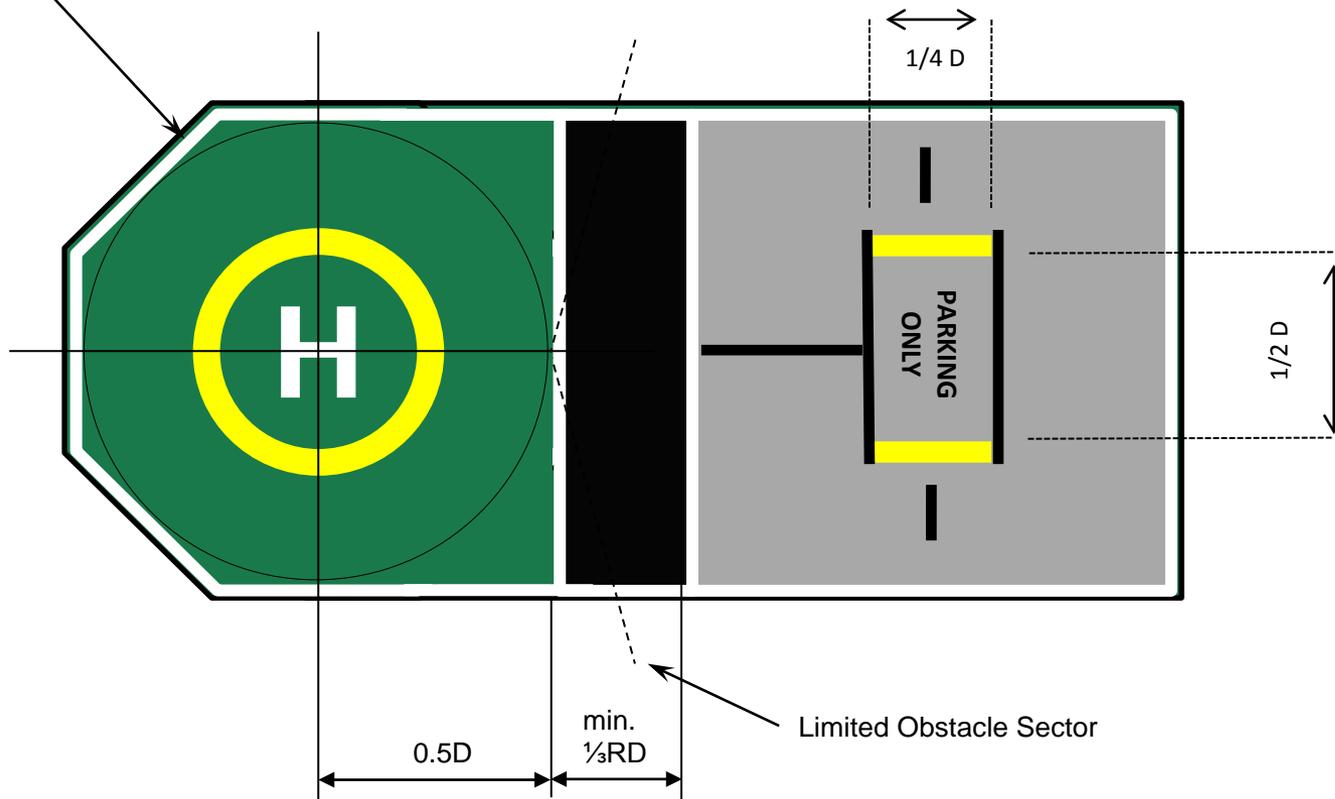


Example of helideck layout with adjacent D-value parking area and $1D + \frac{1}{3}RD$ clearance area.



Example of helideck layout with adjacent 1D parking area and hover/ground taxi markings

Safe Landing Area (SLA) inside White Perimeter Line



Example of helideck layout with adjacent 1 D parking area and hover/ground taxi markings.

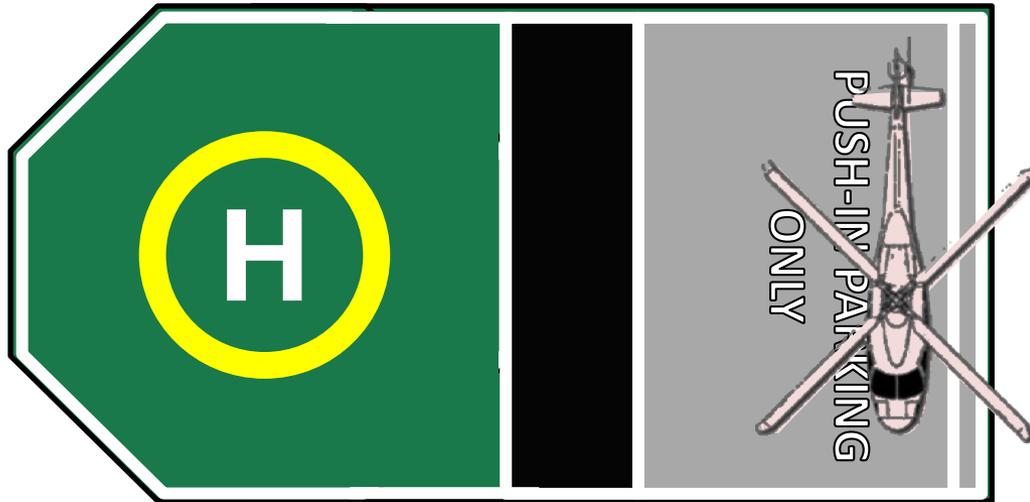


Parking Area (Specific)

Push-in Parking Only:

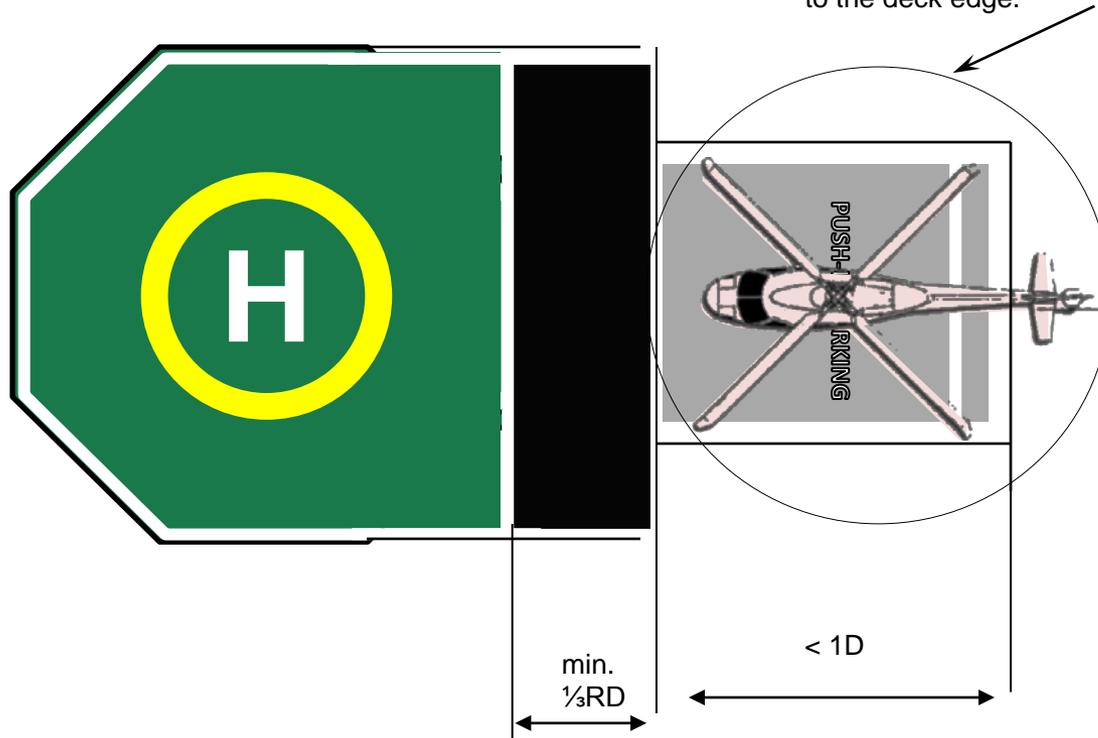
- The **Push-In Only** parking area footprint (deck size) shall be a minimum that will provide un-obstructed clearance for a rotor not turning helicopter to be safely ground handled including to and from the SLA.
- Consideration for the ability of maintenance to access the helicopter, i.e. work stands, ladders, tools and equipment, shall be considered when determining the overall size of the Push-In Only parking area .

At no time will any parked helicopter be positioned closer than 3 feet from the deck edge.



Example of helideck layout with adjacent limited size parking area (push-in parking only)

At no time will any parked helicopter be closer than 3 feet from the helideck edge. This line marks 3 feet from the deck edge to indicate the closest distance the undercarriage of the helicopter may be positioned to the deck edge.



Example of helideck layout with adjacent limited size parking area (push-in parking only)

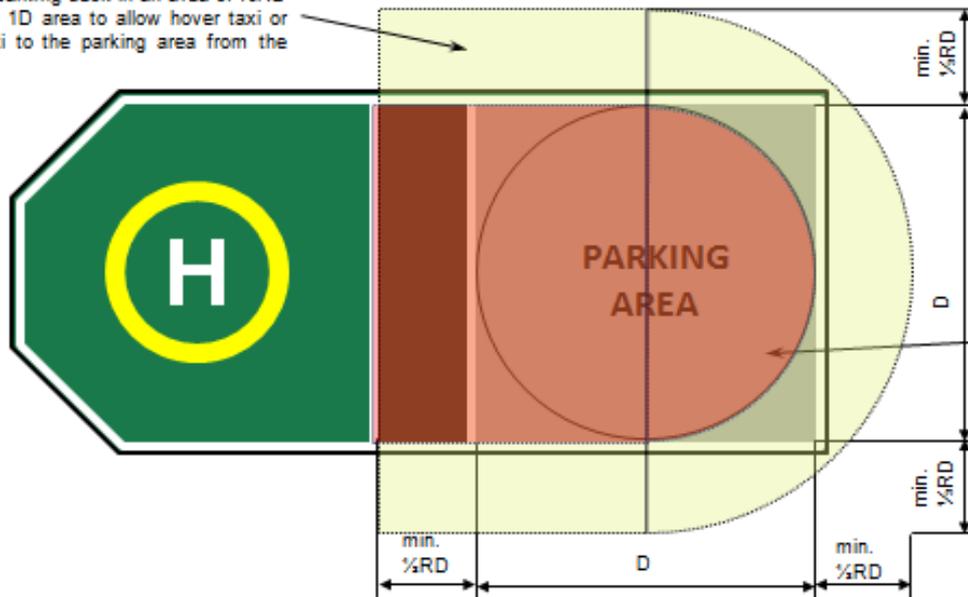


Parking Limitations

The **Parking Area**, **Limited Parking Area**, **Push in Area** shall be located within the Limited Obstacle Sector (LOS).

As a minimum the **Parking Area** clearance will be Diameter (D) + 1/3 RD (HSAC RP 93.3) of the largest helicopter from the SLA and all obstructions.

