FUEL INVENTORY CONTROLS (#25-20)

Terry Follmer, Chief Audit Executive

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Executive Summary

The fiscal year 2025 & 2026 Audit Plans approved by the CapMetro Board of Directors included an assurance review of fuel inventory to ensure adequate controls, compliance with contracts, policies, procedures and regulatory requirements. The audit results including the objective, scope and conclusion are as follows.

Background

CapMetro spends approximately $12.9 million a year (FY 2025) on fuel and uses a variety of systems to purchase, receive, dispense and account for fuel. CapMetro has 21 tanks located across 4 locations that contain either regular diesel, red diesel (for trains), or unleaded fuels. Contracts are in place with two vendors (Colonial Oil Industries, Inc. and Petroleum Traders Corporation). Pricing is based upon the OPIS price (www.opis.com) on the day the fuel is received and shipments are FOB destination, so CapMetro does not take ownership or have risk of loss until the fuel is delivered. The fuel is ordered using emails to the vendors, and when the fuel is delivered both a Requisition/PO and receipt are entered into the Oracle system. All 21 tanks have the Veeder Root and Gasboy systems installed which feeds into other systems as follows:

- **Veeder Root** (www.veeder.com) - A tank measurement system which records fuel received, tank balances, and temperature of the fuel which can change the volume by several percentage points. Veeder Root sends fuel balances to the EKOS system and a user interface allows personnel to monitor each tank's balance remotely to determine the timing of next fuel order.
- **Gasboy** (www.Gasboy.com) - A dispensing and validation system that is interfaced to the EKOS fuel database and used at each tank to dispense fuel. The ability to dispense fuel as well as which vehicles can receive fuel is controlled by the Gasboy system through both user and vehicle identification. Fuel consumption is recorded in Gasboy by vehicle, user, etc. and data is saved in the EKOS system.
- **EKOS** (www.info.myekos.com) - A cloud-based database and analysis tool that consolidates data from all 21 fuel tanks and receives data from Veeder Root and Gasboy. It provides data on fuel dispensed by vehicle to the Hexagon EAM system - which is critical data for vehicle maintenance and performance when measuring miles per gallon and other key metrics.
- **Hexagon** (www.hexagon.com) - The Enterprise Asset Management (EAM) system is used to manage fixed assets (e.g., vehicles, facilities, HVAC, etc.) and spare parts inventory for vehicles and facilities related preventive and unplanned maintenance as recommended by the original equipment manufacturer. The EAM system also receives fuel and fluids (e.g., oils) dispensed and enables better, more strategic decisions that extend the asset life cycle, increase safety, and enable cost efficiencies. At month end, an EAM report is created and provided to the Accounting Department which is used to record the consumption of fuel for the month.
- **Oracle** (https://www.oracle.com/) - CapMetro's Enterprise Resource Planning (ERP) and accounting system is used to create fuel Requisitions/POs, process fuel payments, and record the monthly consumption of fuel using a Hexagon EAM report.

Oracle accounting records are updated real-time for procurement activity (i.e. fuel orders and receipts) as entered by Operations. However, the Oracle accounting records are only updated once a month via manual journal entry for fuel consumed using a Hexagon EAM report sent by an Operations Analyst to the Accounting Department at month end. Additionally, the Oracle general ledger only has one fuel inventory asset account (Fuel Inventory 1030201), and one inventory fuel expense account (Fuel Expense 5040111).

CapMetro's fuel is stored in 21 different tanks located across four locations (Appendix A) as follows:

Location	Tank	Product	Capacity
2910 East Fifth St, Austin, TX 78702	Diesel Tank 1	ULSD #2	20,000
	Diesel Tank 2	Clear Diesel	20,000
	Diesel Tank 3	Clear Diesel	20,000
	Diesel Tank 4	Clear Diesel	20,000
	Diesel Tank 5	Clear Diesel	20,000
	Diesel Tank 6	Clear Diesel	20,000
	E15	E15 Unleaded	10,000
	Diesel Separator	CARB #2 ULS	1,000
	Unleaded	CONV 87	10,000
509 Thompson Ln, Austin, TX 78742 Most	Diesel	ULSD #2	20,000
	Unleaded	CONV 87	20,000
817 W Howard Lane Austin, TX 78753	Unleaded	CONV 87	6,000
9315 McNeil Rd, Austin, TX 78758	Tank 1 Unleaded	CONV 87	20,000
	Tank 2 Diesel	ULSD #2	20,000
	Tank 3 Diesel	ULSD #2	20,000
	Tank 4 Diesel	ULSD #2	20,000
	Tank 5 Diesel	ULSD #2	20,000
	Tank 6 Diesel	ULSD #2	20,000
	Tank 7 Diesel	ULSD #2	20,000
9315 Rail	Dyed Diesel 1	Dyed Diesel	3,500
	Dyed Diesel 2	Dyed Diesel	4,000

