



**Office of
Internal Audit**

FLORIDA INTERNATIONAL UNIVERSITY

Audit of University Fleet Management

**Report No. 20/21-05
November 12, 2020**

FIU | Office of Internal Audit

Date: November 12, 2020

To: Aime Martinez, Associate Vice President for Business and Finance

From: Trevor L. Williams, Chief Audit Executive



Subject: Audit of University Fleet Management – Report No. 20/21-05

We have completed an audit of University Fleet Management for the period January 1, 2019, through February 29, 2020, and an assessment of the current practices through July 31, 2020. The primary objective of our audit was to determine whether procedures and controls for the University's fleet ensure that: a) oversight and inventory of University fleet are adequate; b) preventive maintenance and vehicle inspections are timely performed and documented; c) the fleet management contract is monitored and adhered to; d) safety and accident prevention in the facilities is promoted; e) fuel inventory and usage are managed properly; and f) fleet data is safeguarded, current, and timely backed up.

The day-to-day maintenance and repair of the more than 600 vehicles and other pieces of equipment comprising the University's diverse fleet is outsourced to First Vehicle Services, a fleet maintenance vendor. During the period reviewed, the University paid First Vehicle Services \$1,113,249.

Our audit found that University Fleet Management has established a robust maintenance program that ultimately expands the lifecycle of vehicles and equipment. Moreover, Fleet Management has timely addressed violations noted by official agencies. However, opportunities for improvement exist as they relate to the documentation of fuel policies and procedures, the timeliness of maintenance and inspections, the recording and tracking of accountable property, and the enhancement of the processes that promote safety. The audit resulted in 15 recommendations, which management has either already addressed or agreed to implement.

We want to take this opportunity to express our appreciation to you and your staff for the cooperation and courtesies extended to us during the audit.

Attachment

C: FIU Board of Trustees

Mark B. Rosenberg, University President

Kenneth G. Furton, Provost, Executive Vice President, and Chief Operating Officer

Kenneth A. Jessell, Senior Vice President and Chief Financial Officer

Javier I. Marques, Vice President and Chief of Staff, Office of the President

TABLE OF CONTENTS

	<u>Page</u>
OBJECTIVES, SCOPE, AND METHODOLOGY	1
BACKGROUND	2
Preventive Maintenance and Inspections	3
Contract Oversight and Billing	4
Employee Training	4
Fuel Management	5
Information Technology	5
OBSERVATIONS AND RECOMMENDATIONS	6
Areas Within the Scope of the Audit Tested Without Exception.....	7
Fleet Master Listing Data.....	7
Preventive Maintenance Plan.....	7
Utilization of Vehicles	8
Vehicle Disposal	9
Certifications.....	9
State Fire Marshal Inspections	9
Fire Extinguisher Inspections.....	9
Department of Environmental Resources Management Inspections	9
Internal Safety Inspections	10
Permits	10
Infor EAM	10
Areas Within the Scope of the Audit Tested With Exception.....	11
1. FuelMaster IT Control Weaknesses	11
User Access	11
Event Logging	12
2. Fuel Management.....	15
Fuel Procedures.....	15
Fuel Reconciliations	15
Fuel Usage.....	16
3. Preventive Maintenance of University Fleet.....	19
4. Vehicle Trip Logs.....	21

Personal Use of Vehicles	21
Completion of Vehicle Trip Logs	21
5. Training	24
6. Safety Signage	25
7. Accountable Property	27
APPENDIX I – COMPLEXITY RATINGS LEGEND.....	29
APPENDIX II – OIA CONTACT AND STAFF ACKNOWLEDGMENT	30

OBJECTIVES, SCOPE, AND METHODOLOGY

Pursuant to the approved annual plan for the 2019-2020 fiscal year, we have completed an audit of University Fleet Management¹ for the period January 1, 2019, through February 29, 2020, and an assessment of current practices through July 31, 2020. The primary objective of our audit was to determine whether there are adequate and effective controls and procedures in place to ensure that the University fleet is properly accounted for, maintained, and operating under safe conditions.

The audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing*, promulgated by The Institute of Internal Auditors and ISACA *IS Audit and Assurance Standards*. To accomplish specific Information Technology control objectives, we utilized the COBIT 5.0 Framework developed by ISACA. The audit included tests of the supporting records and such other auditing procedures, as we considered necessary under the circumstances. Audit fieldwork was conducted from March 2020 through August 2020.



During the audit, we:

- Reviewed University policies and procedures, and applicable federal and state statutes, rules, and regulations;
- Tested the adequacy of internal controls and processes for fleet administration;
- Evaluated the established controls and procedures over the University's preventive maintenance program and fuel management practices;
- Tested payments to the fleet management vendor for propriety; and
- Reviewed the adequacy of processes for promoting safety and training awareness in the facilities.

Sample sizes and transactions selected for testing were determined on a judgmental basis applying a non-statistical sampling methodology.

As part of our audit, we reviewed internal and external audit reports issued during the last three years to determine whether there were any prior recommendations related to the scope and objectives of this audit. There were no prior recommendations related to University Fleet Management. However, there were recent external inspections conducted which we followed up and those results are included in this audit report.

¹ This audit is titled Motor Pool (University Fleet Management) in the approved annual audit plan.

BACKGROUND

Florida International University's (FIU) Fleet Management is a division of the Office of Business Services (OBS). The University Fleet Manager (Fleet Manager) is the most senior staff member of the division and is responsible for the long-term strategic management and oversight of the day-to-day services outsourced to a fleet maintenance vendor, First Vehicle Services (FVS or "Vendor") selected in response to the *Fleet Services Invitation to Negotiate* (ITN 45-004). The contract commenced on March 14, 2016, and has an initial term of five (5) years. The Fleet Manager monitors the Vendor's performance using key performance indicators (KPI) and ensures that the Vendor is maintaining clean and safe working conditions within the facilities at the Modesto Maidique Campus (MMC) and the Biscayne Bay Campus (BBC).