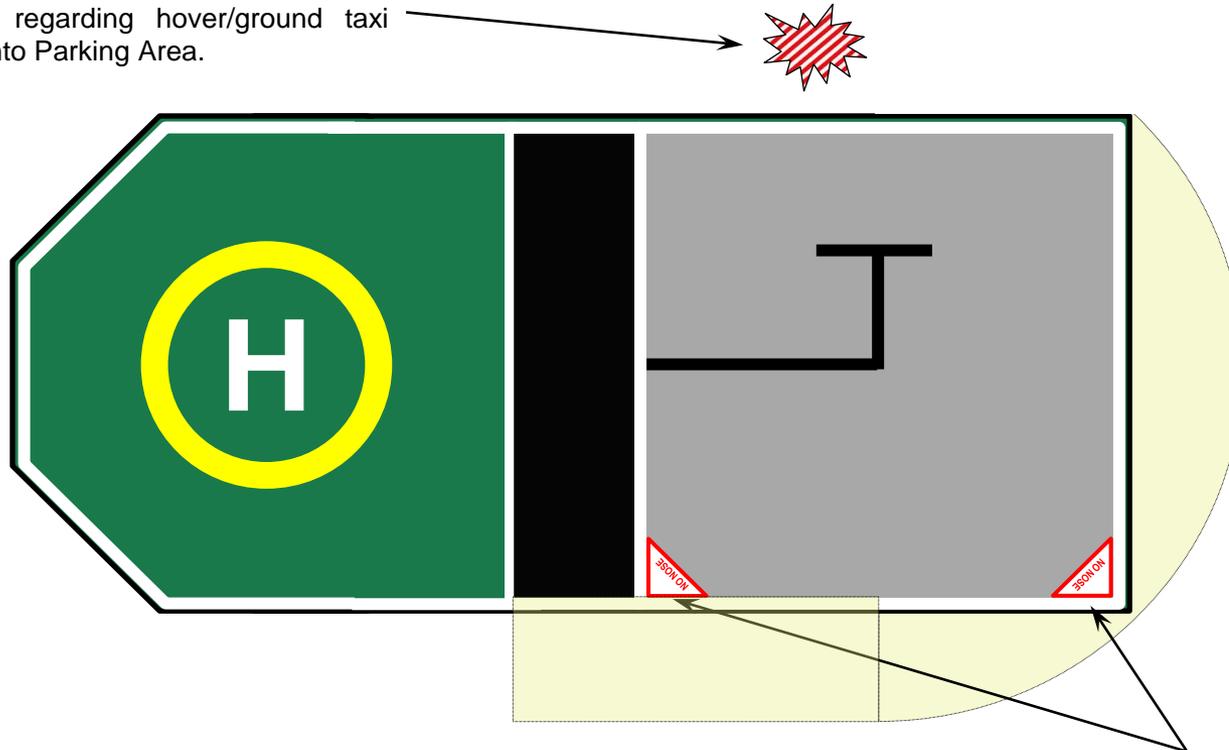
Obstacles shall not exceed 10 inches above the parking deck in an area of $\frac{1}{2}RD$ around the 1D area to allow hover taxi or ground taxi to the parking area from the SLA.



Obstacles shall not exceed 2 inches above the parking deck in the 1D area.

When an infringement of the $\frac{1}{3}$ RD area surrounding the D-area on the Parking Area is present the parking area is limited and called a **Limited Parking Area**. As a minimum the Limited Parking Area clearance will be Diameter (D). The infringements of the $\frac{1}{3}$ RD (HSAC RP 93.3) shall be adequately marked and procedures shall be available to identify the obstruction(s) or restriction(s).

An obstacle in the 1/3 RD area results in restrictions regarding hover/ground taxi from SLA into Parking Area.



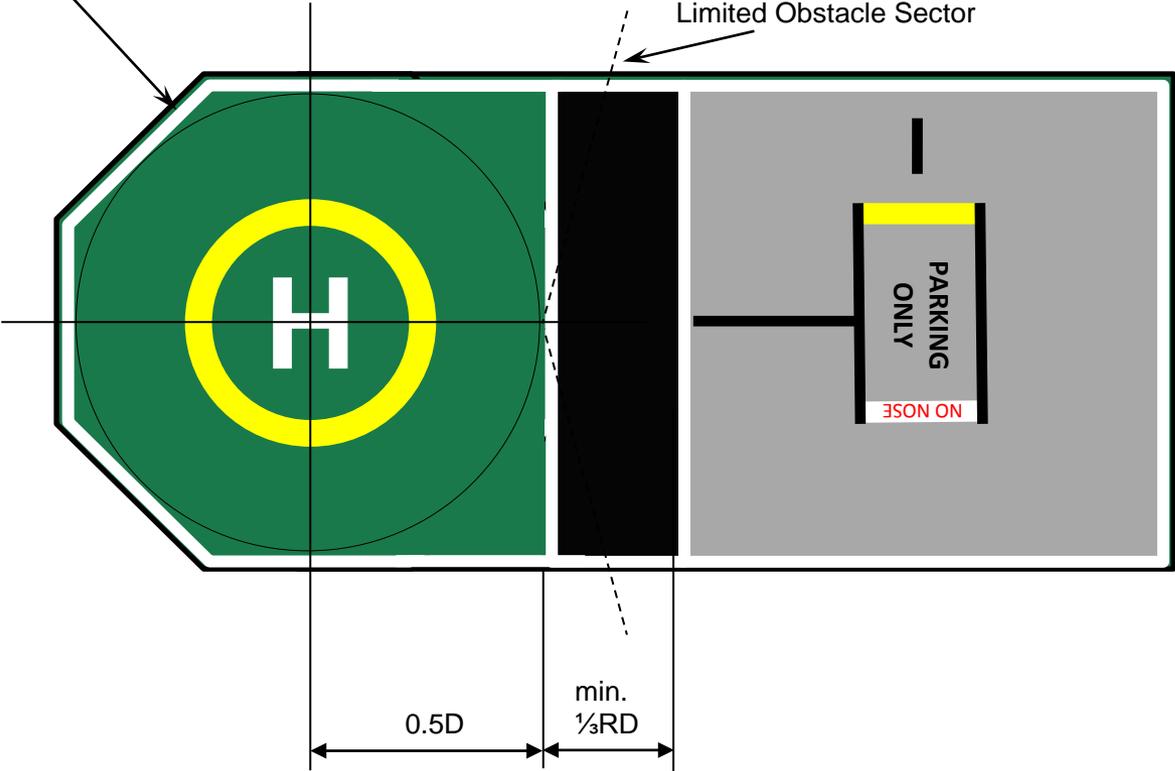
A 'NO NOSE' marking shall indicate a tail rotor hazard on the opposite side of the parking deck

Example parking area layout with an obstacle in 1/3 RD area

Safe Landing Area (SLA) inside White Perimeter Line

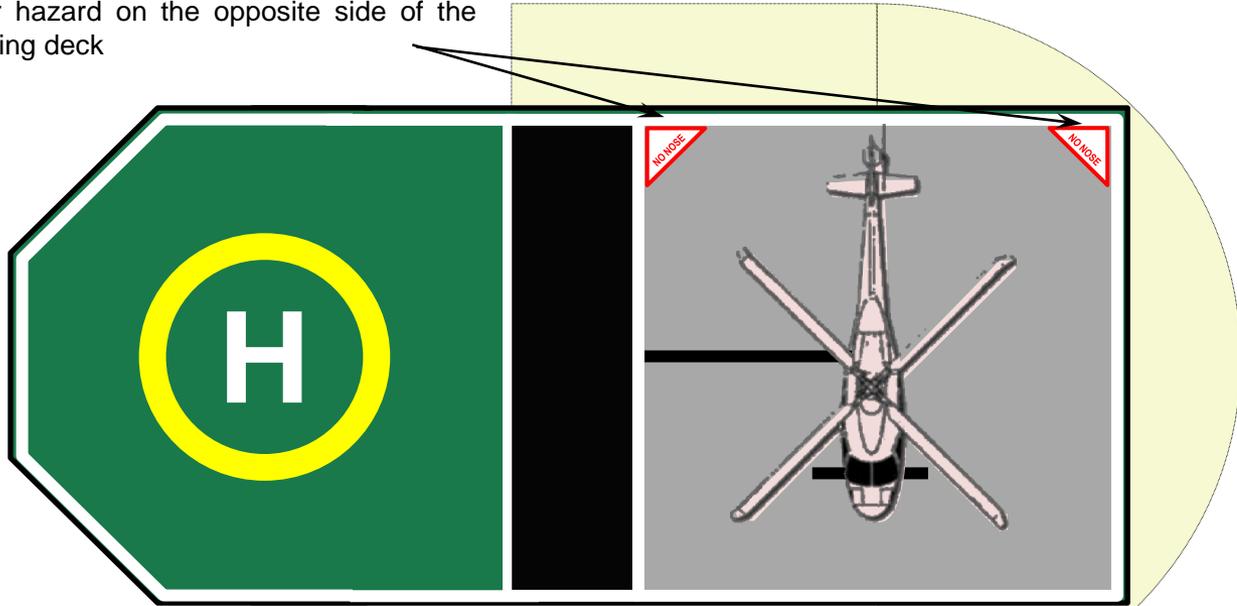


Limited Obstacle Sector



Example parking area layout with an obstacle in 1/3 RD area

A 'NO NOSE' marking shall indicate a tail rotor hazard on the opposite side of the parking deck



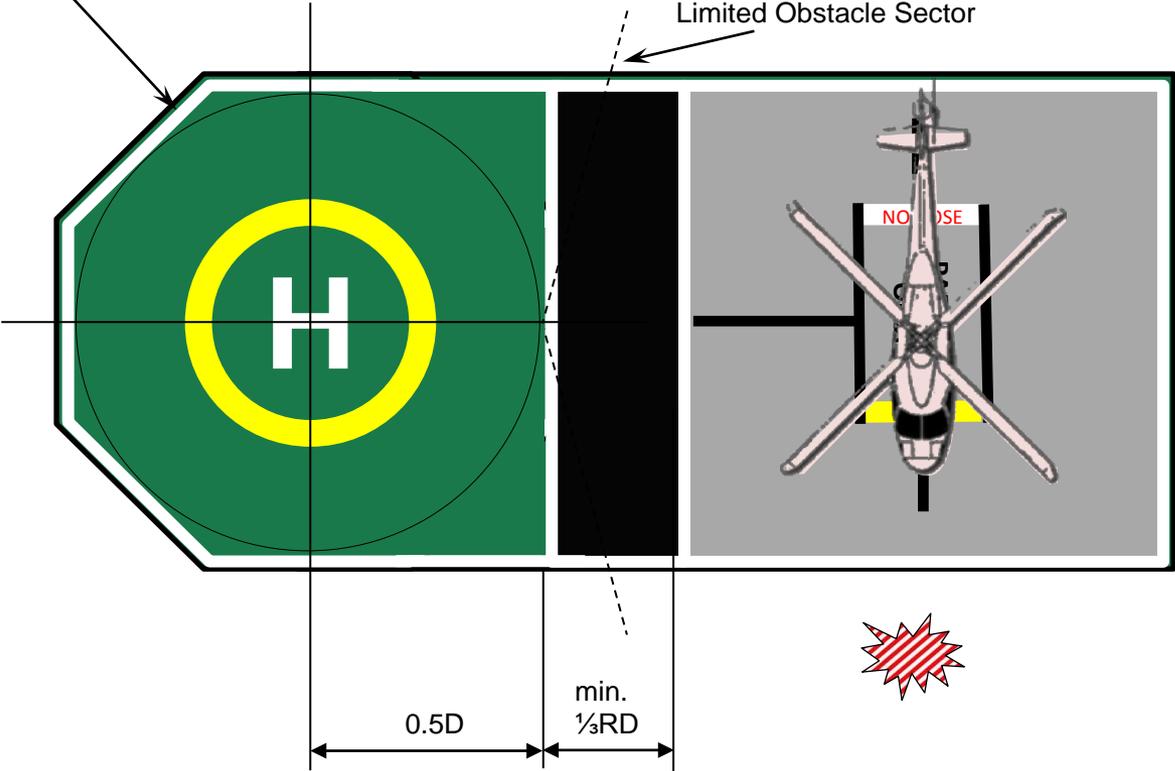
An obstacle in the 1/3 RD area results in restrictions regarding hover/ground taxi from SLA into Parking Area.