Audit Objective & Scope

The objective of the fuel controls audit was to evaluate fuel records and internal controls related to the completeness and accuracy of the fuel consumption records, as well as the procure to payment controls. The scope included a review of FY2025 fuel records in the various systems and related procure to pay records in the Oracle system, data analytics on the completeness and accuracy of fuel data, and a review of the policies and procedures that are used to manage the lifecycle of fuel records updates in the various systems. We obtained and tested fuel inventory data from various systems for the period 10/01/2024 to 09/30/2025.

Opinion

In our opinion, internal controls are generally in place and properly functioning over fuel management, consumption and reporting. We identified some areas where internal controls could be further strengthened as follows:

Issues & Risk	Risk Rating	Status	Target Completion Date
1. *RECONCILE EKOS TO HEXAGON EAM*	MEDIUM	Open	10-1-2026
2. *FUEL CONSUMPTION RECORDED TO GENERAL LEDGER*	LOW	Open	10-1-2026
3. *FUEL - UPDATE POLICIES & SOPS*	MEDIUM	Open	10-1-2026
4. *FUEL SYSTEM ISSUES AT NORTH BASE DEMAND RESPONSE*	MEDIUM	Open	5-30-2026

More details regarding the issues/risks and recommendations can be found below in the detailed audit report.

This audit was conducted in accordance with the US Government Accountability Office's Generally Accepted Government Auditing Standards (GAGAS) and the Institute of Internal Auditor's Global Internal Audit Standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The audit was conducted by the following staff members in the CapMetro Internal Audit Department:

- Mazen Shehadeh, Senior Auditor III
- Valerie Carson, Senior Auditor II
- Terry Follmer, CAE

Recommendations to strengthen controls and improve accountability were provided to management. Management agrees with the internal audit recommendations and has provided target completion dates which are included in the detailed audit report below. A follow-up audit is performed semi-annually (i.e., May and November) to ensure management action plans for all issued audit reports are completed in a timely manner.

We appreciate the cooperation and assistance provided to us throughout this audit.

Risk Rating Definitions

Ratings Definitions- Auditors used professional judgment and rated the audit findings identified in this report. The issue ratings identified for each finding were determined based on the degree of risk or effect of the findings in relation to the audit objective(s).

Rating	Issues identified	Action required
HIGH	Issues identified present risks or effects that if not addressed could critically affect the audited entity's ability to effectively administer the program(s)/function(s) audited.	Immediate action is required to address the noted concern(s) and reduce risks to the audited entity.
MEDIUM	Issues identified present risks or effects that if not addressed could substantially affect the audited entity's ability to effectively administer the program(s)/function(s) audited.	Prompt action is essential to address the noted concern(s) and reduce risks to the audited entity.
LOW	Issues identified present risks or effects that if not addressed could moderately affect the audited entity's ability to effectively administer the program(s)/function(s) audited.	Action is needed to address the noted concern(s) and reduce risks to a more desirable level.

Ratings methodology- In determining the ratings of audit findings, auditors considered factors such as:

1. Financial impact
2. Potential failure to meet program/function objectives
3. Noncompliance with state statute(s), rules, regulations, and other requirements or criteria
4. The inadequacy of the design and/or operating effectiveness of internal controls
5. Evidence of potential fraud, waste, or abuse
6. Significant control environment issues
7. Little to no corrective action for issues previously identified

Auditors will also identify and consider other factors when appropriate.