Services provided by the Vendor include:

- Preventive Maintenance
- Repairs
- Outside Repairs
- Deferred Maintenance and Extending Vehicle Lives
- Road Calls and Towing
- Quick Fixes
- Warranty and Recall Work
- Road Testing
- Assessment of Business Partner Vehicles
- New Vehicle Preparation and Vehicle Disposal
- Accident and Vandalism Repairs
- Welding and Fabrications
- Vehicle Painting and Body Parts
- Vehicle Sharing Program
- User Abuse Repairs
- Emergency Services
- Waste Management



The FIU Fleet Management program has met the requirements set by the National Institute for Automotive Service Excellence (ASE) Blue Seal of Excellence. This recognizes the competence and credibility of the auto repair shop technicians who help people keep their vehicles on the road every day and in the case of our University fleet, it honors the dedication of Administrators and the hard work technicians put forth to provide safe, reliable vehicles and equipment to serve the transportation needs of the FIU community.

To earn and maintain the ASE Blue Seal recognition, a minimum of 75% of the shop's technicians must be ASE certified. Among those certified technicians, the shop must cover all ASE certifications that correspond to every area of service the shop offers. This achievement requires a commitment to continual training to ensure technicians are properly trained and maintain valid certifications. Additionally, University's Fleet Management was recognized in 2020 as one of the 100 Best Fleets in the Americas™ (from over 38,000 such operations).

As of March 6, 2020, the University's diverse Fleet consisted of approximately 627 vehicles and other pieces of equipment (Table 1). They included, but were not limited to, police vehicles, sedans, pickups, SUVs, golf carts, mules, boats, airboats, and trucks.

Table 1: University Fleet as of March 6, 2020	
Category	Count
Utility Vehicles and Golf-Carts	249
General Automobiles, Light Trucks, SUVs, Vans	149
Equipment	102
Law Enforcement Vehicles	64
Trailers	27
Boats and Hovercraft	17
Trucks greater than 10,000 GVWR (gross vehicle weight rating)	8
Trucks greater than 26,000 GVWR	7
Buses (Small)	4

Source: Fleet Management

Preventive Maintenance and Inspections

According to the contract with the Vendor, University-owned vehicles are required to be serviced with the following established preventive maintenance schedule (Table 2) to be compliant with Federal and State mandated safety and emission requirements:

Table 2: Preventive Maintenance Schedule		
Category	Cost	Cycles
General Automobiles, Light Trucks, SUVs, and Vans	\$85.51	Every 4 months or 3,000 miles
Law Enforcement Vehicles	\$102.66	Every 3 months or 3,000 miles
Trucks greater than 10,000 GVWR	\$127.61	Every 4 months or 6,000 miles
Trucks greater than 26,000 GVWR	\$220.83	Every 4 months or 6,000 miles
Buses (Small)	\$231.33	Every 4 months or 6,000 miles
Buses (Medium)	\$263.72	Every 6 months or 6,000 miles
Golf Carts	\$42.89	Every 4 months
Utility Carts	\$81.29	Every 4 months
Boats	\$53.43	Every 3 months
Hovercraft	\$58.32	Every 3 months
Equipment	\$81.29	Every 4 months
Trailers	\$42.89	Every 6 months

Source: Fleet Management

The Fleet Manager is responsible for ensuring enforcement of the preventive maintenance program. Inspections of all vehicles are conducted when they are brought in for preventive maintenance. Inspection results are recorded within the work order created to authorize and document the work performed.

Contract Oversight and Billing

For the period reviewed (January 1, 2019, through February 29, 2020), the University paid FVS \$1,113,249. Payments to FVS are based on their monthly performance. The Vendor's performance is evaluated using the following KPIs:

Table 3: Vendor Performance KPIs			
	KPI Measurement Criteria	Acceptable Range	Penalty
I	Turnaround Time - Preventive Maintenance (PM)		
	PM scheduling and completion within 8 hours	95%	2%
II	Unscheduled Repair Performance		
	Completion in less than 48 hours	95%	1%
III	Quality of Work		
	Repair work orders requiring rework	0-5%	1%
IV	Parts Availability		
	Parts fill rate of 80% or greater	80%	1%
V	Fleet Availability		
	Police availability	90%	.5%
	Non-police availability	91%	.5%

Source: Fleet Management

Each month, the Fleet Manager obtains a report from Infor EAM (the fleet management information system the Vendor uses) that includes results for the aforementioned KPIs. The payment is then calculated using the KPI results. If a monthly KPI is not met, a penalty in an amount representing the applicable percentage is calculated.

Employee Training

FVS has an ongoing employee training and continuing education program, which includes (but is not limited to):

- OEM (Original Equipment Manufacturer) training
- Supervisory/management training
- Technician training
- Other relative trainings

FVS requires each technician to participate in at least 40 hours of training each year. They also provide daily safety messages and ongoing safety training to their employees. In addition, FVS performs daily, weekly, and monthly safety inspections of the facilities, and is a participant in the Occupational Safety and Health Administration's (OSHA) Voluntary Protection Program².

² The Voluntary Protection Programs recognize employers and workers in the private industry and federal agencies who have implemented effective safety and health management systems and maintain injury and illness rates below national Bureau of Labor Statistics averages for their respective industries.

Fuel Management

The University has two (2) fuel sites which are managed by Fleet Management:

- The MMC site consists of one (1) 9,000-gallon gasoline tank and one (1) 3,000-gallon diesel tank; and
- The BBC site consists of one (1) 2,500-gallon gasoline tank and one (1) 500-gallon diesel tank.

Additionally, the University completed the Fuel Hardening Project in July 2020. This improvement provides the University with an increased ability to respond to the cleanup efforts typically experienced after an adverse weather event, and to provide added fuel needed to operate stationary generators during a power failure throughout the campus. The enhancement to the fuel station includes two (2) new 12,000-gallon diesel tanks.

The University purchases all fuel and fueling equipment, while FVS operates and maintains these sites.

