

# Silent Inspector – Potential Applications for Latin America

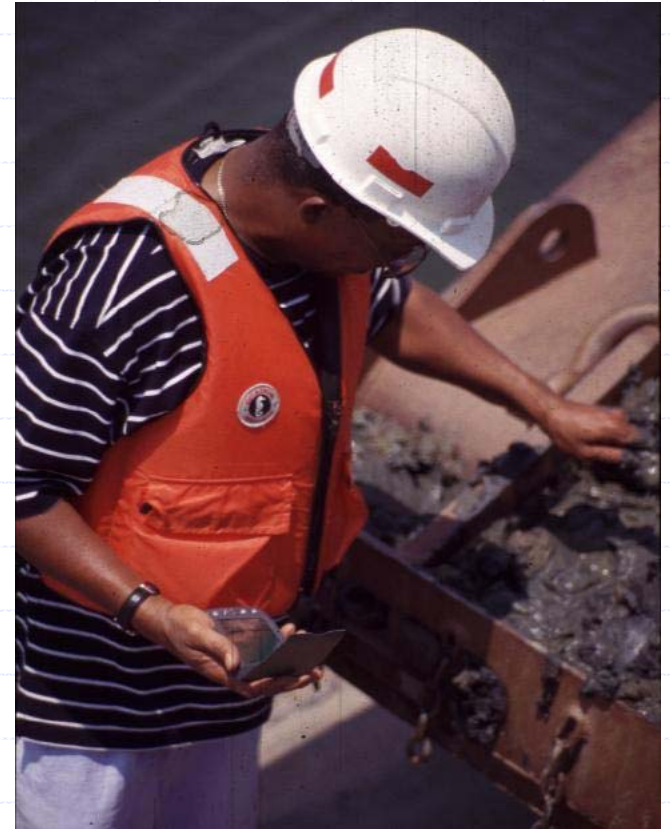


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# Silent Inspector (SI)

Improved dredging  
contract  
administration  
through public-  
private partnership  
for an automated  
inspection system

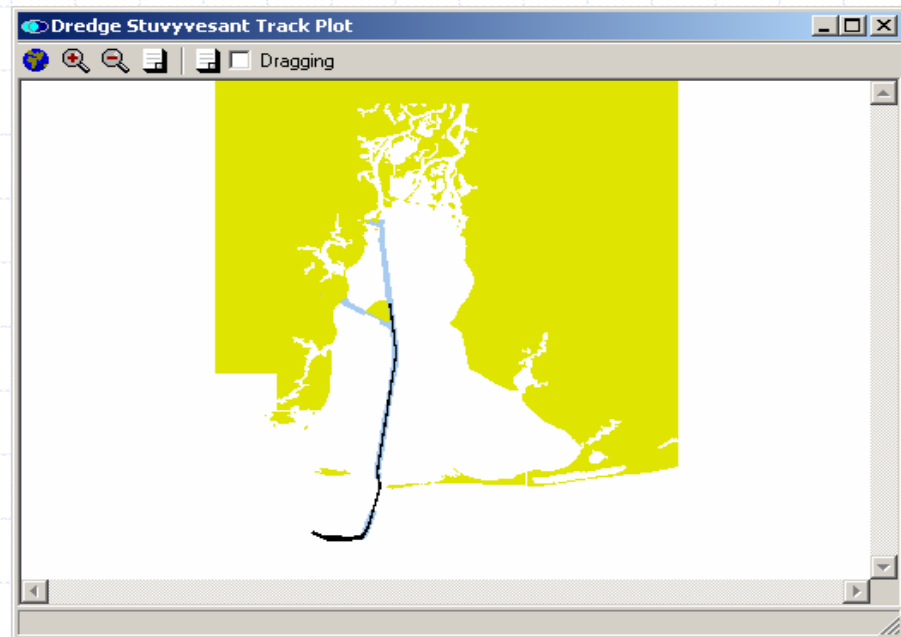


# Corps Dredging Statistics

- ◆ 200+ Contracts Annually
- ◆ Contract Dredging, 80+% of 200M cubic meters
- ◆ \$900 M total, \$500M+ Contract
- ◆ More scrutiny, more data, reduced staff
- ◆ Silent Inspector
  - Start 1990, Industry partner
  - Initial application in 1999
  - Corps-Wide Implementation 2006
  - Investment >\$5M
- ◆ Bottom Line – Better and Faster Contract Monitoring

# Silent Inspector – What Does it Do for Dredging Managers - Basics

- ◆ Where
- ◆ When
- ◆ How Deep
- ◆ How Much
- ◆ How efficient
- ◆ Where was it Placed



# Contractor Benefits

- ◆ Reliable digital record of operations and performance
- ◆ Minimize disputes
- ◆ Faster dispute resolution
- ◆ Reduced paperwork and reporting burden on contractors
- ◆ Consistent requirements



# Port/Government Benefits

- ◆ 24x7 coverage of operations
- ◆ Flexible scheduling of human inspectors
- ◆ Fast response to public and environmental inquiries
- ◆ Reduced claims
- ◆ Better government estimates and planning studies