Audit Report

Issues & Risk	*Risk Rating*	*Recommendation*	*Management Action Plan*
	MEDIUM		
1. RECONCILE EKOS TO HEXAGON EAM EKOS is the cloud-based fuel database that consolidates all data interfaced from the Veeder Root and Gasboy systems. Through an automatic interface, EKOS data is sent to Hexagon EAM almost real-time. We noted that a QA Specialist II makes manual adjustments to the EKOS database and a different position called Business System Analyst II makes manual adjustments to fuel data in the Hexagon EAM system. We reviewed the controls over these manual data corrections and noted the following weaknesses: • There is no independent review or reporting of the adjustments made to the EKOS and EAM systems. • The reason for the adjustments is not documented and reported to Accounting and within Operations. • There is no process to reconcile EKOS data (e.g., monthly consumption) to EAM, and Internal Audit was unable to reconcile or explain differences. The lack of controls over adjustments and missing reconciliations increases the risk that error or irregularities in the fuel data may not be discovered on a timely basis. Note: Historically the Accounting Department has used the monthly Hexagon EAM report to record fuel consumption as a monthly expense.		The Controller and Senior Director of Bus Maintenance should consider the following internal control improvements over fuel-related systems: a) The reasons why manual data adjustments/corrections are made to the EKOS and EAM systems will be documented by the Analyst making the adjustment. b) If the adjustment is greater than a defined tolerance (i.e. gallons and/or %), the adjustment will be approved by management and reported to the Accounting Department. c) The EAM fuel consumption will be reconciled at month end to the EKOS system, and any differences will be recorded with a documented explanation.	Management agrees and has developed the action plan below. **Target Completion Date**: The Accounting Department will review the future monthly reconciliations between EKOS and EAM performed by Operations. Operations will begin the reconciliation between EKOS and EAM fuel systems effective October 1, 2026.

Issues & Risk	*Risk Rating*	*Recommendation*	*Management Action Plan*
	LOW		
2. FUEL CONSUMPTION RECORDED TO GENERAL LEDGER Historically, the Accounting Department has used a monthly EAM report from an Operations Analyst to book the monthly consumption, and in several months during 2025 the Fuel asset account on the Balance Sheet went negative because fuel receipts were not recorded timely by Operations. We reviewed the controls over fuel General Ledger (G/L) accounts and noted the accuracy of the consumption (fuel expense) and ending balance asset account could be improved by the following changes: • Quantities on hand at month end and listed in the Balance Sheet as an asset should be based upon the Veeder Root balances for each of the 21 fuel tanks. • Fuel expense (consumption) should be calculated using the beginning tank balances listed in Veeder Root, and adding the fuel receipts by tank, and subtracting the ending balance per tank listed in Veeder Root. • Educating Operations on the importance of entering all fuel requisitions/receipts timely into Oracle. • If Accounting becomes aware of any receipts not entered (e.g., Invoice received but Requisition/Receipt not entered into Oracle yet), they should create an accrual at month end for the missing receipt amount and automatically reverse the adjustment the following month. • Rail Fuel (red diesel) has been historically expensed as received with no ending fuel asset balance, however, adopting like-kind accounting treatment as listed above would improve financial statement accuracy. The accuracy of financial reports can be improved through the recommendations listed in finding #1 above together with suggestions listed above in finding #2.		The Controller, Senior Director of Bus Maintenance, and Director of DR Maintenance, and VP of Rail Operations should consider the following: a) The Accounting Department will obtain online access through Operations to the Veeder Root fuel levels for all 21 tanks to record the month-end quantities used to calculate the month-end fuel balance on the Balance Sheet. b) Controller will calculate and record Fuel expense (consumption) using the beginning tank balances listed in Veeder Root, and adding the fuel receipts by tank, and subtracting the ending balance per tank listed in Veeder Root. c) Responsible management will work together to ensure staff understands the importance of entering all monthly fuel requisitions/receipts timely into the Oracle system. d) The Controller will put in place a process to accrue for any known missing fuel requisitions/receipts. e) Because the Accounting Department's reconciliation of Fuel Consumed will be the most accurate with the changes above, the Analyst in Operations should reconcile the Hexagon EAM and EKOS consumption balances to the consumption quantity recorded by Accounting, and any differences over a defined amount (e.g., gallons and/or %) should be investigated and documented. f) The Controller will begin applying like-kind accounting treatment for Rail Fuel (red diesel) as listed in recommendation 2a & 2b above.	Management agrees and has developed the action plan below. **Target Completion Date**: Effective 10/1/2026, the Accounting Department will implement recommendations 2a, b, d, e, and f. For recommendation 2c) Operations will ensure expectations to enter in fuel Requisitions/Receipts timely into Oracle will be communicated and monitored. Target completion date on 2c) is 10/1/2026