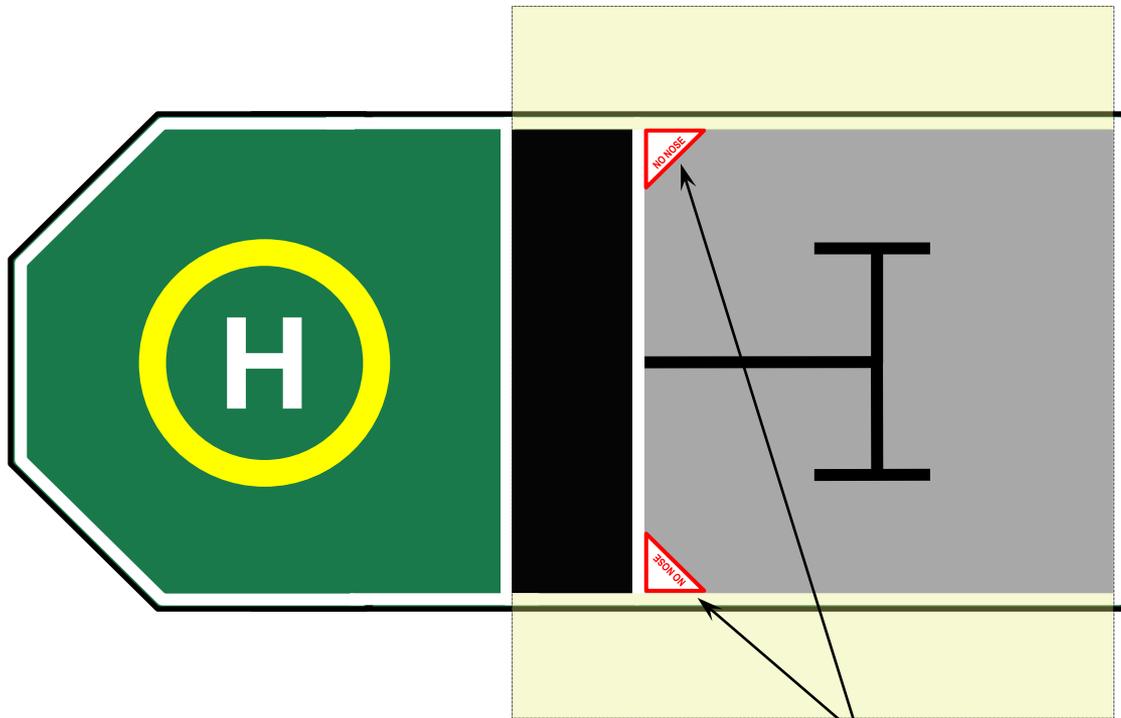
Example parking area layout with an obstacle in 1/3 RD area

Safe Landing Area (SLA) inside White Perimeter Line

Limited Obstacle Sector



Example parking area layout with an obstacle in 1/3 RD area



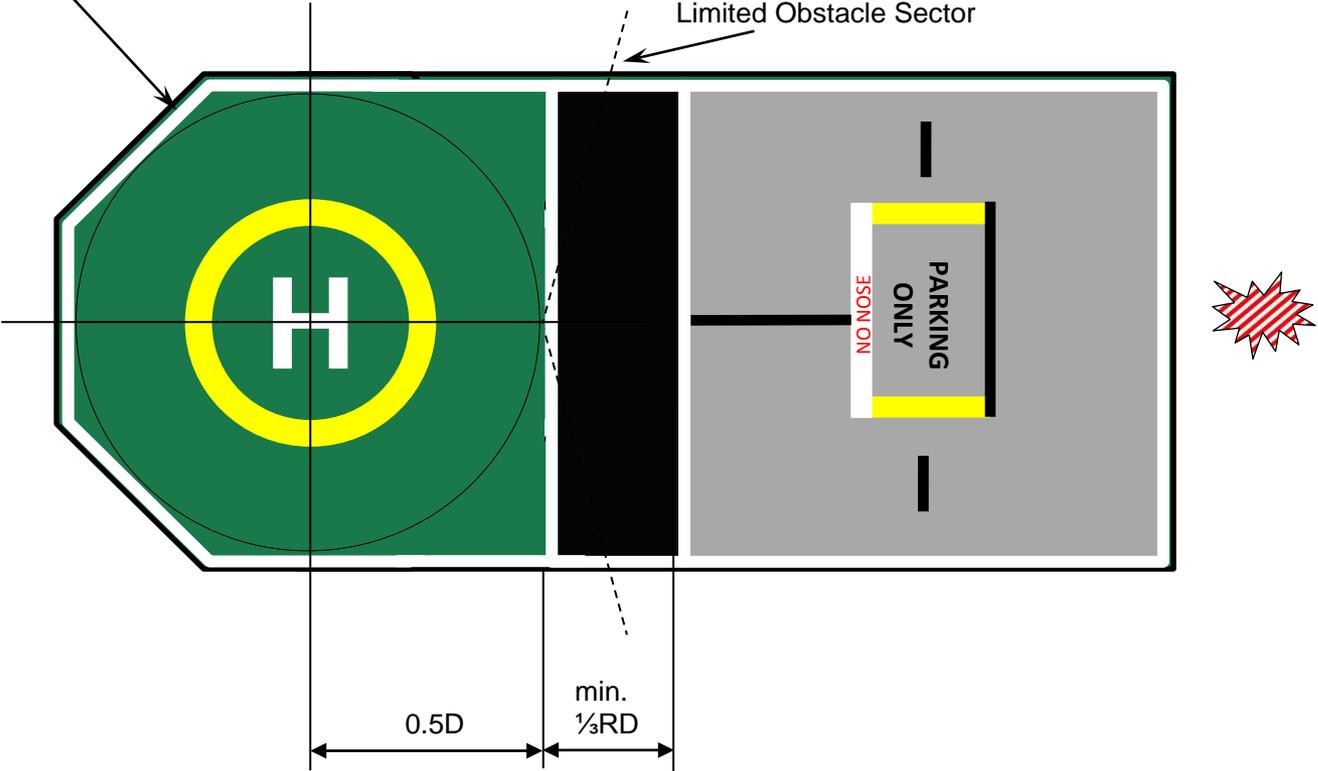
An obstacle in this part of the 1/3 RD area results in the restriction to only allow hover/ground taxi from SLA into Parking Area, but **push-back only** to SLA instead of hover/ground taxiing out due to lack of tail rotor clearance turning the helicopter.

A 'NO NOSE' marking shall indicate a tail rotor hazard on the opposite side of the parking deck

Example of helideck layout with adjacent 1D parking area and hover/ground taxi markings

Safe Landing Area (SLA) inside White Perimeter Line

Limited Obstacle Sector



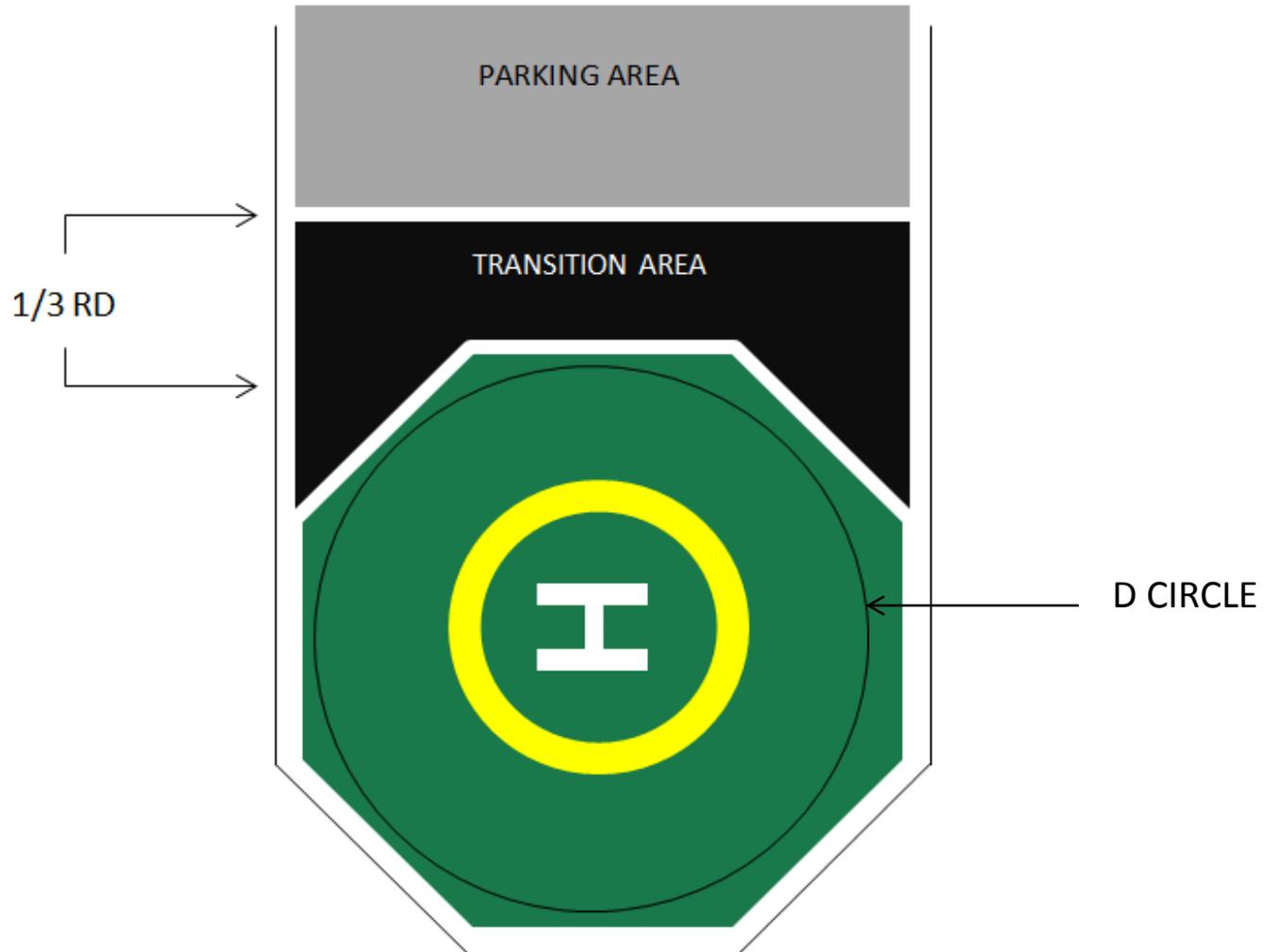
Example parking area layout with an obstacle in 1/3 RD area



Transition Area

- An extension from the helideck that is used to reposition the helicopter to the parking area by hover taxi, ground taxi, or towing.
- The transition area will be painted a contrasting color starting from the perimeter line of the Final Approach and Take-Off area (FATO) to the Parking Area perimeter line.
- The minimum distance from the D circle of the SLA will be $\frac{1}{3}$ RD to the parking area.
- Restrictions to the method of transition, and any parking area restrictions, shall be displayed in the transition area.
- NO part of either a helicopter tied down or operating on the helideck will intrude this area except during transition to and from.