# How does it work?

- ◆ Uses contractor's sensors and instrumentation
- ◆ Corps does QA and analysis
- ◆ Contractor hardware - Corps Software
- ◆ Contract specs provide detailed implementation guidance



# What does it do?

- ◆ Records data from contractor's computers
  - Every 10 seconds
- ◆ Produces reports based on actual dredge performance
- ◆ Data stored in sophisticated relational database

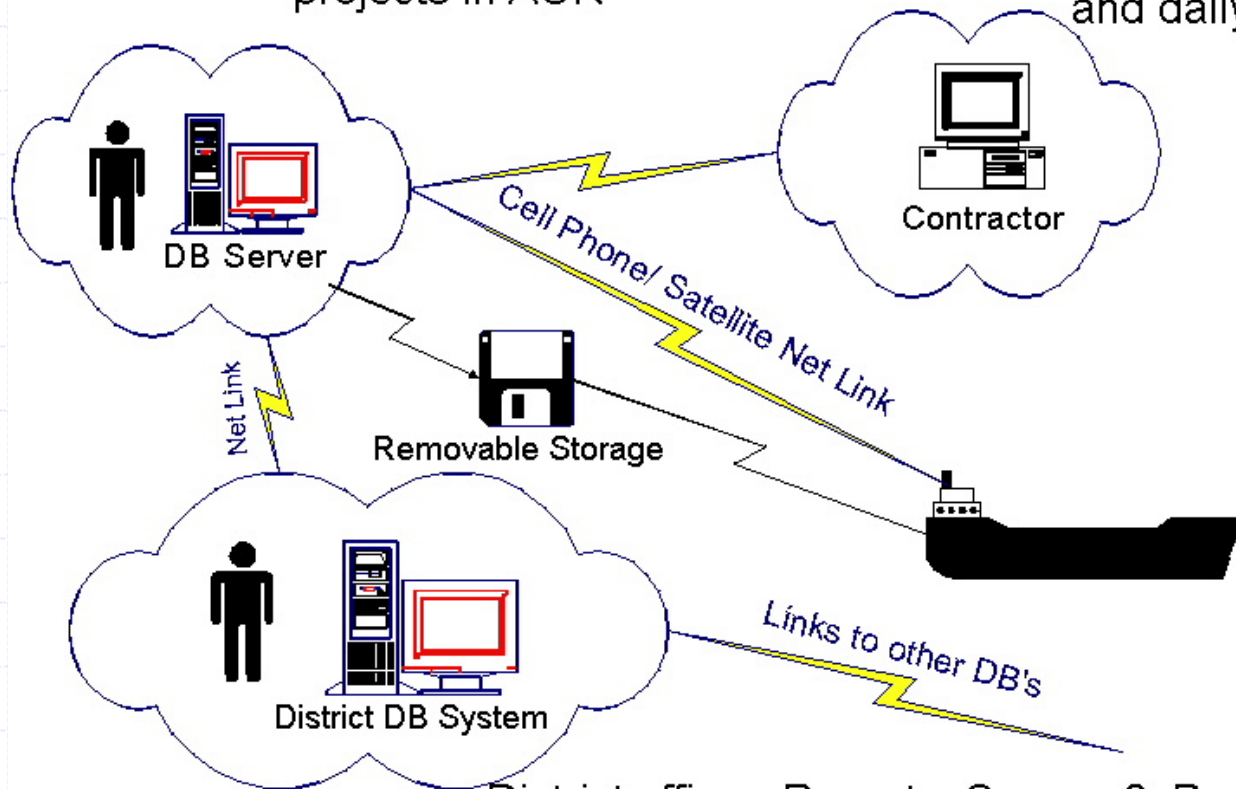




# SI District Concept

Site office - Dredging Data, Daily Reports, Surveys, Project, contract info only on projects in AOR

