

Commercial Vehicle Inspection Safety Enforcement Systems and the Development of the Inspection Selection System

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Overview

- **Background of Inspection Systems**
- **Development of the Original ISS**
- **PRISM and Development of SafeStat**
- **Development of the Current ISS**
- **Looking to the Future**
 - **Query Central**
 - **ISS enhancement pilot**



Inspection Systems

- **Why Developed?**
 - Improve data accuracy and timeliness
 - Help focus resources
- **What systems exist?**
 - **ASPEN – inspection software**
 - Collects inspection details, prepares report, transmits data
 - **ISS – Inspection Selection System**
 - Provides recommendation, carrier snapshot



Inspection Systems (continued)

- **PIQ – Past Inspection Query**
 - Retrieves recent inspection reports
 - **CDLIS Access – Commercial Driver’s License Information System Access**
 - Retrieves driver status reports and/or conviction history
 - **QC – Query Central**
 - Combines the functions of ISS, PIQ, & CDLIS Access, plus more
- **For more information:**
<http://www.ugpti.org/tssc/>



Original ISS

- Introduction
- Background and Motivation
- Definition
- Development and Testing
- Results and Implications



ISS - Introduction

- **States conduct various safety activities including:**
- **Driver/vehicle inspections**
 - Level I - check driver and vehicle (including underneath)
 - Level II - check driver and walk around vehicle
 - Level III - check driver only
 - Level V - vehicle inspection at a carrier's terminal
 - Any serious violations found then placed OOS
- **Compliance reviews**
 - Detailed review of records to measure compliance
 - Assign/change rating or enforcement action



ISS - Motivation

- **Relationship between OOS rates, compliance ratings, and accident rates**
- **OOS rate good indicator of safety problems, but need reasonable number of inspections to calculate**
 - 40% of carriers with zero inspections
 - 28% with one or two inspections
 - 152 carriers with more than 1,000 inspections
- **Conclusion: Need to better allocate resources to carriers with worst safety performance and/or with little or no information**



ISS - Definition

- ISS as solution to *aide* inspectors at the roadside to select “best” drivers/vehicles
 - Inspector enters DOT/MC number and is given an inspection value and recommendation
 - Inspector can also access details screen for additional information
- Targets carriers with poor safety history, and those with no or little information relative to their size
- Also recommends specific regulatory areas to concentrate on based on previous OOS violations
- ISS makes recommendation, inspector makes final decision



ISS – Development and Testing

- **Development guided by a Roadside Technology TWG**
- **Included representatives from Alabama, Colorado, Connecticut, Idaho, Kansas, Michigan, Nebraska, New Mexico, Ohio, Ontario, Virginia, Washington, D.C., and Wyoming**
- **Initial ISS algorithm tested and adjusted using actual carriers a focus group was familiar with**
- **ISS integrated into ASPEN**
- **First testing began May 1995, additional states started Fall 1995 through present**
- **ASPEN and/or ISS is currently in use nationwide**



ISS - Testing Results

- **60 percent increase in the number of vehicles and/or drivers put OOS when the ISS recommended an inspection**
- **Also a significant increase in the number of carriers inspected with less than three inspections previously**



PRISM

- **Performance and Registration Information Systems Management**
- **Two major processes**
 - **CMV registration process**
 - Ensures each vehicle is identified with carrier responsible
 - Safety fitness as a requirement to obtain plates
 - Use of registration sanctions as incentive to improve
 - **MCSIP process**
 - Means by which carrier safety is tracked and improved
 - Use of SafeStat for prioritization for either a warning letter or a compliance review



SafeStat

- **Four Safety Evaluation Areas (SEAs)**
 - Accident, Driver, Vehicle, Safety Management
- **For each SEA, measures are calculated**
- **Measures are then ranked relative to all other carriers, producing indicators**
- **Indicators are combined to compute SEA values**
- **Final score is only given to carriers with 75 or above in two or more SEAs**
 - Accident SEA is weighted by 2, Driver SEA by 1.5, and then values are summed



Current ISS

- **Background and Development**
- **Testing**
- **Results**



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Current ISS – Background

- **Why integrate SafeStat into ISS?**
 - **Original ISS was successful, but a desire existed for a uniform rating system for carriers**
 - **Differing goals of ISS versus PRISM**
- **Comparison of original ISS and SafeStat scores**
- **Which level of SafeStat data to use?**
- **Current ISS safety algorithm**
- **Current ISS insufficient data algorithm**
- **Every carrier in MCMIS has an ISS value**