Issues & Risk	*Risk Rating*	*Recommendation*	*Management Action Plan*
	MEDIUM		
3. FUEL - UPDATE POLICIES & SOPs We noted that the Director of DR Maintenance who has overall fuel supply responsibility for all CapMetro fuel has documented "how to" procedures but formal policies and SOPs are either missing or need to be updated by Operations or Accounting. Internal controls could be strengthened by having the Operations and Accounting Department develop Policy and SOPs that cover controls in the following business processes: procurement; receipt; consumption; reconciliations between systems and variance levels that must be reported and approved; manual adjustments to EKOS and Hexagon EAM; and accounting entries.		The COO and CFO should consider having their teams develop Policies and SOPs that cover the controls over the following fuel business processes: • Procurement; • Fuel receiving; • Access and Consumption of Fuel; • Reconciliations between systems (e.g. EAM and EKOS) and variance levels that must be reported and approved; • Manual adjustments to EKOS and Hexagon EAM systems and adjustment levels that must be reported and approved by management; • Accounting entries. • Update Fuel policies and SOP used by service partners and CapMetro employees to report systems not working (e.g. Gasboy and/or Veeder Root) via: Open a ServiceNow Ticket for those who have a network account; email capmetro@service-now.com ; or call CapMetro IT Service Desk at (512) 389-7570.	Management agrees and has developed the action plan below. **Target Completion Date**: The Accounting Department believes this can be achieved with the help of Operations by 10/1/2026.

Issues & Risk	*Risk Rating*	*Recommendation*	*Management Action Plan*
	MEDIUM		
4.FUEL SYSTEM ISSUES AT NORTH BASE DEMAND RESPONSE Internal Audit noted that the North Base Demand Response (817 Howard Lane) location was the last location to receive the Gasboy system. Discussions with management and personnel disclosed that the Gasboy to EKOS database feed and related balances periodically have unexplained errors. Management and Internal Audit were unable to isolate root cause or explain why either transactions are missed or erroneously recorded by the systems. This situation requires help from the IT Department and engagement from possibly the vendors of the Gasboy and EKOS systems.		The CIO, CFO and COO should consider putting a task team together to formally document the fuel systems issues at North Base Demand Response and engage the Gasboy and/or EKOS companies to assist in improving the system recordkeeping.	Management agrees and has developed the action plan below. **Target Completion Date**: Operations is exploring the needed hardware to operationalize Gasboy at North Base DR, and will define a course of action by May 30, 2026.