Contractors provide QCR and daily reports



District office - Reports, Surveys?, Project info for all projects

# Using the SI

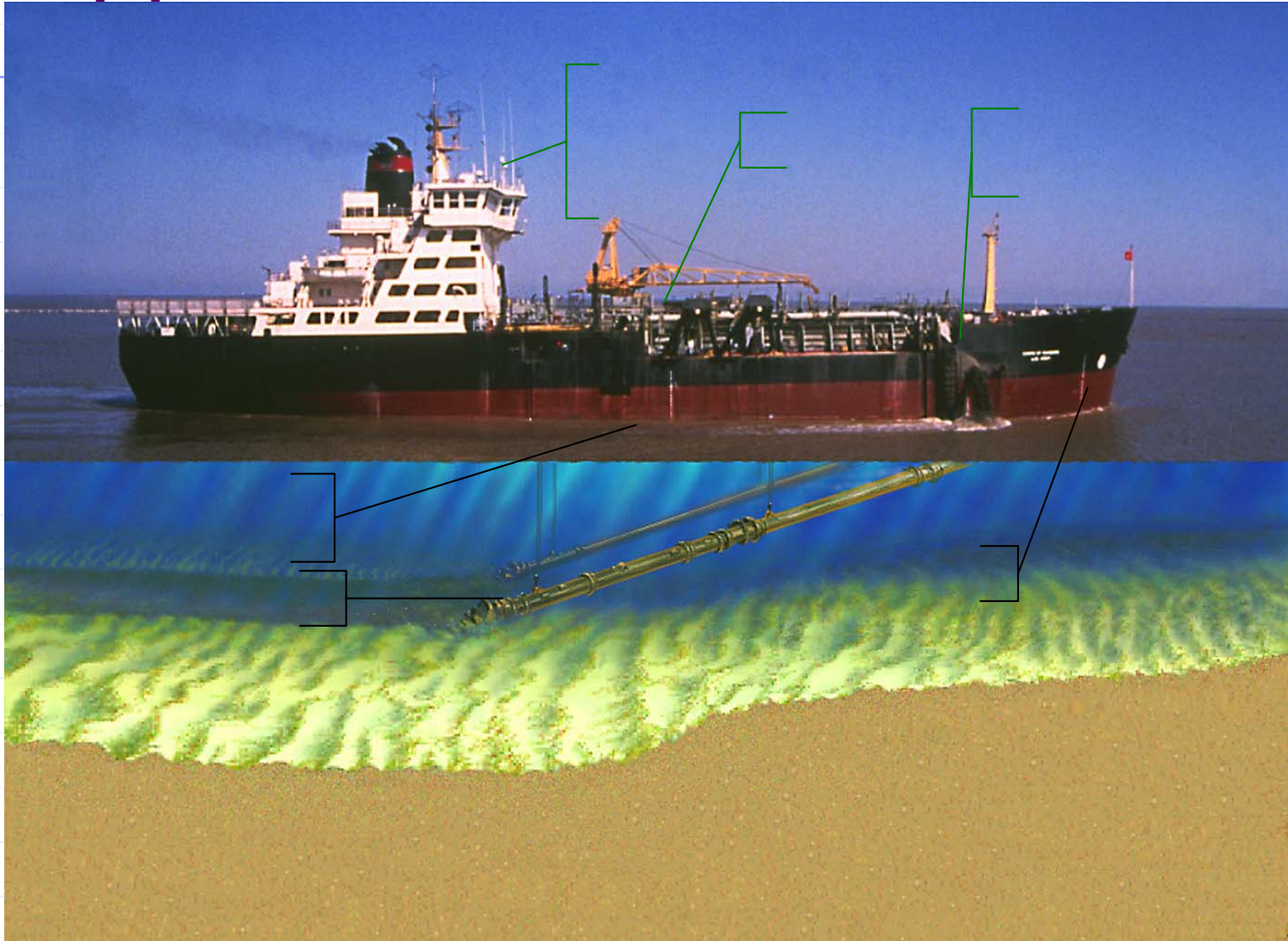
## ◆ Production / Operations