From the D circle of the SLA with 1/3 RD



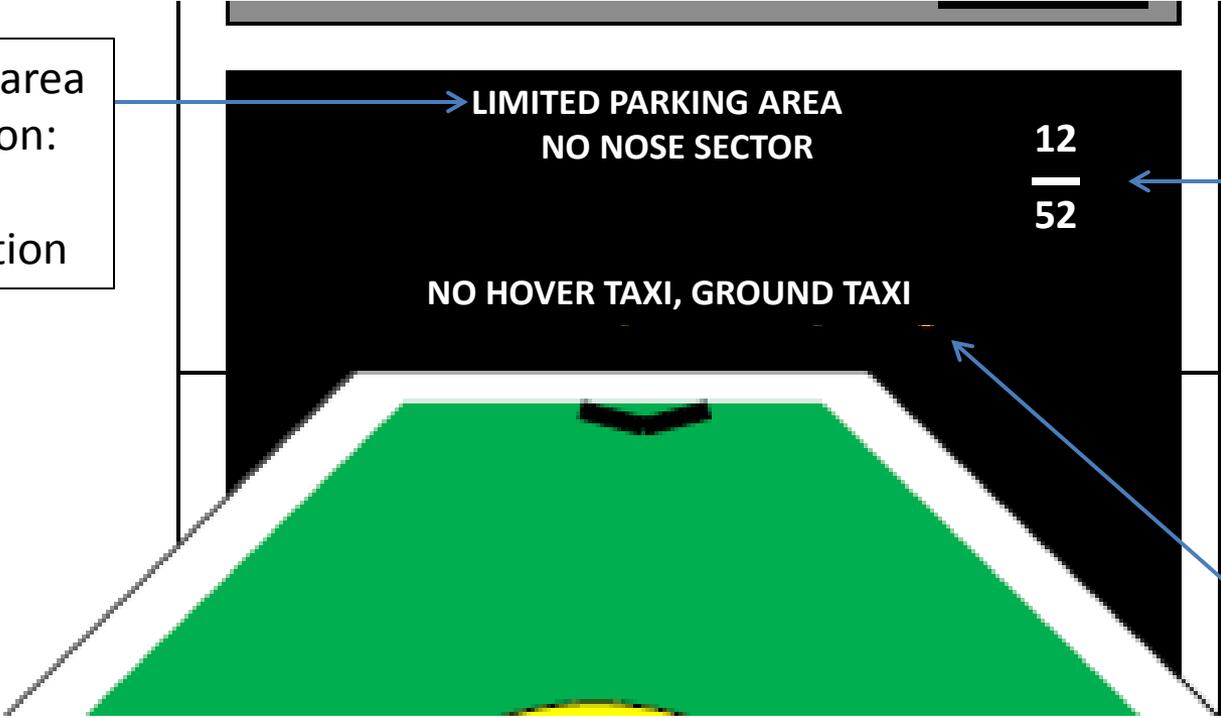


Transition Area with Restrictions

The Limited Parking Area can be down-sized to accommodate a helicopter type with a lesser D-value in order to achieve $1D + 1/3 RD$ clearance for the smaller type. In this case, a reference shall be noted in the transition area of the restriction in helicopter size D-value allowed in the Limited Parking Area. It shall be adequately marked to alert the crew of all restrictions associated with the parking area.

Restrictions:
Displayed only if applicable

Parking area
restriction:
Crew
notification



Weight or
Dimension
restrictions
of the
parking area
if different
from the
helideck

The restrictions
associated with
transition from the
helideck to the
parking area i.e.
“NO GROUND TAXI”
but **hover** and
towing is approved



Parking Area Procedures

- Helicopters shall not land on any offshore helideck where a helicopter is parked unless that helicopter is properly secured in the parking area and has main rotors tied down.
- Written procedures shall be in place for closing or restricting operations to the helideck and/or parking area.
- As with the Helideck, “EXIT” markings shall be used on the parking area. Written procedures shall be in place to address the hazard(s) associated with the tail rotor in the proximity of access points.
- Passenger operations shall not be conducted from the parking area.
- For vessels and installations that have a purpose-designed helicopter parking area or hangar deck, the helicopter operator shall produce specific procedures for ground maneuvering the aircraft.



Lighting

WG proposal - The perimeter line marking and perimeter lights should clearly delineate the SLA boundary from the parking area. For night operations, perimeter lighting may be installed around the parking area outboard boundary but it should be a different color (e.g. blue) to the SLA perimeter lighting. Similarly, the parking area should ideally be floodlit. However, it is important to note that all parking area floodlighting should be adequately shielded to avoid 'overspill' onto the SLA with the potential to affect pilot's night vision.

Flush fitting lights may be used at the inboard (150° LOS origin) edge of the landing area where an operational need exists to move large items of equipment to and from the landing area, e.g. where a run-off area is provided there may be a need to move the helicopter itself to and from the landing area onto the adjacent parking area.



Structural

Below should be considered by the API RP 2L workgroup.

Dynamic load requirements if hovering to the parking area. Does that make it a landing area?

UKHSE - Structurally, the parking area is of adequate construction to support the imposed loads (static).

CAP 437 - Imposed load from helicopter at rest. All areas of the helideck accessible to a helicopter, including any separate parking or run-off area, should be designed to resist an imposed load equal to the MTOM of the helicopter. This load should be distributed between all the landing gear. It should be applied in any position on the helideck so as to produce the most severe loading on each element considered.



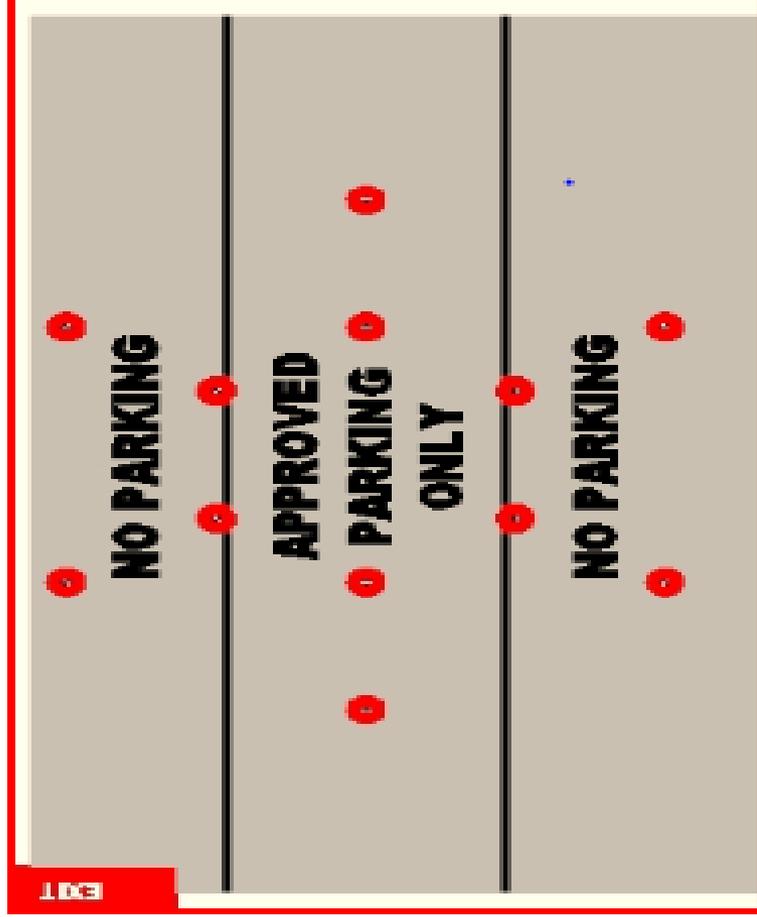
Tie-downs

Should be addressed by the API RP 2L workgroup

API RP 2L - On multi-helicopter heliports sufficient tie-down points should be provided for each helicopter parking area. The tie-down points should be so located and of such strength and construction as to be suitable for securing the largest helicopter the heliport is designed to accommodate during the maximum anticipated environmental condition.

UKHSE - There are adequate tie-down points provided to ensure the parked helicopter can be properly secured.

CAP 437 r7, 8.1 - Additional tie-downs will be required in a parking area.





Defined Helideck Procedures

Will be addressed by a separate HSAC RP.

Helideck Local Procedures Manual

A number of hazards can exist at offshore facilities and the local helideck procedures manual or the Operator's Operations Manual shall have written operational procedures for closing helidecks and have hazard warning systems for the hazards noted below.

- a) Crane – helicopter operational procedures.
- b) Helicopter/tanker operation.
- c) Helideck/heliport operational hazard warning(s)/procedure(s).
- d) Perforating operations.
- e) Gas venting.
- f) Hydrogen sulfide gas (H₂S)(if applicable for the area).

In addition to the Procedures Manual, which includes area helideck procedures, The owner will make available to the Operator a Deck Report that contains hazards for each helideck. These Reports shall include as a minimum the following: size/weight capability, markings, lighting (if installed), communications, weather capabilities, hazards, and any specific operational procedures.

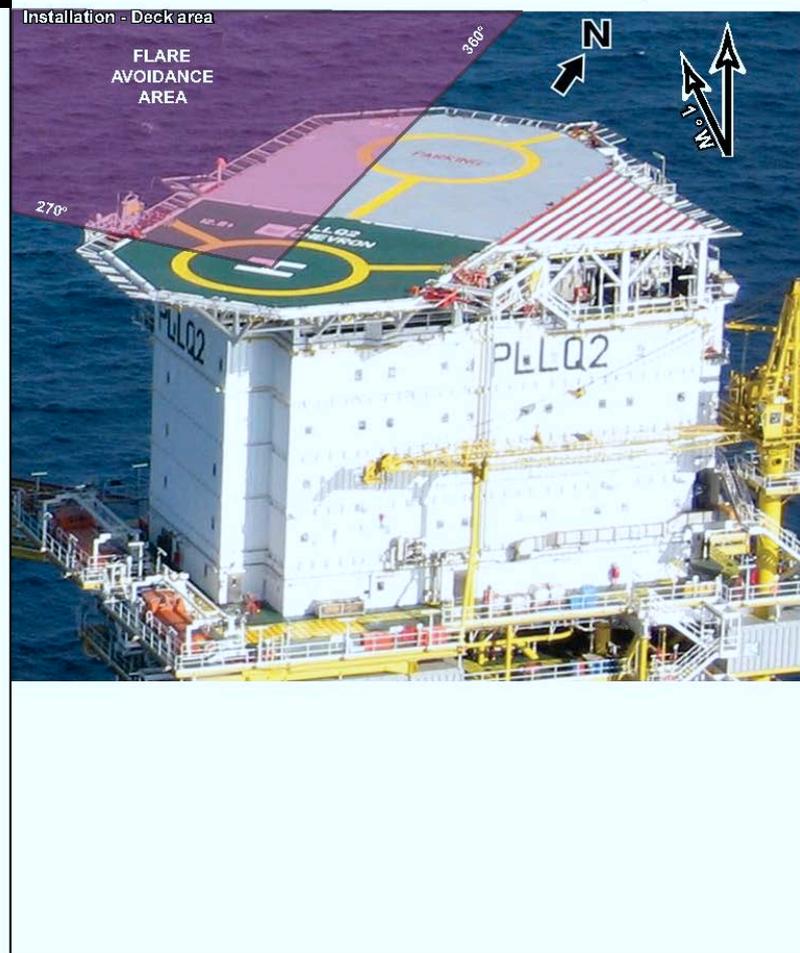
Platong LQ radio (VHF) 129.40		Platong LQ radio (FM / VHF) None		NDB Frequency Ident 353 PLLQ2	
Deck Elevation 162'	Rig Elevation 180'	Deck Orientation 120° (M)	Obstacles within 14nm See notes		
Deck D value limit 22.0 m	Deck I value limit 12.8 t	Fuel Yes	External Power Yes		

1500°
See note

MSA PLLQ2

Operating Limitations:

- Position, orientation and nearby obstructions may vary. Check before flight.
- Do not fly in flare avoidance area (270° to 360°)



CHANGES: Deck orientation revised from '180° (M)' to '120° (M)'

Platong LQ radio (VHF) 129.40		Platong LQ radio (FM / VHF) None		NDB Frequency Ident 353 PLLQ2	
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Expanded Notes and Procedures