Information Technology

FVS uses Infor EAM, a computerized fleet management information system, which provides records of all maintenance, repair, and service activity performed on each vehicle.

Fleet Management utilizes Syntech's FuelMaster System to manage its fuel operations. The system allows fuel to be dispensed in two ways:

- PROKEE ("Utility Key"): A programmable chip embedded in a hard plastic casing that is programmed by the Administrator (Fleet Manager) for a particular department, person, or storage can. It is read electronically by the pumping device and usage is recorded. Once the pump is activated, fuel can be placed in a portable container or any non-University vehicle.
- Automotive Information Module (AIM): A special sensor installed in the vehicle that activates the pump or the Fuel Management Unit (FMU). When a vehicle with AIM pulls up to the fueling station, the FMU authenticates AIM via radio frequency. Once AIM is authenticated, fueling is enabled.

OBSERVATIONS AND RECOMMENDATIONS

Our overall assessment of internal control is presented in the table below. In summary, we noted that the University's Fleet Management has established a robust maintenance program that ultimately expands the lifecycle of vehicles. Moreover, Fleet Management has timely addressed violations noted by official agencies. However, opportunities for improvement exist as it relates to the documentation of fuel policies and procedures, the timeliness of maintenance and inspections, the recording and tracking of accountable property and processes that promote safety. The areas tested during the audit and our observations and recommendations are detailed on the following pages.

CRITERIA	SATISFACTORY	OPPORTUNITES TO IMPROVE	INADEQUATE
Process Controls		X	
Policy & Procedures Compliance	X		
Effect	X		
Information Risk		X	
External Risk	X		
INTERNAL CONTROLS LEGEND			
CRITERIA	SATISFACTORY	OPPORTUNITES TO IMPROVE	INADEQUATE
Process Controls (Activities established mainly through policies and procedures to ensure that risks are mitigated and objectives are achieved.)	Effective	Opportunities exist to improve effectiveness	Do not exist or are not reliable
Policy & Procedures Compliance (The degree of compliance with process controls – policies and procedures.)	Non-compliance issues are minor	Non-compliance issues may be systematic	Non-compliance issues are pervasive, significant, or have severe consequences
Effect (The potential negative impact to the operations- financial, reputational, social, etc.)	Not likely to impact operations or program outcomes	Impact on outcomes contained	Negative impact on outcomes
Information Risk (The risk that information upon which a business decision is made is inaccurate.)	Information systems are reliable	Data systems are mostly accurate but need to be improved	Systems produce incomplete or inaccurate data which may cause inappropriate financial and operational decisions
External Risk (Risks arising from events outside of the organization's control; e.g., political, legal, social, cybersecurity, economic, environment.)	None or low	Potential for damage	Severe risk of damage

Areas Within the Scope of the Audit Tested Without Exception

Fleet Master Listing Data

We obtained the master listing of the University's fleet from Fleet Management wherein they had identified a total of 627 items, consisting of motor vehicles, golf-carts, utility carts, boats, trailers, and equipment. We then reviewed the master listing in its entirety to determine if:

- Pertinent vehicle details (i.e., vehicle identification number, make, model, year, and mileage) are documented;
- Vehicles indicated what department they are assigned to; and
- Vehicles indicated their physical location.

Although some data was missing, the data contained in each record, specifically the preventive maintenance type, provided sufficient information to trigger timely preventive maintenance notifications. Further, the data enabled specific identification of each item.

Preventive Maintenance Plan

In addition to prolonging the useful life of the vehicle, the purpose of preventative maintenance inspections is to proactively identify and repair potential vehicle component failures before they occur. This reduces vehicle downtime, improves passenger safety, and reduces cost. The Florida Department of Transportation's (FDOT) State Management Plan requires that each agency develop a maintenance plan that outlines the agency's maintenance policies, procedures, and practices. Although the University does not fall under the jurisdiction of the FDOT State Management Plan, the plan was used as guidance to evaluate the adequacy of Fleet Management's existing maintenance plan, as it provides general fleet maintenance guidelines.

Since the University outsources its maintenance to FVS, we used the FDOT's guidance for agencies which outsource all of their maintenance activities to ensure that all the elements of their maintenance program procedures and practices were included. As a result, we were able to validate that FVS has formalized a Maintenance Plan for the University that encompasses the key elements outlined in the FDOT's guidance.

Additionally, the FDOT requires that agencies conduct routine preventative maintenance inspections on their vehicles. These inspections should meet or exceed OEM recommendations and/or the minimum maintenance requirements established in the *FDOT Preventative Maintenance Standards Manual*.

The requirements are summarized as follows:

- Preventive maintenance inspections should be scheduled in a progressive method by using a predetermined target mileage interval chosen by the agency. These intervals, however, should not exceed 6,000 miles.
- Agencies must list in their maintenance plan each OEM recommended vehicle component and target mileage interval that will be used.
- Agencies should choose a target mileage for conducting oil changes that meets or exceeds OEM manufacturer recommendations.

We validated that the University has established preventive maintenance schedules, based on vehicle type that meet the aforementioned criteria.

Utilization of Vehicles

We evaluated vehicle utilization of the University’s Fleet to determine if vehicles are under or over utilized. We measured vehicle use by applying various approaches, including benchmarking, conducting mileage analyses, and reviewing the University’s Vehicle Replacement Plan. The University’s Vehicle Replacement Plan does not take into consideration mileage. The function evaluates vehicle replacement on the following metrics:

- Vehicle age/lifecycle
- Repair and maintenance cost
- Replacement cost

These metrics are then all taken into account to calculate a “trigger” score, ranging from “0” to “3”, which is used to assess whether a vehicle should be recommended for replacement (“3”) or not (“0”). The results of Fleet Management’s most recent review of 223 vehicles currently on-hand can be summarized as follows:

Table 5: Fleet Management Vehicle Replacement Plan Summary		
Trigger Score	Count of Vehicles	Percentage
0	84	4%
1	102	46%
2	30	27%
3	7	3%

Source: Fleet Management

We identified vehicles with mileage outliers from the fleet listing and concluded that Fleet Management’s Vehicle Replacement Plan applied its cost-replacement methodology adequately.