Assistance

- Cycle Time, load, digging depths, position

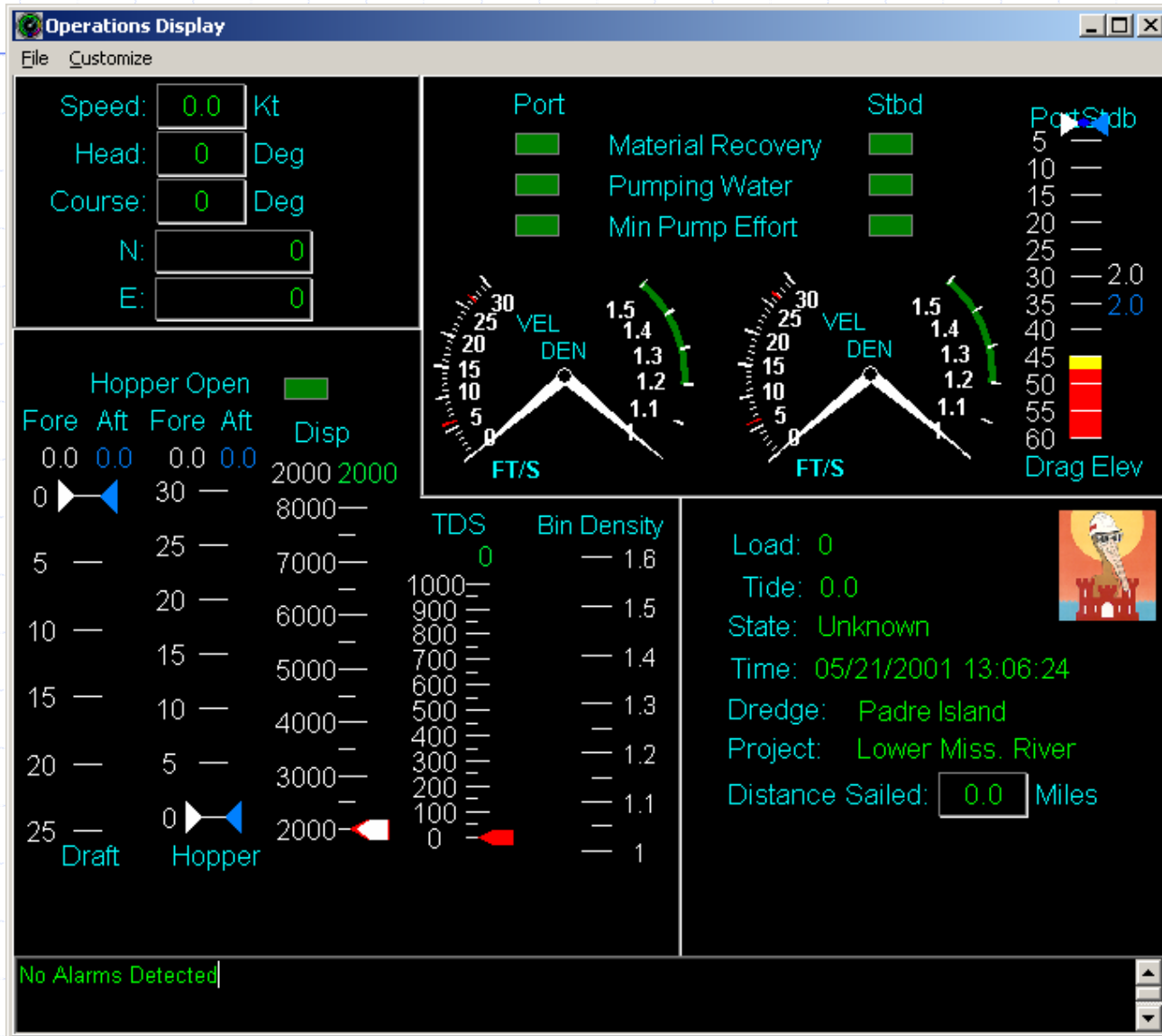
## ◆ Environmental

- Depths, Turtle & Fish operating restrictions
- Disposal site monitoring
- Dredge Leakage