- Position, orientation and nearby obstructions may vary. Check before flight.
- Approach, landing and takeoff shall be done to the FATO. No approaches, landings or takeoffs directly to or from the parking area.
- All approaches and takeoffs shall avoid flying directly over the parking area when other aircraft are parked there
- Aircraft on the parking area shall check with the PLLQ radio room prior to start to ensure no inbound aircraft are landing during start up, taxi and departure
- Aircraft taxiing on PLLQ2 shall announce intentions on 129.4 prior to taxi and ensure their anti-collision lights are on. The marked yellow lines are to be strictly followed at all times.
- Aircraft parked on PLLQ2 shall have rotor blades tied down and doors secured at all times regardless of wind conditions or weather
- No personnel are allowed on the deck during aircraft taxiing
- Operator: Chevron

CHANGES: Deck orientation revised from '180° (M)' to '120° (M)'

Expanded Notes and Procedures

1. Position, orientation and nearby obstructions may vary. Check before flight.
2. Approach, landing and takeoff shall be done to the FATO. **No approaches, landings or takeoffs directly to or from the parking area.**
3. **All approaches and takeoffs shall avoid flying directly over the parking area when other aircraft are parked there**
4. **Aircraft on the parking area shall check with the PLLQ radio room prior to start to ensure no inbound aircraft are landing during start up, taxi and departure**
5. **Aircraft taxiing on PLLQ2 shall announce intentions on 129.4 prior to taxi and ensure their anticollision lights are on. The marked yellow lines are to be strictly followed at all times.**
6. **Aircraft parked on PLLQ2 shall have rotor blades tied down and doors secured at all times regardless of wind conditions or weather**
7. **No personnel are allowed on the deck during aircraft taxiing**



GULF of MEXICO

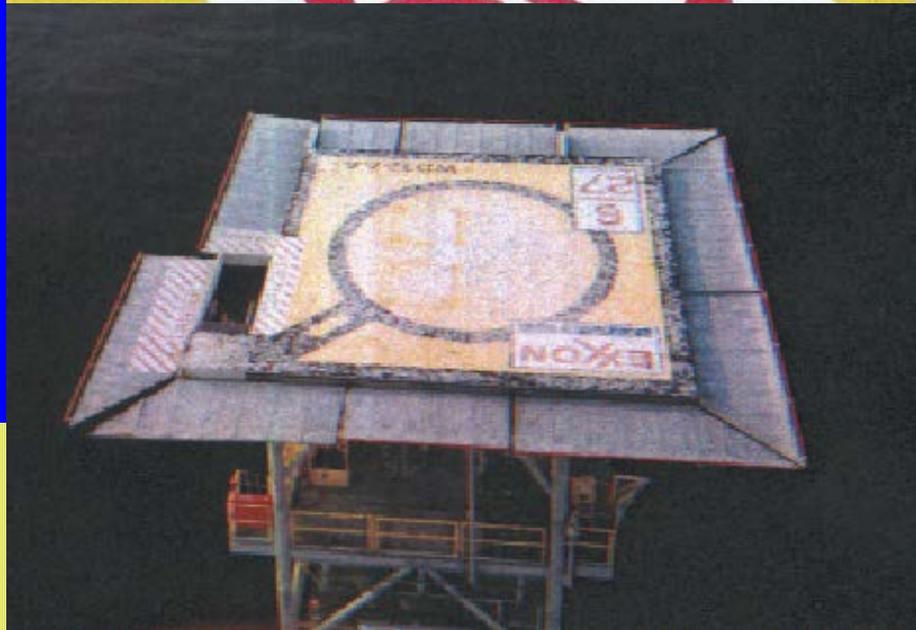
OFFSHORE HELIDECK DESIGN WORKGROUP

**Helicopter
Safety
Advisory
Conference
(HSAC)**

23 January 2013



OFFSHORE HELIDECK DESIGN WORKGROUP



OFFSHORE HELIDECK DESIGN WORKGROUP

- **Meeting Objective:** Begin work on revision of API RP 2L “Helideck Design” and development of API RP 2L1 “Helideck Assessment, Management, Maintenance, and Inspection”.

OFFSHORE HELIDECK DESIGN WORKGROUP

- Helideck related accidents/incidents continue in the GoM - improved guidance on design and management are needed
- US FAA has no official position on helidecks
- ICAO Annex 14 has been and continuing revision – now includes RD helidecks, options for US markings, solid fence options, improved obstacle clearances

OFFSHORE HELIDECK DESIGN WORKGROUP

- US Helideck Guidance:
 - API RP 2L / State of LA Guide
 - IMO - MODU Code (IADC)
 - ICS - Helicopter/ Ship Operations
 - USCG - CFR 46, Part 108 MODUs & CFR 33, Part 143 Floating OCS Facilities
 - BSEE - CFR states they will inspect facilities

OFFSHORE HELIDECK DESIGN WORKGROUP

- API RP 2L - 1996 – 2012 is in need of revision
- HSAC proposed draft change to API rejected 2005 – HSAC objected formally
- Both API and ICAO have rejected hostile/non-hostile as a design concept
- API has approved 2 RPs to be drafted by year end 2013
 - RP2L - Helideck Design
 - RP 2L1 - Helideck Assessment, Inspection, Maintenance, and Management

OFFSHORE HELIDECK DESIGN WORKGROUP

Document	1.0D (D = Overall Length)	0.83 D (RD)	0.62 D
API RP 2L	No	Yes	No
ICS (Vessels)	Yes	Yes – limited headings	No
IMO (MODU)	Yes - Hostile	Yes - Non Hostile	No
USCG - Floaters OCS	No	Yes	No
ICAO Annex 14	Yes	Yes – 7k lbs or less	No
API RP 2L Draft 2005 Rejected	Yes - Hostile	Yes - Non Hostile*	Yes - Non hostile satellite deck**

* With enhanced obstacle clearance

** 360 degree no obstacles

OFFSHORE HELIDECK DESIGN WORKGROUP

- **Workgroup:**
 - Charter established, advisor/technical writer
 - Membership – Operators, helideck owners, OOC, LA DOT, BSEE, USCG, etc
 - HSAC has lead
- **Proposed two-tier concept:**
 - New build decks helidecks should be designed to overall length (D), or
 - to rotor diameter (RD) if provisions are provided for improved ground effect area (GEA), visual cues, turbulence disruption, and obstacle clearances, etc.
 - Accepted by HSAC work group 23 Jan 2013.

OFFSHORE HELIDECK DESIGN WORKGROUP

Document	1.0D (D = Overall Length)	0.83 D (RD)	0.62 D
API RP 2L	No	Yes	No
ICS (Vessels)	Yes	Yes – limited headings	No
IMO (MODU)	Yes Hostile	Yes - Non Hostile	No
USCG - Floaters OCS	No	Yes	No
ICAO Annex 14	Yes	Yes – 7k lbs or less	No
API RP 2 Draft 2005 Rejected	Yes Hostile	Yes - Non Hostile*	Yes - Non hostile satellite deck**
API RP 2L - New Builds Only Proposed	Yes	Yes ***	No

* With enhanced obstacle clearance

** 360 degree no obstacles

*** With improved visual cues, solid safety fence for improved ground cushion, air gap for improved turbulence disruption, and obstacle clearance equal to 1.0D

OFFSHORE HELIDECK DESIGN WORKGROUP

- **Helideck design improvements:**
 - 2-inch max height above deck for lights - improved TR clearances over ICAO
 - Safety net/fence outer edge to helideck level only
 - HSAC Marking RPs and others included
 - Adopt ICAO revised obstacle clearance requirements for the limited obstacle sector
 - Adopt industry best practices for helidecks

OFFSHORE HELIDECK DESIGN WORKGROUP

- **Next Steps:**
 - Drafts out 1 April 2013
 - Work group meeting 18 April
 - Final documents 31 December 2013



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**OFFSHORE HELIDECK DESIGN
WORKGROUP**

**Helicopter
Safety
Advisory
Conference
(HSAC)**

23 January 2013

Helicopter Safety Advisory Conference (HSAC) 2012 Gulf of Mexico Offshore Helicopter Operations and Safety Review

TO: HSAC Operators

DATE: January 15, 2013

Colleagues:

The Helicopter Safety Advisory Conference (HSAC) continues to receive a favorable response to our Annual Offshore Helicopter Operational Activity and Safety Performance Report. It is that time again to begin collecting the data, with a target of preliminary data release in March 2012.

Your assistance is again sought in compiling the review for 2012. Information provided will be consolidated into a summary report, listing numbers and type of aircraft (singles, twins, heavies, etc.), level of activity, and safety performance. A copy of the report will be provided to all participants.

On the attachment, please provide by helicopter type (singles, light twins, medium twins, etc.), the activity levels, number of helicopters, hours flown, and numbers of flights and passengers carried for offshore helicopters operated in petroleum related activity by your company for the Gulf of Mexico. Regarding safety, provide information on the number of accidents, fatal accidents, injuries, and the extent of aircraft damage.

Your response should be sent to the undersigned **no later February 15, 2012**. **All information will be treated confidentially and destroyed after consolidation into the final report.**

Thanks in advance for your help in gathering this information. Aviation support for the oil and gas industry is conducted to a high level of operational and safety performance. Your support in providing activity and safety information for the preparation of an annual aviation operational and safety performance statistics report is important to the HSAC and the aviation support industry.

Should you have any questions please feel free to contact the undersigned.

Bob Williams
Industry Liaison Sub Committee
Fax: 972-373-3735
Tel: 214-208-5480

Attachment

SAFETY THROUGH COOPERATION

HSAC 2012 OFFSHORE GULF OF MEXICO HELICOPTER OIL INDUSTRY OPERATIONS AND SAFETY REVIEW DATA COLLECTION FORM

1. Report **ONLY OFFSHORE OIL INDUSTRY RELATED ACTIVITY**. Exclude all activity provided outside of the Gulf of Mexico or non-offshore support, which will be gathered separately.
2. **Reporting partial helicopters is acceptable**. This is especially important when helicopters are only used for a partial year for oil industry support or for non-offshore activity (pipeline, seismic, etc.) which is gathered separately.
3. Provide helicopter fleet size and activity in terms of single engine, light twin (AS355, BO105, etc), medium twin (B430/212/412, AS 365, S76. etc.), and heavy twin (S61, AS332, B214, etc.).
4. Provide **total passengers carried for the year, total hours flown, and total flight stages (one takeoff and landing is a flight stage) by type helicopter**. If actual numbers are not available, provide best estimate.
5. **If leasing helicopters from other operators, please ensure both companies are not reporting the data.**
6. Report ALL offshore oil industry helicopter accidents (**date, type helicopter, extent of injuries, & aircraft damages**).
7. Please refer questions to Bob Williams at 214-208-5480.

NAME OF OPERATOR: _____ **CONTACT NAME:** _____

CONTACT PHONE: () _____ **Email:** _____

ACTIVITY INFORMATION - OFFSHORE (Gulf of Mexico only)

Type Helo	Fleet Size	# Passengers Carried	# Hours Flown	# Flights (Takeoff & Landing = 1)
Single Engine				
Light Twin				
Medium Twin				
Heavy Twin				
Totals				

ACCIDENT INFORMATION (Use back of form if necessary for additional space)

Date of Accident	Type Helicopter	Injury Classification				Aircraft Damage Classification			
		Injuries	Fatalities	PAX	Crew	Minimum	Major	Total Loss	Not Recovered

Return by Email: Robert.G.Williams@ExxonMobil.com or FAX Number: 972-373-3735

HSAC January 2013 New Orleans, LA

Helideck Monitoring System (HMS)

Path to Improved Safety, Efficiency, Standardization,
& Cost Reduction



Introduction

Russell Roy

Russ.Roy@RigStat.com

Logan Roy

Logan.Roy@RigStat.com

RigStat LP

13003 Southwest FWY Suite 120

Stafford, Texas 77477

281-491-5817

USA Patent No. 7,366,614

Installations

EnSCO

Transocean

Noble Drilling

Diamond Offshore

Rowan Companies

Presentation Overview

- **What is CAP 437 (Civil Aviation Publication)**
- **Purpose of CAP 437**
- **What is covered in CAP 437**
- **Sensor Installations**
- **Display Screens**
- **Q&A**

What is CAP 437?