Current ISS - Testing

- **Distributed for testing January 1999**
- **Presentations, interviews with states relayed positive responses regarding the system**
- **Comparison of original ISS and current ISS**
 - **Of those recommended in the current ISS, less than 4% were not recommended in original ISS**
- **Data from 213,585 inspections in 7 states between January and June 1999**



**Table 1. OOS Rates by the Original ISS and ISS-2 Recommendations Overall
(n=213,585 inspections)**

	Original ISS Recommendation		
	Pass	Optional	Inspect
Number of inspections	118,029	57,067	38,489
Driver OOS Rate	5.5%	7.3%	9.2%
Vehicle OOS Rate	18.9%	30.4%	31.3%
Total OOS Rate	19.8%	30.8%	32.5%
	ISS-2 Recommendation		
	Pass	Optional	Inspect
Number of inspections	72,988	44,638	95,959
Driver OOS Rate	3.8%	6.5%	8.9%
Vehicle OOS Rate	18.3%	24.3%	29.0%
Total OOS Rate	18.3%	24.7%	30.4%



Table 2. OOS Rates by the Original ISS and ISS-2 Recommendations for those Inspections of Carriers with Sufficient Safety Data (n=183,239 inspections)

	Original ISS Recommendation		
	Pass	Optional	Inspect
Number of inspections	112,070	45,791	25,378
Driver OOS Rate	5.4%	6.9%	9.1%
Vehicle OOS Rate	18.7%	30.9%	32.1%
Total OOS Rate	19.6%	31.1%	33.0%

	ISS-2 Recommendation		
	Pass	Optional	Inspect
Number of inspections	72,988	39,077	71,174
Driver OOS Rate	3.8%	6.3%	8.9%
Vehicle OOS Rate	18.3%	24.2%	29.1%
Total OOS Rate	18.3%	24.5%	30.4%



Table 3. OOS Rates by the Original ISS and ISS-2 Recommendations for those Inspections of Carriers with Insufficient Safety Data (n=30,346 inspections)

	Original ISS Recommendation		
	Pass	Optional	Inspect
Number of inspections	5,959	11,276	13,111
Driver OOS Rate	6.8%	9.0%	9.4%
Vehicle OOS Rate	22.2%	28.6%	29.7%
Total OOS Rate	23.9%	29.8%	31.7%
	ISS-2 Recommendation		
	Pass	Optional	Inspect
Number of inspections	0	5,561	24,785
Driver OOS Rate	N/A	7.6%	9.0%
Vehicle OOS Rate	N/A	24.9%	28.5%
Total OOS Rate	N/A	26.0%	30.3%



Current ISS - Conclusions

- Current ISS is as effective as the original ISS in meeting its goals
- Carriers with insufficient data should continue to be targeted for inspection
- Current ISS:

<http://www.ugpti.org/tssc/projects/mcp005.php>

Original ISS:

<http://www.ugpti.org/tssc/projects/mcp013.php>



The Future - Query Central

- **Motivation**
- **Carrier, vehicle, and driver information retrieval via the Internet**
- **Single input retrieves data from multiple sources**
- **Provides data analysis and summarization**
- **Data is real time, and generally from the authoritative source**



QC – Carrier Search

The screenshot shows a web browser window titled "Query Central Carrier Search - Microsoft Internet Explorer". The page features the "Query Central" logo with a truck icon and the heading "CARRIER SEARCH". A navigation bar includes links for "Driver", "Vehicle", "Carrier", "Help", "Home", and "Log Off". Below this is a banner stating "Rapid central access to current Motor Carrier Safety information from many sources." The search interface includes a "Search Type:" dropdown menu with options: "USDOT Number", "USDOT Number", "MC/MX Number", "MX RFC Number" (highlighted), and "Carrier Name". A "Search Criteria:" text input field and a "Search" button are positioned to the right of the dropdown. Below the search area, instructions read: "To search for motor carriers, select a search type and enter search criteria." and "Press SEARCH to submit query". The browser's status bar at the bottom shows "Done" and "Internet".



QC – Carrier Summary

Query Central **CARRIER SUMMARY**

[Driver](#) | [Vehicle](#) | [Carrier](#) | [Help](#) | [Home](#) | [Log Off](#)
[Carrier Summary](#) | [Carrier Detail](#) | [Violation History](#) | [L&I Detail](#) | [436 Past Inspection\(s\)](#) | [Summary Report](#)

Motor Carrier Identification & Safety Data

Legal Name:	SAMPLE TRANSPORT INC	USDOT#:	9999999
DBA Name:		MC/MX#:	999999
Physical Address:	615 S ARLING LOWELL, AR 73744	Phone#:	(555)123-0000
		Status:	ACTIVE
Mailing Address:	PO BOX 11 LOWELL, AR 73744	MCSIP Level:	
Inspection Value: 37 - PASS			
<i>Inspection Value is based on SAFESTAT data.</i>			

Visit the [SAFER Website](#) for additional information.