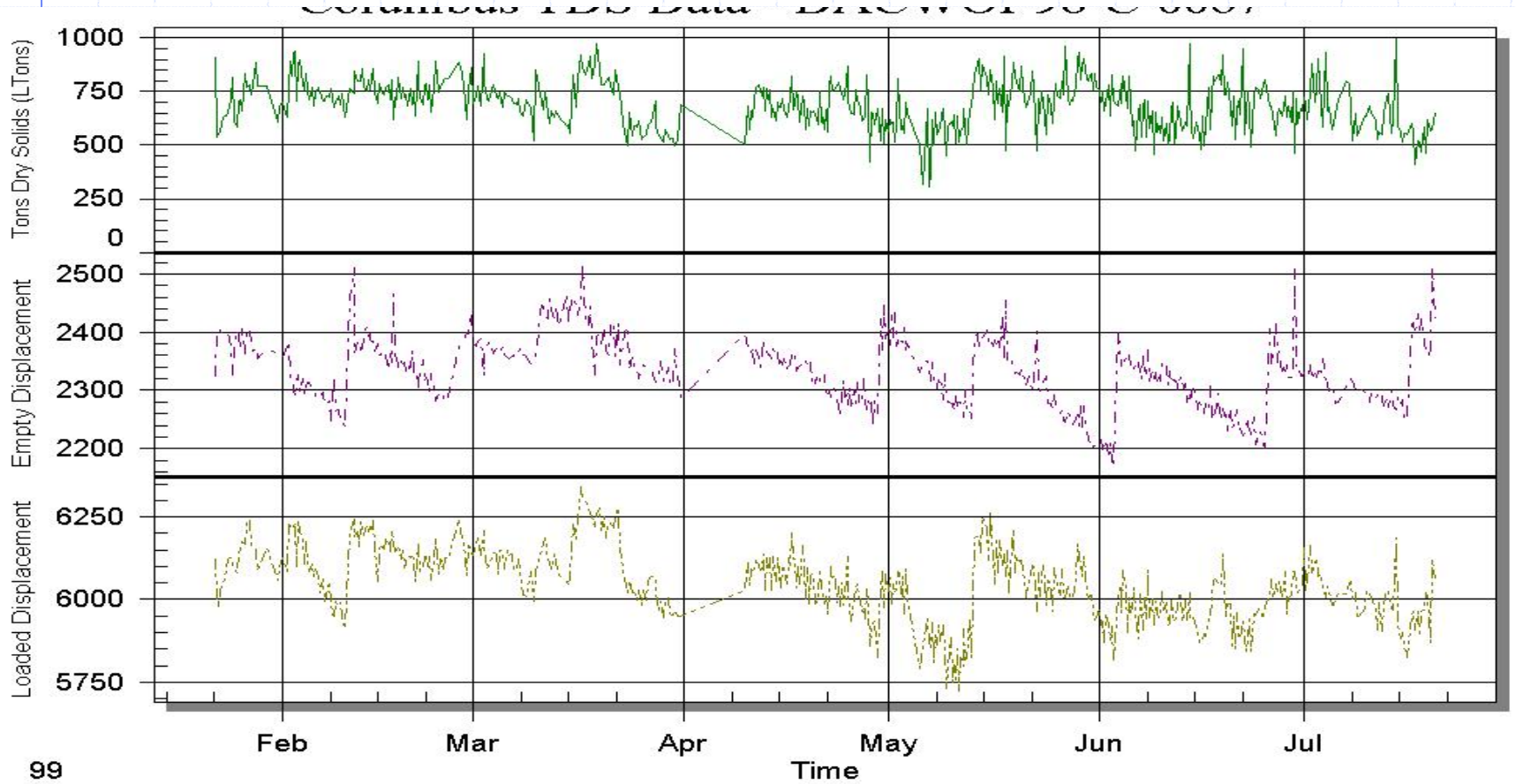
# Hopper SI Measurements



# SI On-dredge display



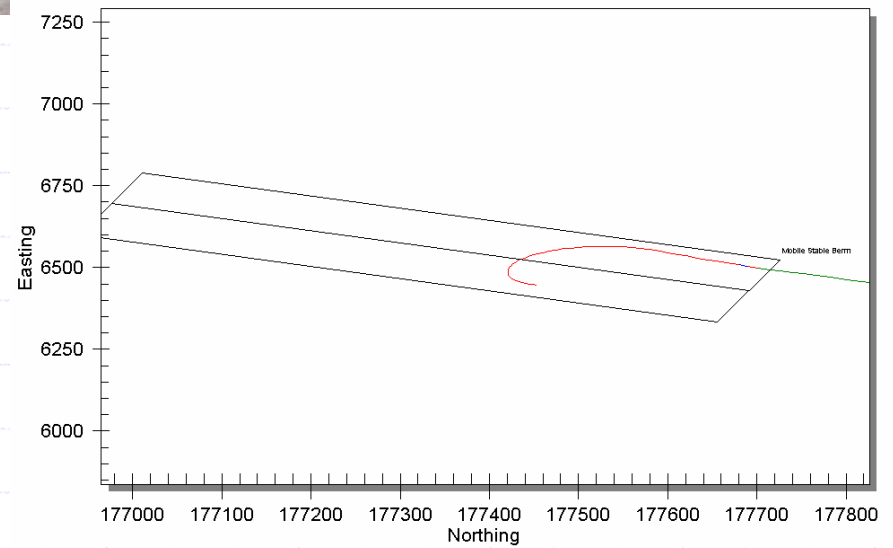
# TONS DRY SOLIDS



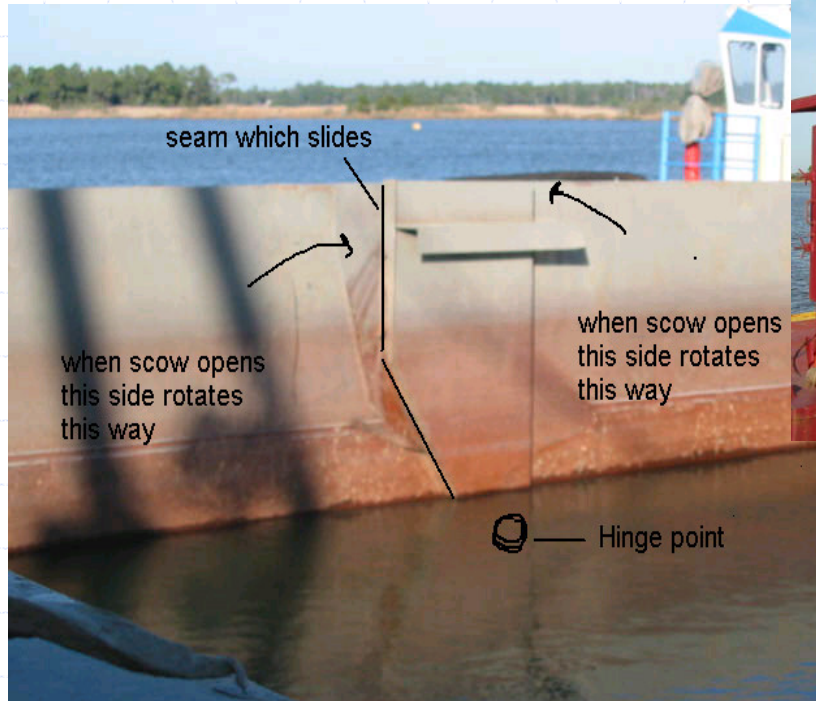
# Turtle Monitoring



Dredge Columbus - Track Plot  