Published by the UK Civil Aviation Authority

Publish Dates

- First edition September 1981
- Second edition December 1993
- Third edition October 1998
- Reprinted January 2002 incorporating amendments to date
- Fourth edition September 2002 incorporating new house-style
- Fifth edition August 2005
- Sixth edition December 2008
- Sixth edition incorporating amendment 01/2010
- Sixth edition incorporating amendment 02/2010
- **Seventh edition May 2012**

Purpose of CAP 437

The first edition of CAP 437 was published to give guidance on the criteria applied by the CAA in assessing the standard of helicopter offshore landing areas for worldwide use by helicopters registered in the UK.

What is covered in CAP 437

- Chapter 1 – Introduction
- Chapter 2 – Helicopter Performance Considerations
- Chapter 3 – Helicopter Landing Areas – Physical Characteristics
- Chapter 4 – Visual Aids
- Chapter 5 – Helicopter Rescue and Fire Fighting Facilities
- **Chapter 6 – Helicopter Landing Areas – Miscellaneous Operational Standards**
- Chapter 7 – Helicopter Fueling Facilities – System Design and Construction
- Chapter 8 – Helicopter Fueling Facilities – Maintenance and Fueling Construction
- Chapter 9 – Helicopter Landing Areas on Vessels
- Chapter 10 – Helicopter Winching Areas on Vessels and on Wind Turbine Platforms

Sensor Installations

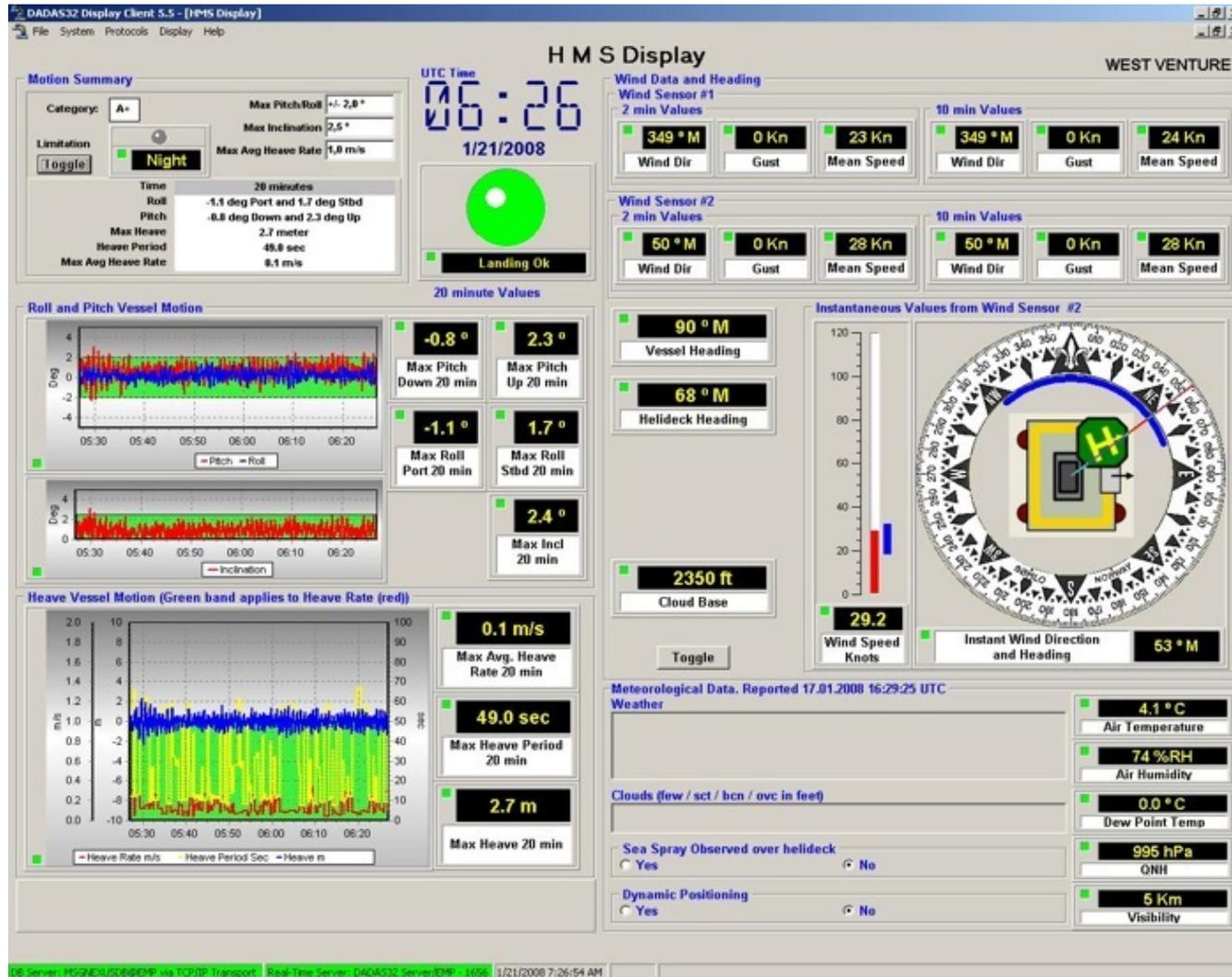
- GPS Location
- Vessel and Helideck Heading
- Wind Speed and Direction, Gust
- Air Temperature
- Dew Point Temperature
- Barometric Pressure; QNH & QFE
- Horizontal Visibility
- Cloud amount and height
- Significant Wave Height
- Pitch, Roll, Helideck Inclination and Significant Heave Rate