Vehicle Disposal

For the period audited, 58 University vehicles were determined surplus. We selected a sample of five (5) surplus vehicles and evaluated the condition (i.e., mileage and available life) of the vehicles to determine if they were disposed of prematurely or unreasonably. We concluded that the reasons for surplus were adequate.

Certifications

In response to the Fleet Services Invitation to Negotiate, FVS indicated that they are committed to service excellence and that its workforce would obtain, at a minimum, ASE certifications within the first three months of the effective date of the contract and that technicians would maintain such certifications for the contract term. To determine whether FVS met its promised employee certification commitments, we sampled five (5) of seven (7) technicians and noted that this commitment was met. Additionally, FVS committed to providing one certified Emergency Vehicle Technician (EVT). We validated that this commitment was met.

State Fire Marshal Inspections

Per Florida Statute 633.218, *Inspections of state buildings and premises; tests of fire safety equipment; building plans to be approved*, "It is the duty of the State Fire Marshal and her or his agents to inspect, or cause to be inspected, each state-owned building on a recurring basis established by rule, and to ensure that high-hazard occupancies are inspected at least annually, for the purpose of ascertaining and causing to be corrected any conditions liable to cause fire or endanger life from fire and any violation of the fire safety standards for state-owned buildings, this chapter, or the rules adopted pursuant hereto. The State Fire Marshal shall, within 7 days following an inspection, submit a report of such inspection to the head of the state agency responsible for the building."

We reviewed reports issued by the State Fire Marshal and noted that all violations pertaining directly to Fleet Management have been addressed.

Fire Extinguisher Inspections

Environmental Health and Safety conducts monthly fire extinguisher inspections. As part of these inspections, Environmental Health and Safety ensures that the units are in good working condition and available for use. We validated that fire extinguisher inspections were timely conducted.

Department of Environmental Resources Management Inspections

We obtained safety reports issued by the Department of Environmental Resources Management (DERM) during the audit period to identify any deficiencies and to ensure that corrective action has been taken. The inspections reviewed are detailed below:

Table 4: DERM Inspections (In-Scope)			
Campus	Inspection Type	Inspection Date	Violations
BBC (Facilities)	Compliance with IW5 Permit	March 13, 2019	Addressed
BBC (Fuel Site)	FDEP Annual Site Inspection	May 28, 2019	No violations noted
BBC (Fuel Site)	Storage Tank Inspection	February 6, 2020	Addressed

Source: DERM

We concluded that all DERM violations were addressed.

Internal Safety Inspections

As previously mentioned, FVS is a participant of OSHA’s Voluntary Protection Program. They perform daily, weekly, and monthly safety inspections of the facilities, and provide daily safety messages and ongoing safety training to their employees. We reviewed inspection records for three months (August 2019, September 2019, and February 2020) to ensure that safety inspections of the MMC Facility were conducted and noted that all items inspected received a rating of “P” (passed).

Permits

FVS is responsible for maintaining all applicable governmental permits necessary to perform its obligations for the duration of the contract. We validated that all applicable permits were obtained and are current.

Infor EAM

A System and Organization Control 2 (SOC 2)³ report was issued for Infor EAM. It concluded that the controls were suitably designed and operated effectively throughout the period October 1, 2018, to September 30, 2019, to provide reasonable assurance that Infor EAM’s service commitments and system requirements would be achieved based on the applicable trust services criteria.

³ General use reports that provide assurance to user organizations and stakeholders that a particular service is being provided securely.

Areas Within the Scope of the Audit Tested With Exception

1. FuelMaster IT Control Weaknesses

Fleet Management uses FuelMaster as its Fuel Management System. The system performs various functions, including:

- Authenticating users for fuel dispensing;
- Managing fuel inventory; and
- Generating transaction billing reports and invoicing.

User Access

The COBIT 5 DSS06.03.03 control objective of least privileged user access is to allow authorized users only the access that is necessary to accomplish assigned tasks in accordance with their business function. We evaluated user access at different levels within FuelMaster and noted control weaknesses.

- Operator: Allows authorized individual access into the FuelMaster software. Certain operators can be assigned specific permissions for software operations, such as setting up other operators, and permissions that control the creation, editing, and deleting of system configurations, products, customers, sites, inventory, and transaction records. We noted seven (7) "Operator" accounts, of which:
 - Three (3) are assigned to terminated or unknown individuals; and
 - One (1) is a redundant account. Specifically, there are two (2) accounts assigned to the Fleet Manager.
- Supervisor: Enables system configuration and troubleshooting at the FMU via the supervisor menu. We noted five (5) "Supervisor" accounts, of which only two (2) had Utility Keys encoded (activated) and were assigned to Fleet Management. The department informed us that one (1) of the two (2) Utility Key-enabled accounts was not used. The remaining three (3) Supervisor accounts do not have Utility Keys encoded. These three (3) keys are assigned to Vehicle Services, North Campus, and a generic Fuel Key. Therefore, four (4) of the five (5) Supervisor accounts are not currently utilized by Fleet Management and in particular, the one (1) encoded Utility Key, may pose a risk if maintained active.
- Manual Issue Keys: The Manual Issue Key allows onsite personnel to authorize a transaction without entering any specific accounting information. At the time of our review, there were 13 Manual Issue Keys. Five (5) Manual Issue Keys were encoded and eight (8) were not encoded. Keys may be assigned a personal identification number (PIN), which would require the user to enter a PIN at the FMU keypad. We reviewed fuel

manually dispensed for the period of October 1, 2019, through October 31, 2019. Within this period, 35 users dispensed 5,086 gallons of gasoline. Although a PIN was used by all 35 users, we sampled 10 users, and noted two (2) users entered a PIN assigned to employees who had separated from the University in 2016 and 2017, respectively. In December 2019, Fleet Management discovered as part of its random monthly spot check that the departments were sharing PINs and as a result, deactivated them.