Contract DACW01-99-C0046- Load Number 387



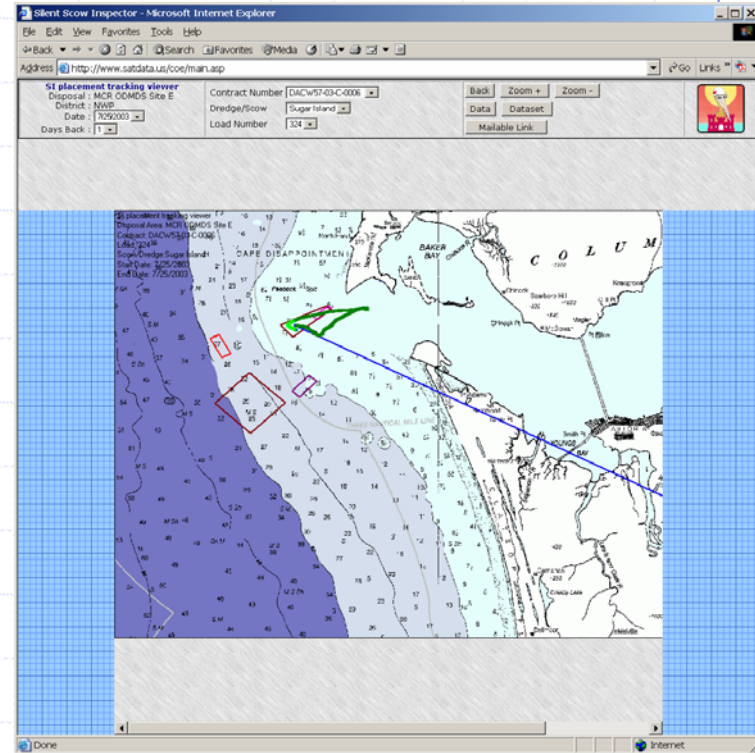
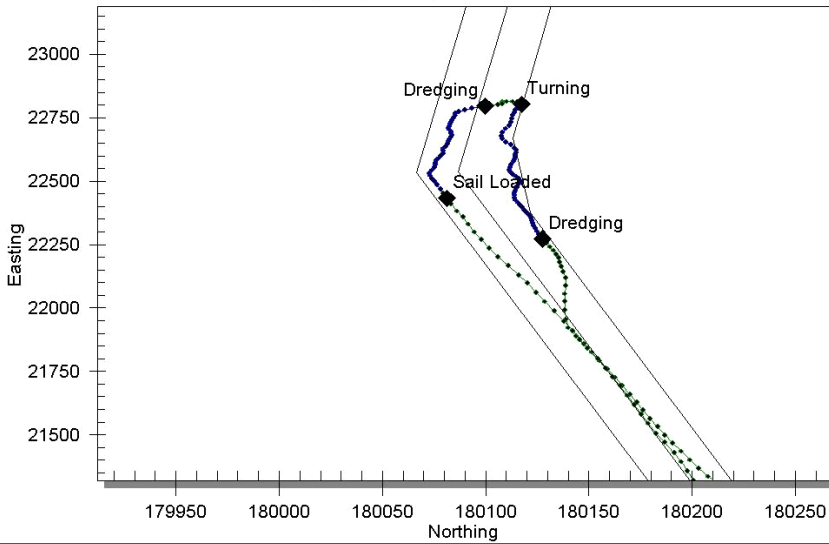
# SI Scows



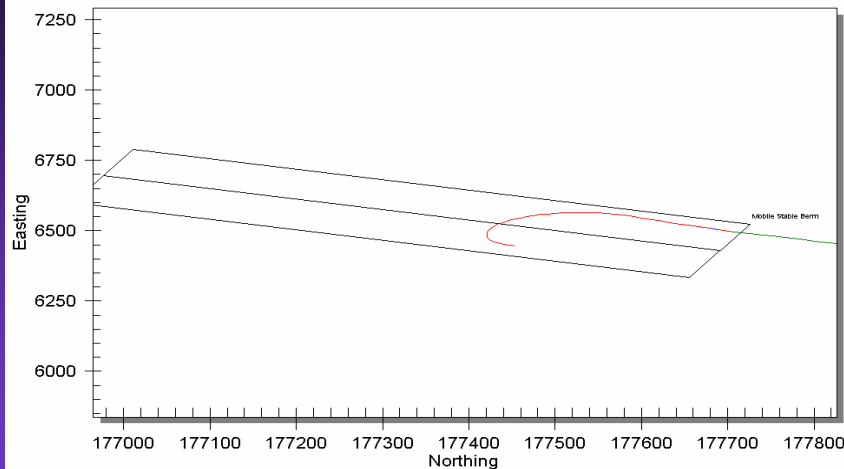
- Corps standard spec – competitive sources