*CAP 437 references CAP 746 for weather definitions and measurements

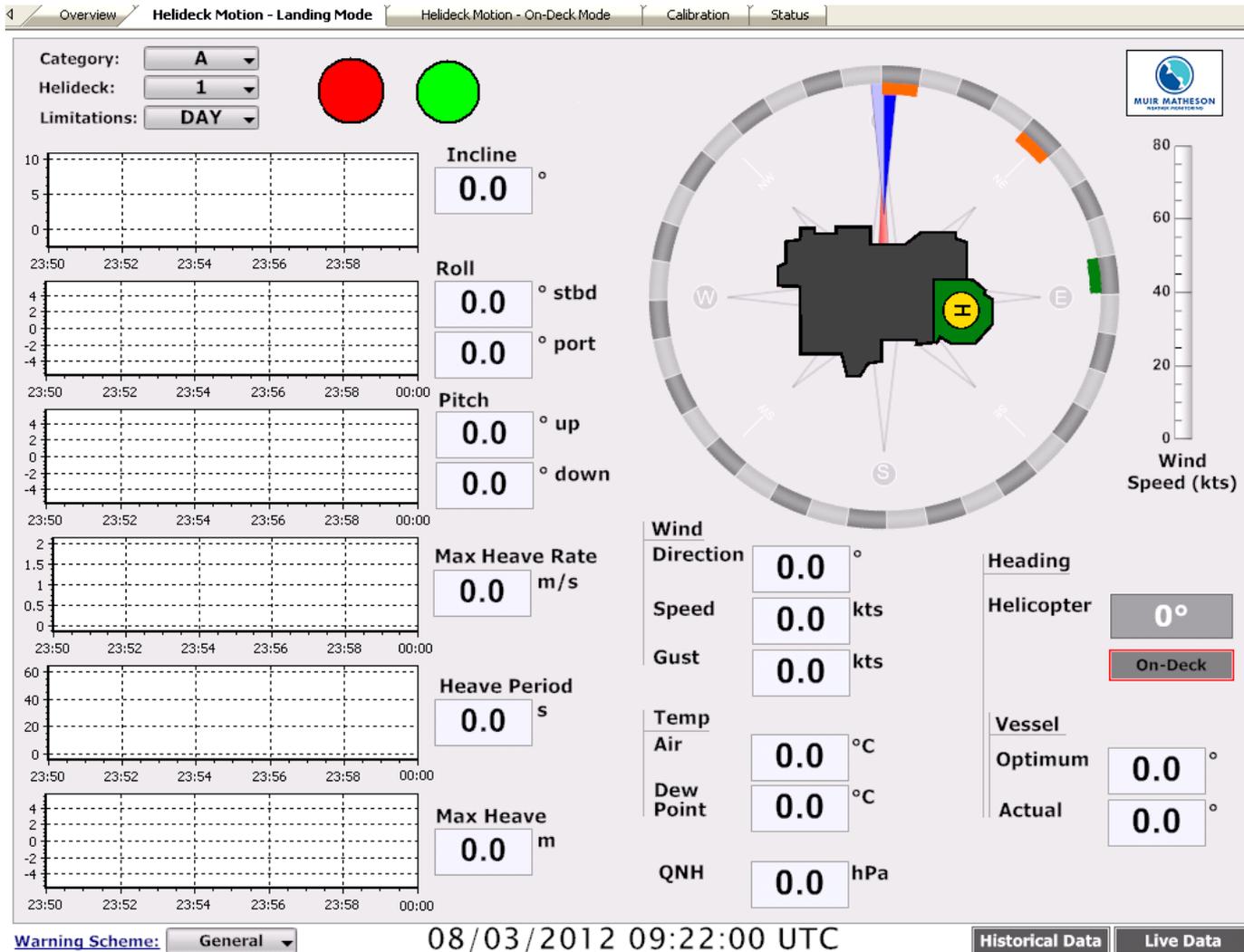
Display Screens – Fugro GEOS



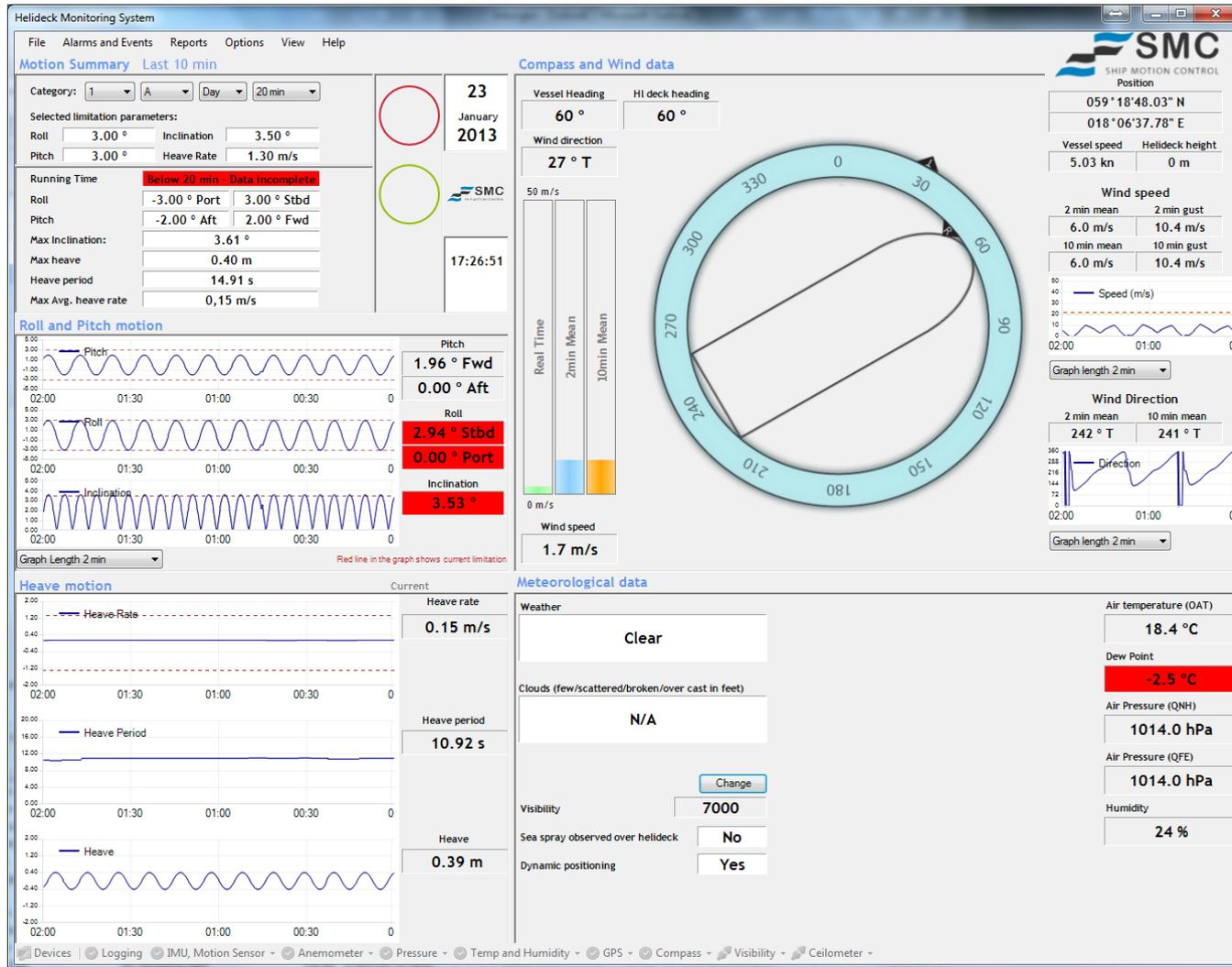
Display Screens – Automasjon og Data



Display Screens – Muir Matheson



Display Screens – Ship Motion Control



Display Screens – Kongsberg Maritime

Web HMS 100

11.05.2010 07:30:35

Operation

NRU

Light

AirTemp

Nav

Wind

Seppol

AirPres

Gyro

Low
 07:27:20
App Server
Reconnecting to App Server successful

View	Config	Alarm
Tools		System

Motion Summary

Vessel **Aker Barents**

IMONO **8768854**

Category **A_Plus_SemiS** Inclin Limit **3,5°**

Roll/Pitch Limit **± 3°**

Limitations **Day** Avg. Heave Rate: **1,3 m/s**

Time **20 minutes - Complete**

Max Roll **1,0° port and 0,8° stbd** Max Inclination

Max Pitch **1,4° down and 0,9° up** **1,7°**

Max Avg. Heave Rate **0,1 m/s**

Heave Period **49,3 sec**

Max Heave **2,1 meter(s)**

Norwegian Sector



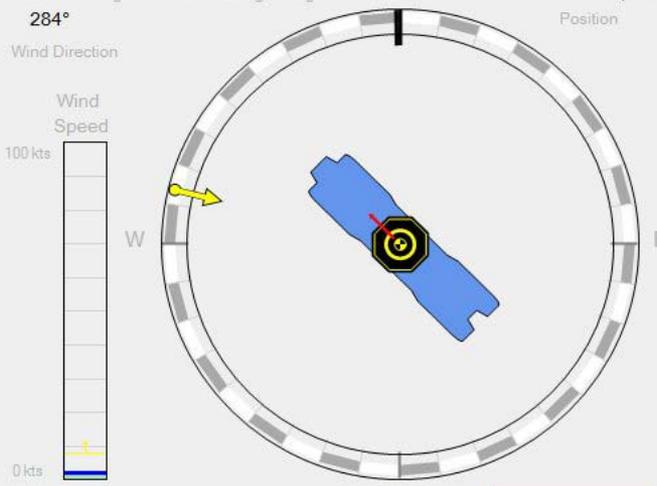
May 11 2010 07:20:24 UTC

Compass

315° **<Value>** 1.0 W Magnetic N 59° 47' 23,188

Vessel Heading Helideck Heading Mag. Var 284° E 002° 13' 00,598

Wind Direction



Wind Speed

100 kts

0 kts

2 kts

Wind Speed Gust Wind Speed

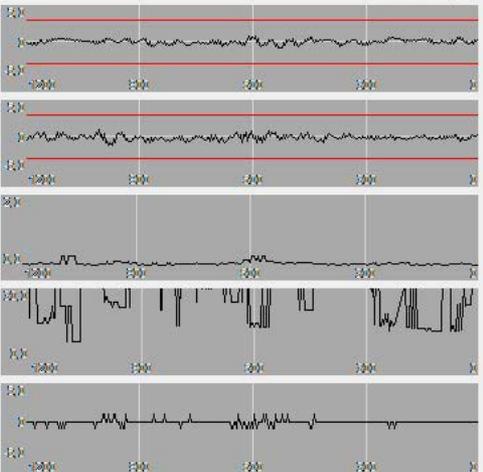
10 minutes

Display mode

- Day bright F7
- Day white
- Day black
- Dusk
- Night F8

Vessel Motion History

Timelength **20 minutes**



0,8° stbd
1,0° port
Max Roll

0,9° up
1,4° down
Max Pitch

0,1 m/s
Max Average
Heave Rate

49,3 sec
Heave Period

2,1 m
Max Heave

Meteorological Data

Last Update Time **Sun, 09.05.2010, @ 16:03:20 UTC** **2 °C**

Weather: **Fair** **Air Temperature**

Clouds: **Bcn 3000 ft** **-2 °C**

Dew Point Temperature

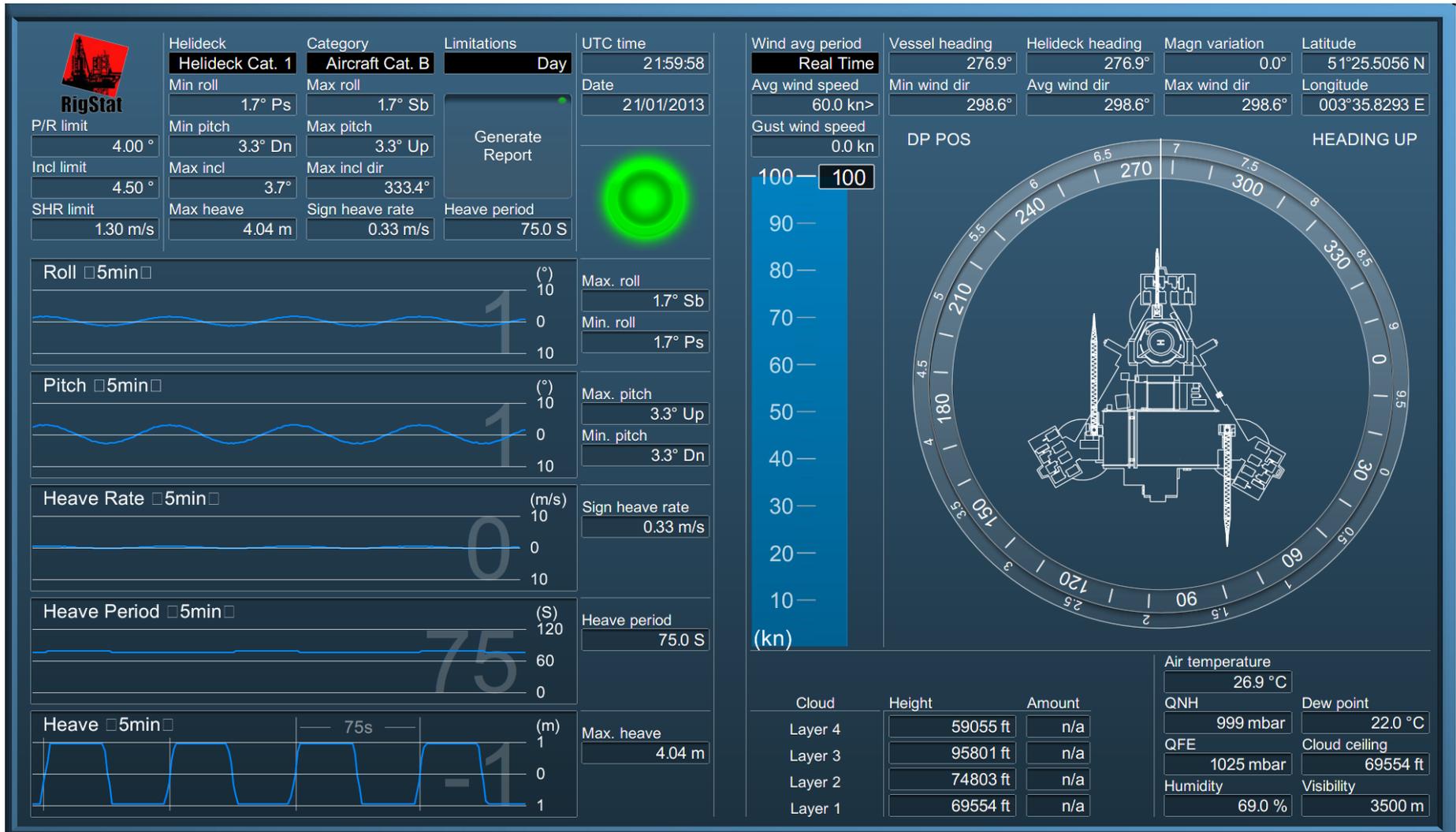
Visibility **10+m** **1004 hPa**

Sea spray observed over helideck Yes No **Air Pressure (QNH)**

Dynamic Positioning Yes No

11

Display Screens – RigStat HMS



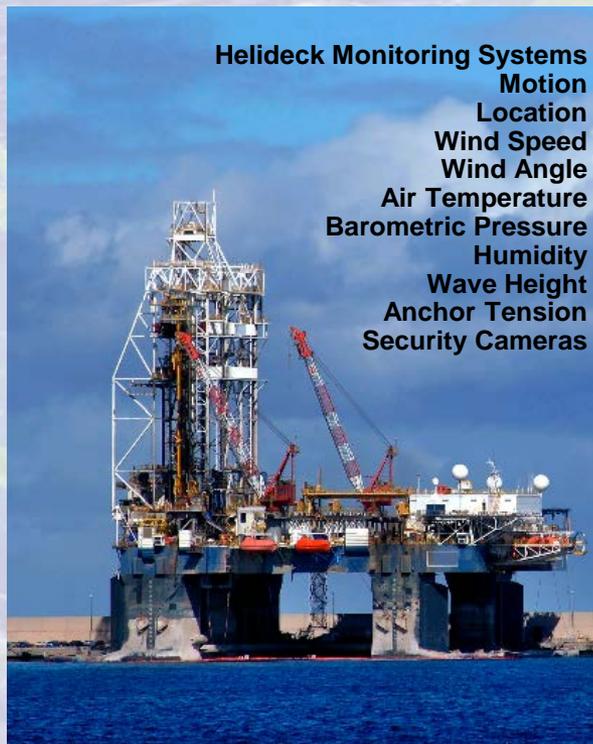
Display Screens – RigStat HMS

Pre-Flight Report Example

Vessel Information		
Vessel Name	Vessel Heading	
RigStat TEST 4	N/A	
Date Stamp (UTC)	Latitude	Longitude
01/17/13 07:35:13 PM	29.63010700	-95.58702200
	Latitude	Longitude
	29°37'48.3852"N	95°35'13.2792"W
Wind Direction	Wind Speed	Wind Gust
N/A	0 knots	0 knots
Visibility	Lighting Present	
N/A	N/A	
Present Weather		
N/A		
	Amount	Height
Cloud Layer 1	N/A	N/A
Cloud Layer 2	N/A	N/A
Cloud Layer 3	N/A	N/A
Cloud Layer 4	N/A	N/A
Air Temperature	Humidity	Dew Point
0.0 C	0.0%	0.0%
QNH	QFE	
N/A	N/A	
Significant Wave Height	Air Gap	
N/A	N/A	
Min/Max Pitch	Min/Max Roll	Heave
N/A / N/A	N/A / N/A	N/A
Remarks		
N/A		