Manual Issue Keys are assigned to the Fleet Manager. This is of concern because the Fleet Manager is also a system administrator, resulting in a lack of segregation of duties. Subsequent to this discovery, Management took corrective actions and reassigned the system administrator through the implementation of the noted management response. Moreover, there is no independent review of fuel dispensed through Manual Issue Key to identify possible theft or misuse.

Event Logging

We noted that FuelMaster audit logs were not enabled. Audit logs are chronological records of security-relevant data that document the sequence of activities affecting an operation, procedure, event, file, or document. A benefit of having audit logs is the ability to detect anomalies in system use and provide accountability.

Without adequate system controls in place, the University may be exposed to fuel theft and misuse, which when combined with the absence of audit logging, could result in the inability of providing accountability.

Recommendations

University Fleet Management should:	
1.1	Ensure that terminated employees' access to FuelMaster is rescinded upon separation and that other users' access to the Operator and Supervisor roles, as well as encoded Utility Keys, is limited to employees with a job-specific need.
1.2	Improve the existing process to detect the improper use of Manual Issue Keys on a timely basis.
1.3	Ensure that the system administrator does not have the capability to dispense fuel.
1.4	Enable and perform formal log reviews on a periodic basis.

Management Response/Action Plan

- 1.1 Access has been requested from Human Resources (REQ00158992) to receive employee terminations daily until which time the Fleet Manager will continue confirming with Fleet Liaisons that everyone who has access is still employed. The process may be streamlined further by December 2020.

Implementation date: November 15, 2020

Complexity rating: 1 - Routine

- 1.2 It was found that Fleet Management performed a random review process rather than a routine process to detect the improper use of manual PROKEE. As evidenced by the review conducted in December 2019, this current process is further enhanced by adding a routine review component and Fleet Management procedures have been updated.

- Operators: 7 accounts, 3 assigned to terminated/unknown individuals, 1 redundant account and 2 assigned to Fleet Manager. Since then, there are only 3 accounts: ADMIN, MOLINAF, and CBERRIZ, all other accounts have been deleted.
- ADMIN: is for FuelMaster remote access for system maintenance, MOLINAF is for the System Administrator, and CBERRIZ is for the Fleet Manager.
- Manual Issue Keys: 5 keys were encoded and 8 were not encoded. The 8 not-encoded keys have since been deactivated.
- Supervisor Keys: All but 1 Supervisor account have been disabled. This key is used to program vehicles in the system and is not programmed for transactions. This key is controlled and kept in a locked box in a secured office at all times.

Effective immediately, as part of this enhanced review, a request for all current Supervisors in custody of PROKEE(s) are to review, acknowledge and sign a custody agreement, accompanied with PROKEE fueling instructions. Lastly, the Office of Business Services Finance shall conduct an independent review of fuel dispensed for manual issued keys to identify possible theft of misuse of fuel as part of the monthly fuel reconciliation.

Implementation date: October 21, 2020

Complexity rating: 1 - Routine

- 1.3 Effective September 23, 2020, the system administrator role within FuelMaster was transitioned to the Office of Business Services IT Generalist II. The new system administrator has neither a user PIN assigned nor a PROKEE assigned. The system administrator also does not have the ability to program a PROKEE.

FuelMaster customer support is available to the system administrator on an as-needed basis. The Vehicle Services Fleet Manager access as system administrator has since been deactivated.

Implementation date: September 23, 2020

Complexity rating: 1 - Routine

- 1.4 It was found that that FuelMaster audit logs were not enabled. The system administrator has succeeded in enabling FuelMaster audit logs. FuelMaster has been contacted to provide feasibility of running an audit event log report and periodic reviews shall be performed by the system administrator, fleet manager, and OBS Finance. A review will be performed to identify any anomalies in system use and address accountability such as failed login attempts, odd/after hours logins, etc.

Implementation date: October 19, 2020

Complexity rating: 1 - Routine

2. Fuel Management

Fleet Management oversees the fuel management function. For the period audited (January 1, 2019, through February 29, 2020), Fleet Management recorded approximately \$362,000 of fuel revenue from its customers (University departments and outside vendors).

Fuel Procedures

We reviewed existing policies and procedures related to fuel management and noted that they provide guidance for dispensing fuel via PROKEE and analyzing fuel usage. However, we noted that the existing guidance does not fully encompass key controls pertaining to the following:

- Procurement of fuel (inter-departmental)
- Circumstances under which for each dispensing method is permitted (i.e., AIM or PROKEE)
- Process for other dispensing methods (i.e., AIM or supervisor key)
- User access to the fuel management system (i.e., granting, revoking, and periodic reviewing of access)
- Preventing and responding to fuel leaks

Policies and procedures together are used to explain, justify, and codify expected practice. They serve to provide guidelines for an activity and set boundaries for acceptable behavior. Thoughtful, comprehensive fuel management policies and procedures may decrease the likelihood of fuel theft, procurement inefficiencies, and safety hazards, especially when adhered to.

Fuel Reconciliations

The Fleet Manager reconciles fuel activity on a monthly basis. We selected a sample of one month's activity (January 2020) and noted that reconciliations for all four (4) fuel tanks were completed. The reconciliations reviewed reflected all fuel delivered for the month tested. Moreover, reconciliations reflected all FuelMaster transactions (fuel dispensed) in January 2020.

Notwithstanding the Fleet Manager's foregoing efforts, the existing reconciliation process lacks independent verification and accountability. The Fleet Manager is responsible for preparing the reconciliations, but the results are not independently reviewed for accuracy. Additionally, since the reconciliations are not signed or dated by the preparer, we are unable to determine who performed the reconciliation or when it was performed.

Fuel Usage

Each month, Fleet Management bills FIU departments and outside vendors (Aramark and FVS) for fuel used. For the month of February 2020, we selected a sample of six (6) customers and reviewed relevant support to determine if usage was proper and adequately documented. For the six (6) customers reviewed, fuel billed in the University's PantherSoft financial system agreed to the fuel dispensed in FuelMaster and the proper per-gallon amounts were billed. We reviewed two (2) vehicles each from five (5) of the six (6) customers tested (for a total of 10 vehicles), and noted that all vehicles were dispensed the correct type of fuel (i.e., gasoline or diesel).