# Scow & Hopper Tracking

Example Track Plot  
US Army Corps of Engineers Mobile District

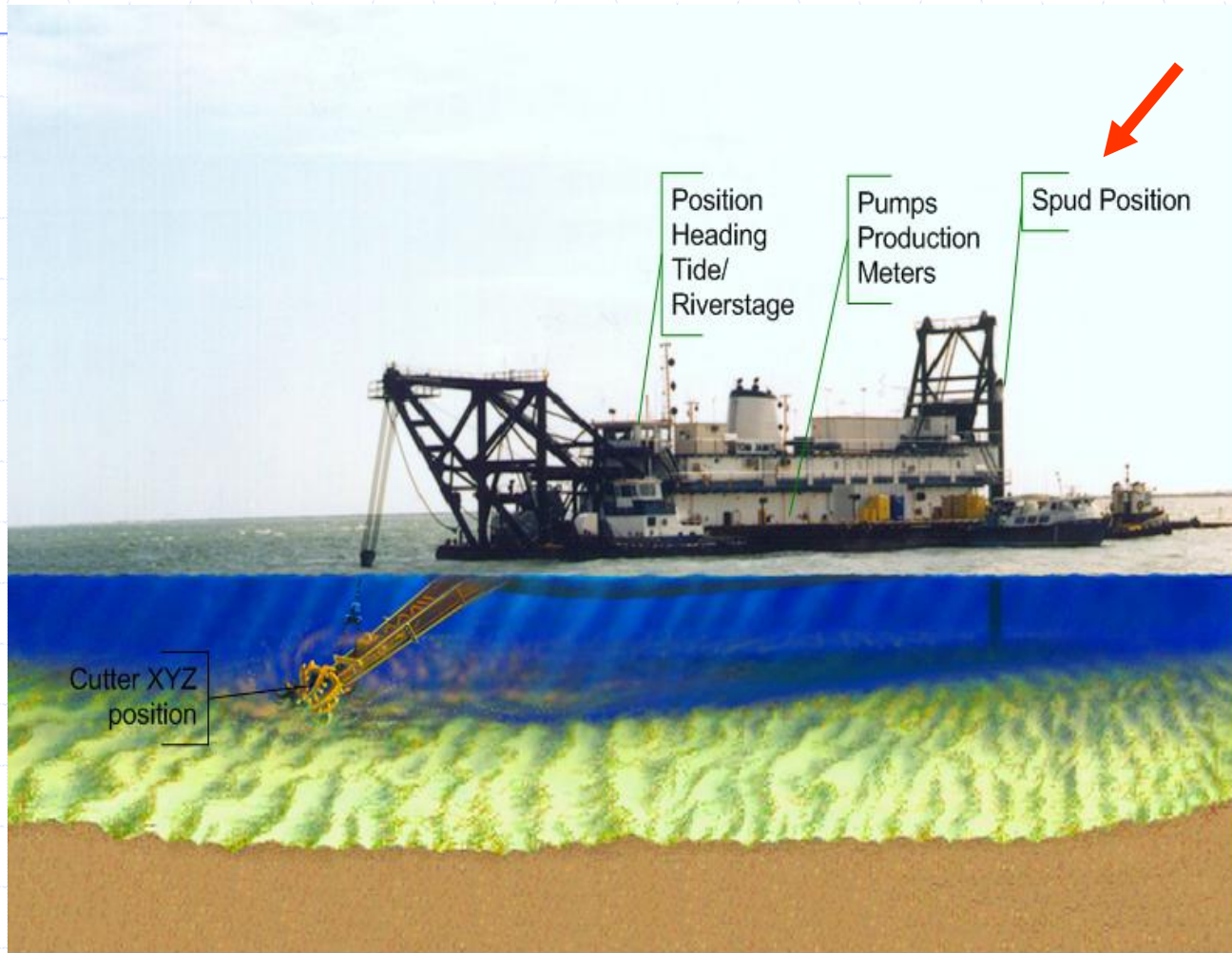


Dredge Columbus - Track Plot  
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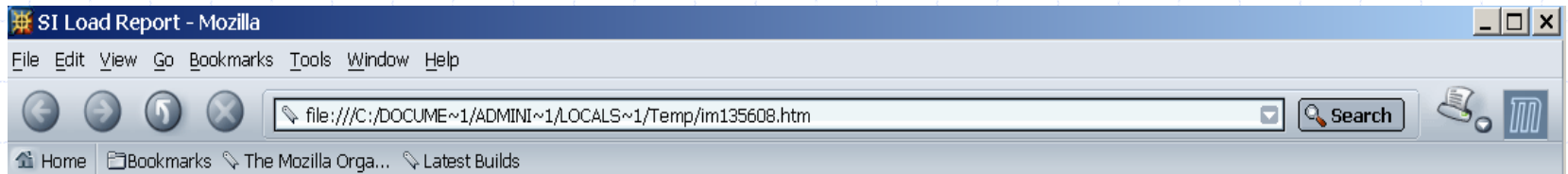