QC – Past Inspections

Query Central Carrier Name Search - Microsoft Internet Explorer

File Edit View Favorites Tools Help Links >>

QueryCentral **PAST INSPECTION LIST**

Driver Vehicle Carrier Query Central Help Home Log Off

[Back to Carrier Data](#)

Past Inspection List for Carrier: **SAMPLE CO**

Inspection Date/Time	State	Inspection Location	Highway	Violations	OOS
05/02/2002 08:09 AM	NE	FREMONT SCALE	F-77	0	0
04/30/2002 04:04 AM	NJ	WHITE TWSP.	RT. 46 & CR. 519	1	0
04/29/2002 05:11 PM	IA	23 - LEMARS		1	0
04/29/2002 11:53 AM	CO	FT MORGAN CO	I 76	3	0
04/23/2002 07:30 PM	IA	I-80 MM 151 MITCHEL		0	0
04/22/2002 12:30 PM	IA	23 - LEMARS		0	0
04/18/2002 06:31 PM	KS	SOUTH HAVEN M.C.I.S. #26A	35	1	0
04/18/2002 05:30 PM	IA	HWY 3 AND 7		0	0
04/17/2002 04:00 PM	IA	44 - EARLY SCALE		4	0
04/16/2002 10:40 AM	KS	KANORADO M.C.I.S. #46	70	1	0
04/15/2002 09:50 AM	NE	INMAN	F-275	4	0
04/15/2002 08:22 AM	MT	BROADUS # 0630	212	0	0
04/09/2002 03:10 PM	NE	HEBRON	F-81	3	1
04/06/2002 12:50 PM	IA	44 - EARLY SCALE		2	1
04/06/2002 12:25 PM	IA	HWY 3 AND 7		0	0
04/03/2002 11:25 AM	IA	44 - EARLY SCALE		1	0
04/03/2002 11:10 AM	KS	CLOUD COUNTY - 029		0	0
04/03/2002 10:10 AM	KS	SOUTH HAVEN M.C.I.S. #26A	35	0	0
03/30/2002 12:42 PM	KS	SOUTH HAVEN M.C.I.S. #26A	35	0	0



QC – Vehicle Search

Query Central **VEHICLE SEARCH**

[Driver](#) | [Vehicle](#) | [Carrier](#) | [Help](#) | [Home](#) | [Log Off](#)

Rapid central access to current Motor Carrier Safety information from many sources.