Appendices

Appendix A: Diesel and Unleaded Fuel Balances - March 3, 2026

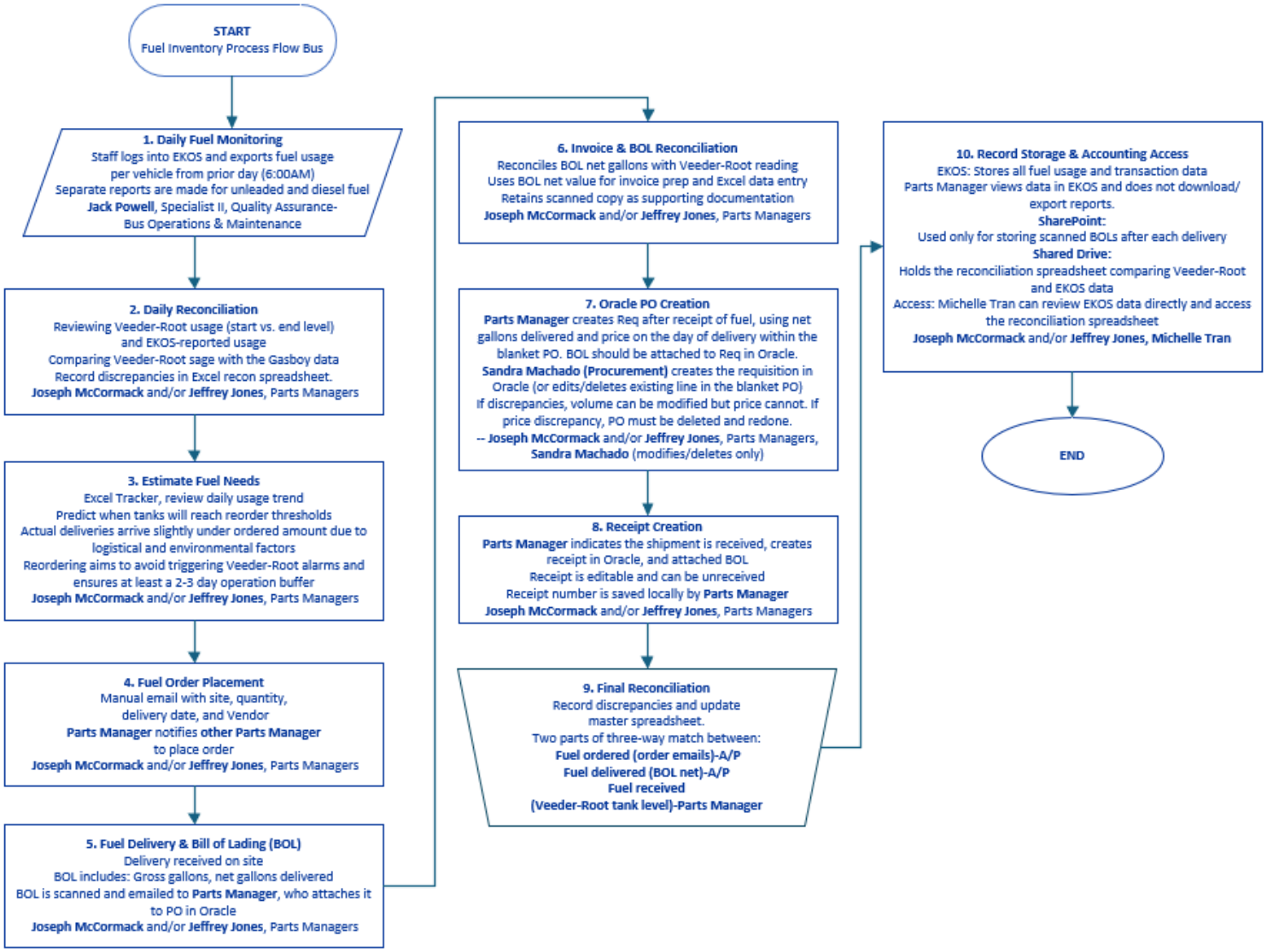
Diesel and Unleaded Fuel as of 03/03/2026:

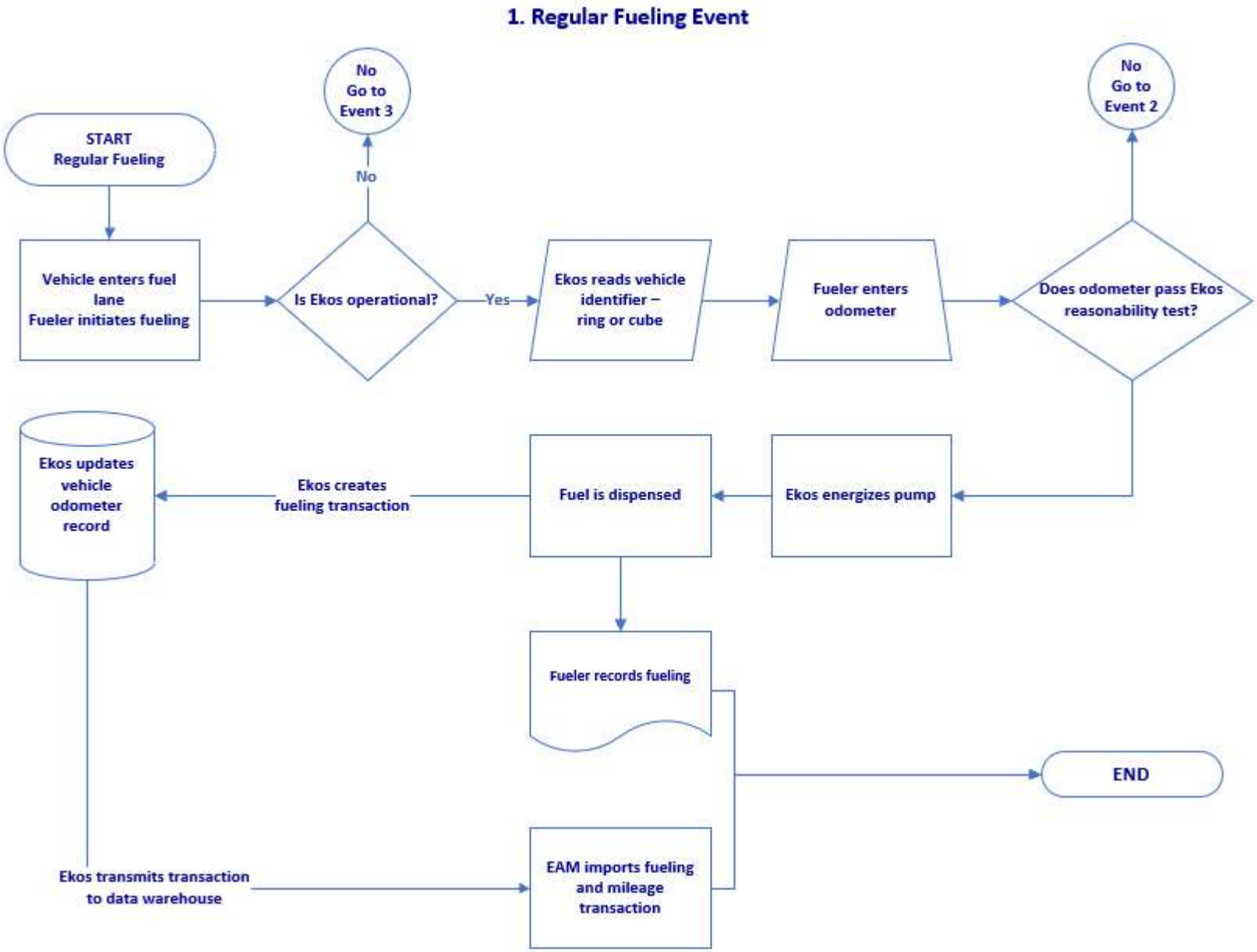
Location	Item	Product	Volume %	Gallons	Capacity	Last Reading	Inventory Reconciliation
2910 East Fifth Street, Austin, TX 78702	Diesel Tank 1	ULSD #2	59%	11,846	20,000	03/02/26 14:13	Enrolled [1]
	Diesel Tank 2	Clear Diesel	65%	12,965	20,000	03/02/26 14:13	Enrolled
	Diesel Tank 3	Clear Diesel	56%	11,190	20,000	12/20/25 22:16	Enrolled
	Diesel Tank 4	Clear Diesel	58%	11,513	20,000	03/02/26 14:13	Enrolled
	Diesel Tank 5	Clear Diesel	51%	10,122	20,000	03/02/26 14:13	Enrolled
	Diesel Tank 6	Clear Diesel	48%	9,690	20,000	30/02/26 14:13	Enrolled
	E15	E15 Unleaded	0%	-	10,000	-	Enrolled [2]
	Diesel Separator	CARB #2 ULS	36%	357	1,000	03/02/26 14:13	Enrolled
	Unleaded	CONV 87	40%	4,036	10,000	03/02/26 14:13	Enrolled
509 Thompson Lane, Austin, TX 78742 Most	Diesel	ULSD #2	39%	7,833	20,000	03/02/26 23:42 PM	Enrolled
	Unleaded	CONV 87	47%	9,477	20,000	03/02/26 23:42 PM	Enrolled
817 W Howard Lane, Austin, TX 78753	Unleaded	CONV 87	37%	2,235	6,000	03/02/26 23:04 PM	No [3]
9315 McNeil Road, Austin, TX 78758	Tank 1 Unleaded	CONV 87	46%	9,289	20,000	03/02/26 23:10 PM	Enrolled
	Tank 2 Diesel	ULSD #2	66%	13,203	20,000	03/02/26 23:10 PM	Enrolled
	Tank 3 Diesel	ULSD #2	66%	13,278	20,000	03/02/26 23:10 PM	Enrolled
	Tank 4 Diesel	ULSD #2	51%	10,114	20,000	03/02/26 23:10 PM	Enrolled
	Tank 5 Diesel	ULSD #2	50%	10,015	20,000	03/02/26 23:10 PM	Enrolled
	Tank 6 Diesel	ULSD #2	29%	5,877	20,000	03/02/26 23:10 PM	Enrolled
	Tank 7 Diesel	ULSD #2	35%	6,924	20,000	03/02/26 23:10 PM	Enrolled
9315 Rail	Dyed Diesel 1	Dyed Diesel	55%	1,926	3,500	02/09/26 12:08	No [3]
	Dyed Diesel 2	Dyed Diesel	39%	1,544	4,000	02/09/26 12:08	No [3]

1 - Enrolling a tank is part of the automatic reconciliation process and is not a regulatory requirement. Only manual reconciliations are required, which are currently performed.
2 - The E15 Unleaded tank at 2910 is not used.
3 - Gasboy fuel hardware installations are still in process at 817 and 9315 Rail.