# Pipeline SI Measurements



# Email Load Report

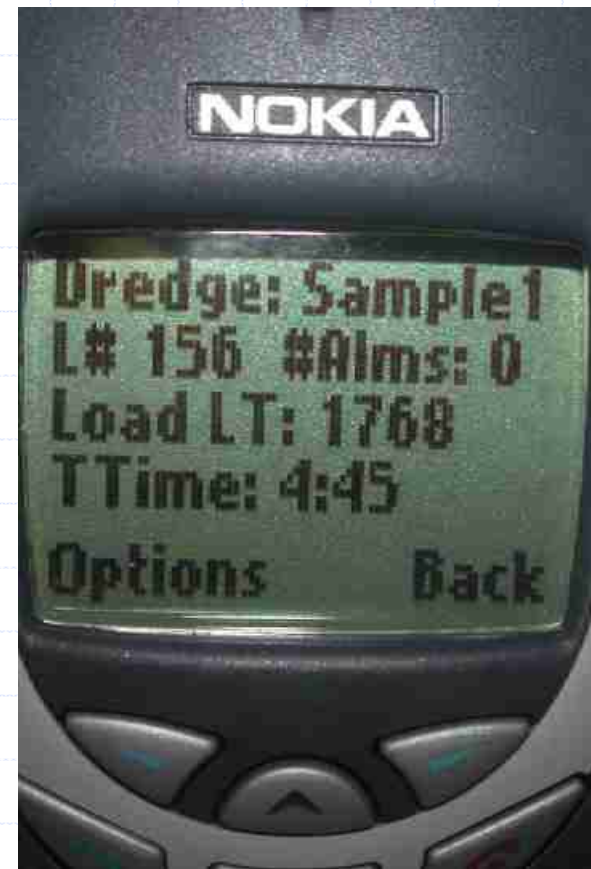
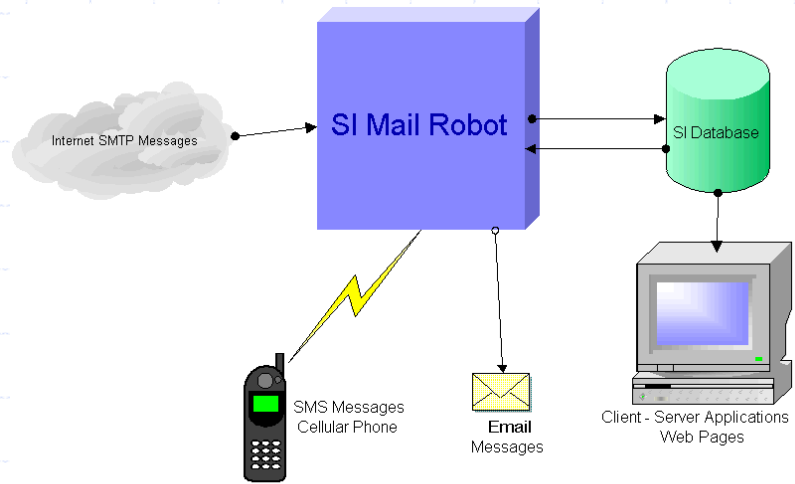


## Stuyvesant Load #239

<b>Load started</b>	02:50 Fri 25 Oct 2002	<b>Load Number</b>	239
<b>Dredge</b>	Stuyvesant	<b>Contract</b>	DACW01-02-C-0015
<b>Production</b>			<b>Time and Distance</b>
<b>Prod Meter (Lt)</b>	<b>TDS (Lt)</b>	<b>Bin density (g/cc)</b>	<b>Distance (m)</b>
1713	1669	1.150	57.2
<b>Ullage and Hopper</b>			<b>Dredging</b>
	<b>Displacement (Lt)</b>	<b>Volume (cyds)</b>	00:24
<b>Empty</b>	7912	1140	<b>Loaded</b>
<b>Loaded</b>	17489	11064	02:33
			<b>Dumping</b>
			00:00
			<b>Turning</b>
			00:00
			<b>Empty</b>
			02:38
			<b>Total</b>
			05:36

This is an automated report produced in near real-time by the [Silent Inspector](#). If you wish to stop these emails or modify your report selections, send email to [CHL-SICS@wes02.usace.army.mil](mailto:CHL-SICS@wes02.usace.army.mil).

# Cell Phone Message



# http://si.wes.army.mil

The screenshot shows a Microsoft Internet Explorer browser window displaying the website for the US Army Corps of Engineers Silent Inspector. The browser's address bar shows the URL <http://si.wes.army.mil/>. The website header features the US Army Corps of Engineers logo and the text "Waterways Experiment Station Silent Inspector". Below the header, there are navigation links for "USACE", "DOER", "Engineer Research & Development Center", and "Waterways Experiment Station".

The main content area is divided into several sections. On the left, there is a vertical navigation menu with the following items: "Home", "Overview", "Capabilities", "Latest Developments", "Contract Specifications", "Current SI User Support", and "Contact Us". The "Home" item is currently selected.

The central content area features a large image of a dredger with the text "Dredge Monitoring for Improved Dredging Contract Administration" overlaid. Below this, there is a red square logo with a white castle icon, followed by the text "US Army Corps of Engineers". The bottom of the main content area shows a large image of a dredger with the text "Silent Inspector" overlaid.

The browser's status bar at the bottom indicates "Internet".

# Requirements for SI Application

## ◆ Infrastructure

- Satellite Phone System (Real Time)
- Internet

## ◆ Volume

- Approximately \$100M to justify investment
- Lesser systems possible

# Point of Contact For Corps Assistance on Silent Inspector

## ◆ Mr. Stephen Collinsworth

- ERDC (Corps) Latin American Liaison
- Mobile, Alabama
- [Stephen.R.Collinsworth@sam.usace.army.mil](mailto:Stephen.R.Collinsworth@sam.usace.army.mil)
- (251) 690-2042

# The End