Plate#: Country: Mexico State: Mexico

Plate/State Search

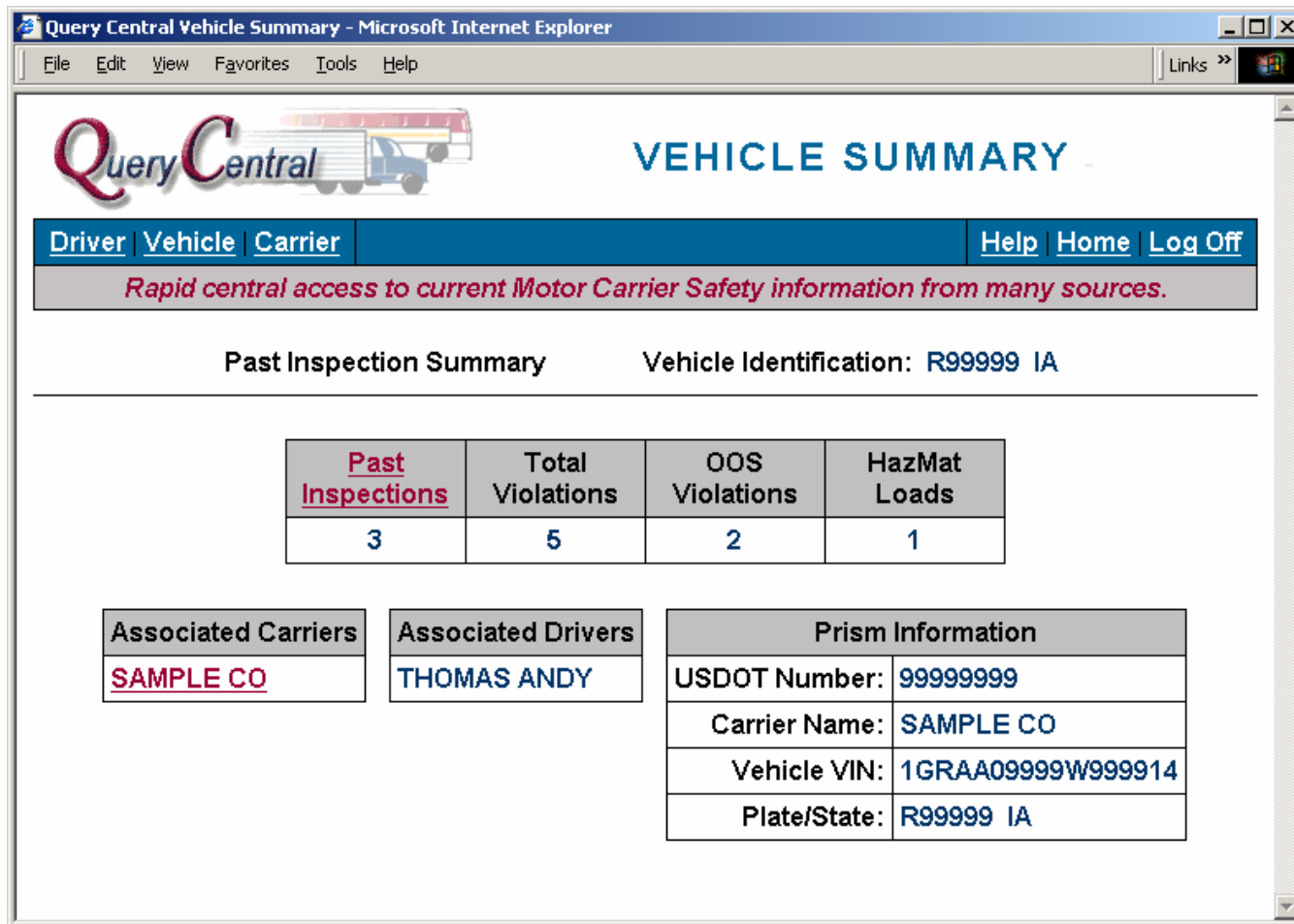
OR

VIN#: Country: Mexico

VIN Search



QC – Vehicle Summary



Query Central **VEHICLE SUMMARY**

Driver | Vehicle | Carrier | Help | Home | Log Off

Rapid central access to current Motor Carrier Safety information from many sources.

Past Inspection Summary Vehicle Identification: R99999 IA

Past Inspections	Total Violations	OOS Violations	HazMat Loads
3	5	2	1

Associated Carriers	Associated Drivers	Prism Information	
SAMPLE CO	THOMAS ANDY	USDOT Number:	99999999
		Carrier Name:	SAMPLE CO
		Vehicle VIN:	1GRAA099999W999914
		Plate/State:	R99999 IA



QC – Driver Search

The screenshot shows a web browser window titled "Query Central Driver Search - Microsoft Internet Explorer". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The address bar shows "Links >>". The main content area features the "Query Central" logo on the left and the text "DRIVER SEARCH" on the right. Below the logo is a navigation bar with tabs for "Driver", "Vehicle", and "Carrier", and links for "Help", "Home", and "Log Off". A red banner below the navigation bar reads "Rapid central access to current Motor Carrier Safety information from many sources." The search form includes the following fields and options:

- Query Type: (dropdown)
- Country: (dropdown)
- State: (dropdown)
- CDL#:
- Indicates Required Data
- First Name: Last Name:
- DOB: Month: (dropdown) Day: (dropdown) Year:
- SSN:

At the bottom of the form are two buttons: "Search" and "Clear".



QC – Driver Summary

Query Central DRIVER SUMMARY

[Driver](#) | [Vehicle](#) | [Carrier](#) | [Help](#) | [Home](#) | [Log Off](#)

[CDLIS Report](#) | No Past Inspections

Driver Identification			
Driver Name:	JOE SAMPLE		
Address:	123 GETAWAY LANE DENVER CO 80202		
CDL#:	111112345	State:	CO
Date of Birth:	04/15/1951		

CDL Summary	
Status:	LICENSED
Expires:	04/15/2005
Classes:	CLASS A
Restrictions:	NONE
Endorsements:	HAZARDOUS MATERIALS



The Future - ISS Enhancement Pilot

- Addition of Carrier-Driver-Conviction (CDC) measure
- See related “Driver Safety History and ISS” presentation at:
<http://www.ugpti.org/tssc/projects/presentations.php>



Contact Information / Discussion

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