However, for the 10 vehicles sampled above, we conducted an analysis of February 2020 fuel usage between fill-ups for reasonableness and noted four (4) instances in which the odometer reading was not recorded prior to fueling. In two (2) of these instances, the odometer reading was not applicable to the analysis because the fuel dispensed was for a transfer tank or for fuel dispensed and charged to FVS. However, for the remaining two (2) vehicles, we were unable to conduct a fuel analysis because the odometer readings were not recorded in FuelMaster. After notifying Fleet Management, the Fleet Manager subsequently obtained the trip logs, conducted the fuel analyses, and found no discrepancies.

If effective controls are not in place to prevent and detect fuel anomalies, then fuel theft, misuse, and inefficiencies may go undetected.

Recommendations

University Fleet Management should:	
2.1	Expand the written policies and procedures to provide guidance for relevant and substantive routines of the fuel management process identified as missing from the current framework.
2.2	Ensure that fuel reconciliations are signed and dated by the preparer and independently reviewed.
2.3	Review FuelMaster to identify why odometer readings are not being captured by the system.

Management Response/Action Plan

2.1 Existing standard operating procedures (“SOP”) have been expanded for the following:

- Fuel Procurement (inter-departmental): SOP-16 has since been expanded to address the procurement of fuel.
- Circumstances under which for each dispensing method is permitted (i.e., AIM or PROKEE): refer to SOP-16.
- Dispensing methods (i.e., AIM or supervisor key): Supervisor keys are not programmed to dispense fuel, refer to SOP-16.
- User access to the fuel management system (i.e., granting, revoking, and periodic reviewing of access): Effective immediately, a one-time request for all current Supervisors in custody of PROKEE(s) are to review, acknowledge and sign a PROKEE USER agreement, accompanied by fueling instructions, refer to SOP-16.
- Preventing and responding to fuel leaks: Procedures already have been in place by the third-party Vendor, FVS, refer to existing BAFO (September 18, 2015, page 86 and page 62 of the original offer) and FVS SOP-506, effective date June 25, 2019, revised annually.

Implementation date: October 30, 2020

Complexity rating: 1 - Routine

2.2 Monthly fuel reconciliations are being signed and dated by the preparer (Fleet Manager) and independently reviewed and signed off by OBS Finance.

Implementation date: November 15, 2020

Complexity rating: 1 - Routine

2.3 The current hardware and software used to manage automated fueling transactions used in University State vehicles uses an algorithm to calculate odometer readings. These readings are initially set at the time of installation and the odometer reading is added to the Fuel Management software.

The two (2) vehicles that failed to register odometer readings were rewired to correct a battery drain issue some vehicles were experiencing. This caused the odometer programming to default to analog mode which caused the system not to capture an odometer reading.

Generally, there will be a slight variation between the mileage shown on the vehicles odometer and the mileage showing on the report screen, due to the nature of the algorithm. FuelMaster offers a system upgrade, known as "dash odometer" which would collect the odometer data readings actually displayed at the vehicles

odometer. Fleet Management has reached out to FuelMaster to calculate the cost of this upgrade to assess feasibility at this time.

Implementation date: December 31, 2020

Complexity rating: 2 - Moderate

3. Preventive Maintenance of University Fleet

Per University Policy No. 540.005, *Acquisition, Assignment and Use of University Vehicles*, "All Florida International University owned vehicles are required to be serviced by FIU Vehicle Services [Fleet Management] third party provider as per a set maintenance schedule as posted on the Vehicle Services' website. Maintenance fees are based on market rates. All expenses associated with operation of the University Vehicle (i.e., maintenance, parking, insurance, license tag, etc.) will be covered by the department that owns the vehicle(s)."

We performed tests to determine whether internal controls and processes for contract oversight and departmental billing were adequate. Overall, our testing concluded that:

- Fleet Management properly monitored key performance indicators to evaluate the Vendor's performance against the contract;
- Fleet Management correctly calculated and disbursed payments to FVS; and
- The process for billing University departments for services provided is adequate.

We judgmentally selected a sample of 50 items (from the 627 vehicles and other equipment in the University fleet) for testing to ensure that vehicle inspections and preventive maintenance were being properly completed. During our audit, we noted the following:

- 22 instances in which vehicle inspections were not timely conducted at scheduled service intervals or were not thorough (technicians did not mark each item as reviewed on the inspection checklist; instead, they signed off the overall subsections).
- 11 instances in which preventive maintenance was not conducted timely. Management has subsequently performed maintenance for seven (7) of these vehicles, two (2) have been surplus, one (1) is pending to be brought in by the department, and one (1) is parked in Fleet Management awaiting the respective department's response, as to whether to make needed repairs or to surplus the vehicle.

Performing thorough inspections and timely preventive maintenance ensures the objectives of an effective maintenance program are met. The resulting benefits are extended vehicle life cycle, mechanically safe vehicles, and reduction of vehicle operating costs.

Recommendations

University Fleet Management should:	
3.1	Develop and implement protocols to ensure that First Vehicle Services is conducting timely and thorough inspections of all vehicles.

3.2	Develop and implement a process for monitoring the completion of scheduled preventive maintenance ensuring that they are timely performed.
-----	--

Management Response/Action Plan

3.1 Of the 22 instances in which vehicle inspections were not deemed thorough because the technicians did not mark each item as reviewed on the inspection checklist; instead, they signed off the overall subsections.

Upon review of the Preventive Maintenance vehicle inspection checklist confirmation process it was proven that the system does not allow technicians to close out the vehicle inspection process unless the checklist marked as "required" in the database are verified as confirmed. Effective immediately, the FVS General Manager has instructed the technicians that all relevant subsections must be verified rather than the current system minimum requirement of checking off the entire section.