Questions & Answers

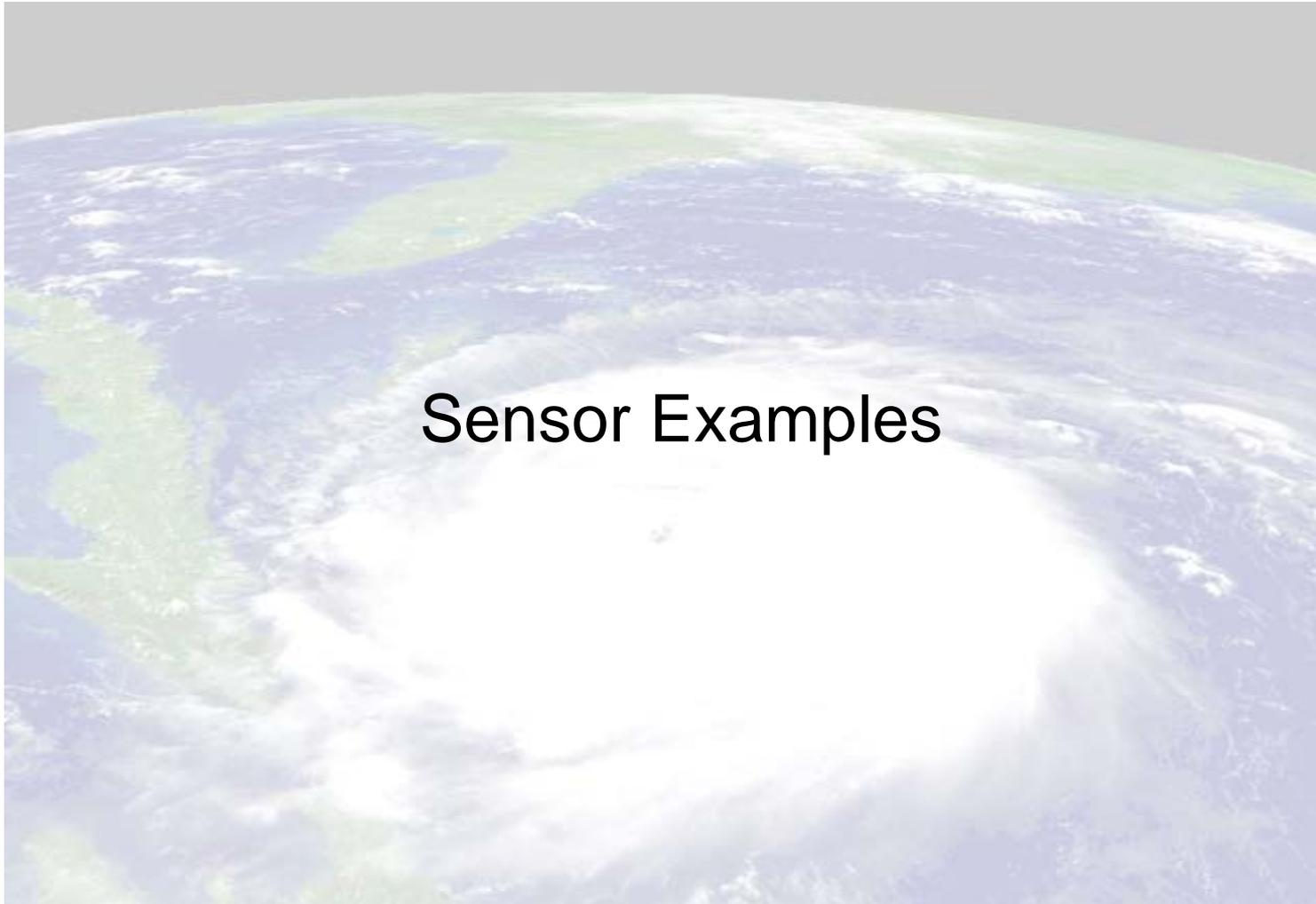


Russ Roy

Logan Roy

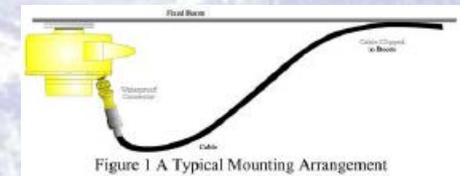
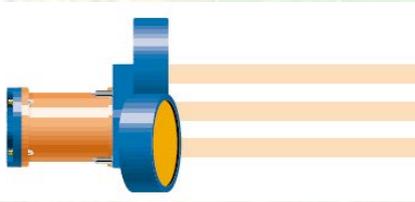


RigStat® , LP
13003 Southwest FWY, Suite 120
Stafford, TX 77477
Bus: (281) 491-5817
Mobile: (281) 773-4055
Bus Fax: (281) 652-5754
E-mail: office@rigstat.com



RigStat® – A Closer Look

Waves



Waves

- Wave height, speed and direction
- Surface current
- Water temperature

Wave Direction

- Wave speed and direction
- Current speed, direction
- Water temperature

Wave Height

- Microwave & Pulsed laser
- Range: 6 m to 50 m with nominally .1m range precision
- Measures distance to water
- Power: 12 to 15 VDC @ 1.8 A

RigStat® – A Closer Look

Anemometers, Barometer, Air Temp, & Humidity

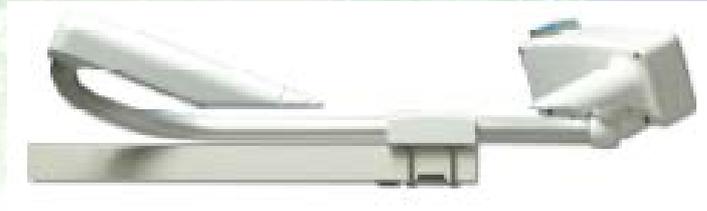


Weather Sensors

- Robust design; some with no moving parts
- Wind speed: 0 to 70 m/s (0-156 mph)
- Speed accuracy: (30 m/s) $\pm 2\%$; (70 m/s) $\pm 3\%$
- Wind direction: Apparent and True
- Direction accuracy: $\pm 2\%$
- Barometric pressure: 0.150 to 1.150 Bar
- Air temperature: -30° to 50°C
- Humidity: 10-95%

RigStat® – A Closer Look

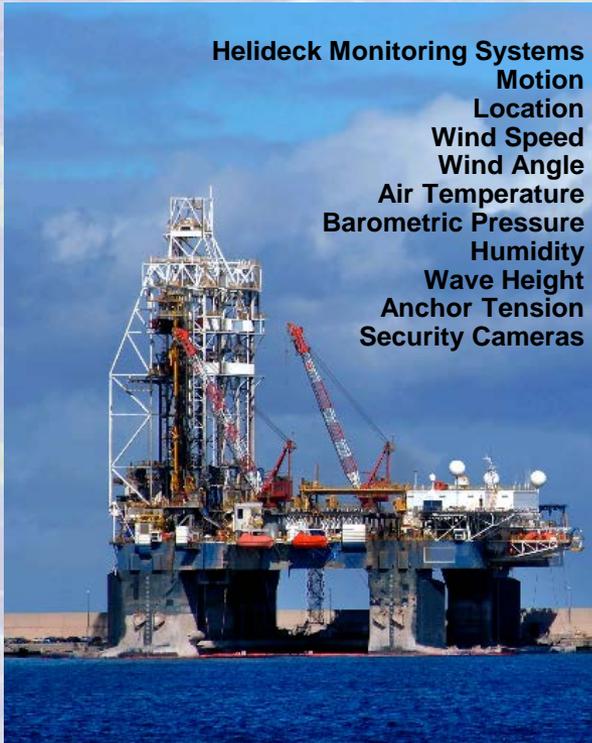
Cloud Ceiling and Visibility



Cloud Ceiling & Visibility Sensors

- Cloud measurement range: 0...25,000 ft
- Distance measurement accuracy: greater of $\pm 1\%$ or ± 5 m
- Operating temperature range: $-40...+60$ °C ($-40...+140$ °F)
- Operating humidity range: 0...100% RH
- Operating wind speed: 55 m/s (123 mph)

- Visibility measurement range: 10...20,000 m (32...65,500 ft)
- Accuracy: pressure: $\pm 10\%$; range 10...10,000 m; 15% range 10...20 km
- Operating temperature range : $-40...+60$ °C ($-40...+140$ °F)
- Operating humidity range: 0...100% RH



Helideck Monitoring Systems
Motion
Location
Wind Speed
Wind Angle
Air Temperature
Barometric Pressure
Humidity
Wave Height
Anchor Tension
Security Cameras



RigStat[®], LP
13003 Southwest FWY, Suite 120
Stafford, TX 77477
Bus: (281) 491-5817
Mobile: (281) 773-4055
Bus Fax: (281) 652-5754
E-mail: office@rigstat.com

Institute for
Economic
Development



Gulf **Oil Spill Disaster**
Adjustment **Assistance** Center

The University of Texas at San Antonio



Program Eligibility

- Small businesses: Retailers, distributors, wholesalers, manufacturers and service companies
- Companies affected, directly or indirectly by the oil spill at least by 5% loss of sales or 5% loss of employment from April 20 to December 31, 2010 vs. same period of 2009
- Businesses willing to invest in growth opportunities and pay 50 % of consulting services
- Business must have been in business since January 2008 in Louisiana



Program Benefits

- Does not require approval from US DOC in Washington
- Additional funding opportunity for technical assistance. No bearing on claims or denials.
- GOSDAA will manage value added projects to assure consultant meets scope of project and deadlines



Eligible Consulting Projects

- Marketing: Strategic Plan, Industrial and Market Research, Branding, Web Site Development, Trade Show Booth, Videos, Brochure and Catalog Designs, Sales Plan, Communication Plan
- Training: Safety, Sales and Communication, Software, Trade Specific and Skill Development
- Quality Systems: ISO 9000, ISO14000, API, AES, Six Sigma, Safe Quality Food, Safety Environmental Management System, Responsible Care Management



Eligible Consulting Projects

- Engineering: Product Design, Research and Development, Finite Element Analysis and Patent Applications, Continuous Improvement-Lean
- Quality Systems: ISO 9000, ISO14000, API, AES, Six Sigma, Safe Quality Food, Safety Environmental Management System, Responsible Care Management
- Software Customization: MIS, CNC, CRM, RFID, Barcoding



GOSDAA Process

Qualification and Pre- Application

- Income Statements
- Balance Sheets
- Income Tax Returns
- Louisiana Employment Reports

Application Approved by UTSA

Diagnostic Analysis of Firm's Internal and External Operating Environments

Adjustment Proposal Approved by UTSA

Project Implementation by Qualified and Approved Consultant(s)



Company Cost Share

- Client pays 50% of all projects incurred
- Maximum Project Amount: \$60,000
- Diagnostic Fee



Non-Eligible Categories

- Wages
- Hardware
- Equipment
- Raw Materials
- Fixed Assets
- Trade Show Booth Registration or Travel Expenses
- Prototypes
- Patent Searches



Project Consultants

- GOSDAA applicants may suggest consultants for the approval process
- Consultants must complete application for approval based on experience, references and rates
- Applicants may require multiple consultants



CONTACT INFO

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