Implementation date: October 27, 2020

Complexity rating: 1 - Routine

3.2 A process for monitoring the completion of scheduled preventative maintenance ("PM") was already in place. All fleet liaisons assigned to the vehicle receive an email notification of when PM is due. If a vehicle is not timely brought in for service, follow up notifications are sent by Fleet Management. Procedures will be further enhanced by escalating to the department head if the fleet liaison(s) fails to comply in a timely manner.

Implementation date: November 27, 2020

Complexity rating: 1 - Routine

4. Vehicle Trip Logs

University Policy No. 540.005, *Acquisition, Assignment and Use of University Vehicles*, requires that a Vehicle Trip Log be maintained for all University on-road automobiles, trucks, vans, and buses (except for vehicles which have been identified as exempt from this requirement). Specific information must be tracked and written in the log, including the:

- operator's name;
- amount of gallons of fuel dispensed;
- date and time of each trip (including the starting and ending mileage);
- purpose of the trip and/or destination; and
- supervisor's signature.

All departments with non-exempt vehicles are required to submit the original completed Trip Log to Fleet Management at the time of completion of the required preventive maintenance service. The Fleet Manager will verify that the log is properly completed, reflecting the required items listed above, including verification of the gas consumption versus the mileage used.

We examined two distinct samples of vehicle trip logs (17 for personal use of vehicles and 20 for completion of Vehicle Trip Logs), which are detailed below.

Personal Use of Vehicles

To determine if University vehicles are being used for non-business purposes, we identified a total of 17 motor vehicles either with excess mileage or low mileage for testing. We then requested the Vehicle Trip Logs for these vehicles and surveyed the departments to understand their use. For the 17 logs sampled, we noted:

- 15 vehicles were appropriately used for business purposes.
- Two (2) vehicles for which the Vehicle Trip Logs were incomplete or vague. Consequently, we were unable to conclude if the corresponding vehicles were used for personal purposes.

Completion of Vehicle Trip Logs

We selected a sample of 20 vehicles and requested the corresponding Vehicle Trip Logs to ensure that logs were properly completed and timely provided to Fleet Management for review. Moreover, we ensured that Motor Vehicle Record Checks⁴ are being conducted for University drivers.

⁴ Information provided by the Florida Department of Motor Vehicles: license status, violations and infractions, accidents, suspensions or revocations, expiration date, endorsements and violations.

We noted:

- 12 vehicles did not have a proper fuel analysis conducted by Fleet Management. This resulted from Fleet Management not having all relevant details on file (i.e., odometer reading or miles per gallon) necessary to conduct the analysis or simply not conducting the analysis at the time of preventive maintenance;
- 10 vehicles did not have Vehicle Trip Logs properly completed;
- 10 instances in which a Motor Vehicle Record Check was not conducted for drivers, five (5) of whom were police officers, including two (2) cases where the job description did not include “driving” as part of the employee’s job function. Human Resources has subsequently conducted five (5) of these checks. Four (4) checks are awaiting completion and one (1) employee has since retired;
- Five (5) vehicles did not have their vehicle trip logs signed by the corresponding supervisor; and
- One (1) vehicle did not provide an updated vehicle trip log to Fleet Management at the time of preventive maintenance.

Properly completed and reviewed Vehicle Trip Logs provide good internal controls to reduce the risks of University vehicles being used for unauthorized purposes and improper dispensing of fuel. In addition, periodically performing Motor Vehicle Record Checks and following through on the results ensure negligent drivers do not operate University vehicles.

Recommendations

University Fleet Management should:	
4.1	Ensure that Vehicle Trip Logs are properly completed when reviewing each log at preventive maintenance service.
4.2	Timely complete fuel analyses of University vehicles.

Human Resources should:	
4.3	Ensure that the job descriptions for the two (2) identified individuals include driving as a job function, and that a Motor Vehicle Record check is conducted for the identified employees.

Management Response/Action Plan

- 4.1 All vehicles trip logs noted in the finding will be obtained, reviewed, and properly completed. Additionally, stickers are being placed on vehicles to remind operators of their responsibility to complete trip logs.

Implementation date: December 31, 2020

Complexity rating: 2 - Moderate

- 4.2 We will ensure that current procedures in place are followed. This entails email reminders to all Fleet Liaisons of their responsibilities to submit timely Vehicle Trip Logs for vehicles in their respective areas. This email communication by the Fleet Manager has also been programmed to automatically remind Fleet Liaisons on a monthly basis. Once trip logs are received, fuel analyses will be timely completed and evidenced on the trip logs.

Implementation date: December 31, 2020

Complexity rating: 2 - Moderate

- 4.3 Human Resources has reviewed the position descriptions of police officers and will make that all have the following statement “performs patrol assignments in a Department vehicle”. We have also reviewed the two other cases identified and will make sure that it includes a duty related to vehicle operation in order to be in line with the pre-employment and position requirements. The initiation of the driver record check has been initiated for both cases identified. One has already been completed and uploaded.

Implementation date: November 30, 2020

Complexity rating: 1 - Routine

5. Training

Continuous training ensures that technicians maintain and improve their professional competence. As part of our testing, we ensured that technicians provided by FVS met the agreed upon training criteria.

In response to the Fleet Services Invitation to Negotiate, FVS indicated that they are committed to service excellence and that every employee is provided a minimum of 40 hours of training to advance their skill level.

To test FVS' compliance with the negotiated terms, we selected a sample of three (3) of seven (7) FVS technicians onsite to ensure that 40 hours of training were obtained in 2019. We noted that all employees sampled received job-related training. However, we were unable to determine if two of the three employees completed 40 hours of training because the support provided did not include the dates or hours that trainings were completed. The third employee reviewed did not complete the 40 hours of training.

Timely, appropriate, and sufficient training completed by technicians contributes to a competent crew and expert service. Ongoing training should improve the quality of mechanical services performed which can impact the safety and sustainability of the University's fleet.

Recommendation

University Fleet Management should:	
5.1	Monitor First Vehicle Services to ensure compliance with training requirements. Measures should be taken if the Vendor is deemed to be non-compliant.

Management Response/Action Plan

5.1 The FVS General Manager has developed a process to document actual hours (40 hours) spent on training. This will be readily available to the Fleet Manager on the premises.

Implementation date: December 31, 2020

Complexity rating: 2 - Moderate

6. Safety Signage

OSHA Standard No. 1910.145, *Specifications for Accident Prevention Signs and Tags*, lists specifications for the design, application, and use of signs or symbols that indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage. OSHA states that signs should contain sufficient information to be easily understood. OSHA Standard No. 1910.145 classifies signs according to use:

- Danger signs (red, black, white): Used to indicate immediate danger and that special precautions are necessary.
- Caution signs (yellow, black, white): Used to warn against potential hazards or to caution against unsafe practices.
- Safety instruction signs (green, white, black): Used where there is need for general instructions and suggestions relative to safety measures.

We conducted a tour of the MMC facility and fuel site to evaluate the existing safety measures and to ensure that all hazards were identified in accordance to OSHA Standard No. 1910.145. We observed the following good practices:

- There is signage that restricts access to the shop, limiting it to authorized personnel.
- There is a designated safety instruction area inside the office, which displays OSHA and Department of Labor safety posters. This area also includes whom to contact in the event of an emergency spill, as well as safety data sheets.
- The shop floor appeared to be free of any spills and workspace was organized.
- Fire extinguishers are placed throughout the shop and are adequately identified.
- A Lock Out, Tag Out system is in place.
- High voltage areas within the shop were properly identified.

However, the following objects were labeled but did not contain easily readable and concise safety signage, which indicates immediate danger, potential hazards, and safety instruction, as required by OSHA Standard No. 1910.145:

- Waste engine oil
- Small flammable liquids cabinet
- Waste coolant
- Welding machine
- Electrical panel by emergency fuel stop switch
- Waste oil tank
- First-aid kit
- Eyewash station

The Invitation to Negotiate states that the Vendor is required to comply with the occupational safety and health standards and all rules, regulations, and orders issued pursuant to OSHA while on the University's premises. Moreover, not adequately identifying hazardous areas may result in workplace accidents, injuries, and fines, and

inadequate response to incidents. Subsequent to this discovery, Management took corrective action and addressed the matter through the implementation of the noted management response.

Recommendation

University Fleet Management should:	
6.1	Work with First Vehicle Services to ensure that OSHA compliant safety signage is displayed, where deemed necessary, and in compliance with OSHA Standard No. 1910.145.

Management Response/Action Plan

6.1 Subsequent to this discovery, Fleet Management took corrective action and installed required signage as required by OSHA Standard No. 1910.145 on the premises. FVS Management is scheduled for the next safety audit for the end of January 2021, with an emphasis on OSHA Standard No. 1910.145.

Implementation date: October 02, 2020

Complexity rating: 1 - Routine

7. Accountable Property

Florida Board of Governors (BOG) Regulation 9.002 states, "All tangible personal property with a value or cost of \$5,000 or more and having a projected useful life of one year or more shall be recorded in the financial system as property for inventory purposes."

FIU Asset Management provided us with a listing of the University's Fleet. As of February 20, 2020, the University had 530 capital assets (items costing under \$5,000 would not be included), with associated costs totaling \$10,954,437. We noted that all items were observed by Asset Management within the last year.

We compared the Asset Management listing to the Fleet Management listing by matching unit numbers, property tag numbers, and/or serial numbers. We noted that Fleet Management did not account for 30 capital assets, with associated costs totaling \$602,791.

Aside from the observation noted above, Fleet Management did not provide a tag number and/or cost information for 130 items, therefore, we were unable to determine with certainty if any of these items should be recorded on the Asset Management listing. Notwithstanding the foregoing determination, two (2) of these items were determined to have costed over \$5,000 and were not recorded on Asset Management's listing. In addition, it appears that at least 50% of remaining items, when compared to similar items, would have costed over \$5,000 and therefore, should have been recorded by Asset Management.

Additionally, we selected a random sample of 25 University-owned vehicles parked throughout MMC to determine the completeness of Fleet Management's and Asset Management's listing. We noted that all vehicles tested were included in the Fleet Management master listing and that pertinent details were correct. However, we noted:

- One (1) vehicle whose unit number was different than the unit number listed in the Asset Management listing.
- One (1) vehicle that was not recorded by Asset Management (included in the 130 instances noted above).

Inadequate tracking of property may result in theft or misuse of items without detection. Moreover, failing to account for such items may result in vehicles not receiving timely maintenance and safety inspections.

Recommendation

University Fleet Management should:	
7.1	Work with Asset Management to ensure that all vehicles are appropriately captured within both lists.

Management Response/Action Plan

- 7.1 Fleet Management will work with Asset Management to continue to ensure that all vehicles are appropriately captured within both lists.

Implementation date: January 31, 2021

Complexity rating: 3 - Complex

APPENDIX I – COMPLEXITY RATINGS LEGEND

Legend: Complexity of Corrective Action	
1	Routine: Corrective action is believed to be uncomplicated, requiring modest adjustment to a process or practice.
2	Moderate: Corrective action is believed to be more than routine. Actions involved are more than normal and might involve the development of policies and procedures.
3	Complex: Corrective action is believed to be intricate. The solution might require an involved, complicated, and interconnected process stretching across multiple units and/or functions; may necessitate building new infrastructures or materially modifying existing ones.
4	Exceptional: Corrective action is believed to be complex, as well as having extraordinary budgetary and operational challenges.

APPENDIX II – OIA CONTACT AND STAFF ACKNOWLEDGMENT

OIA contact:

Joan Lieuw 305-348-2107 or jlieuw@fiu.edu

Contributors to the reports:

In addition to the contact named above, the following staff contributed to this audit in the designated roles:

Manuel Sanchez (supervisor and reviewer); and
Natalie San Martin (auditor in-charge);

Definition of Internal Auditing

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.