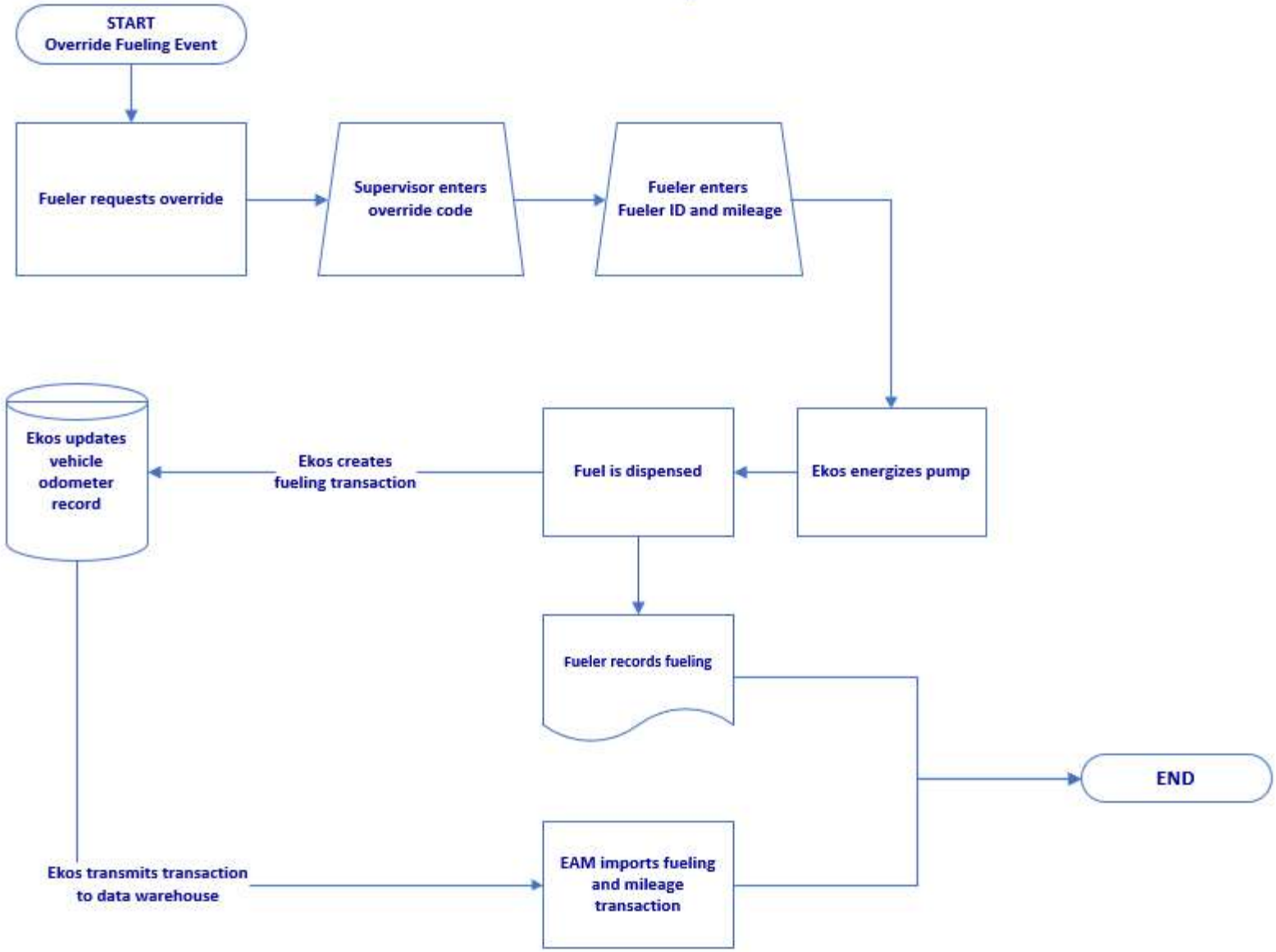
Appendix B: Bus Fuel Inventory Process Flowchart

Fuel Inventory Process Flow Bus

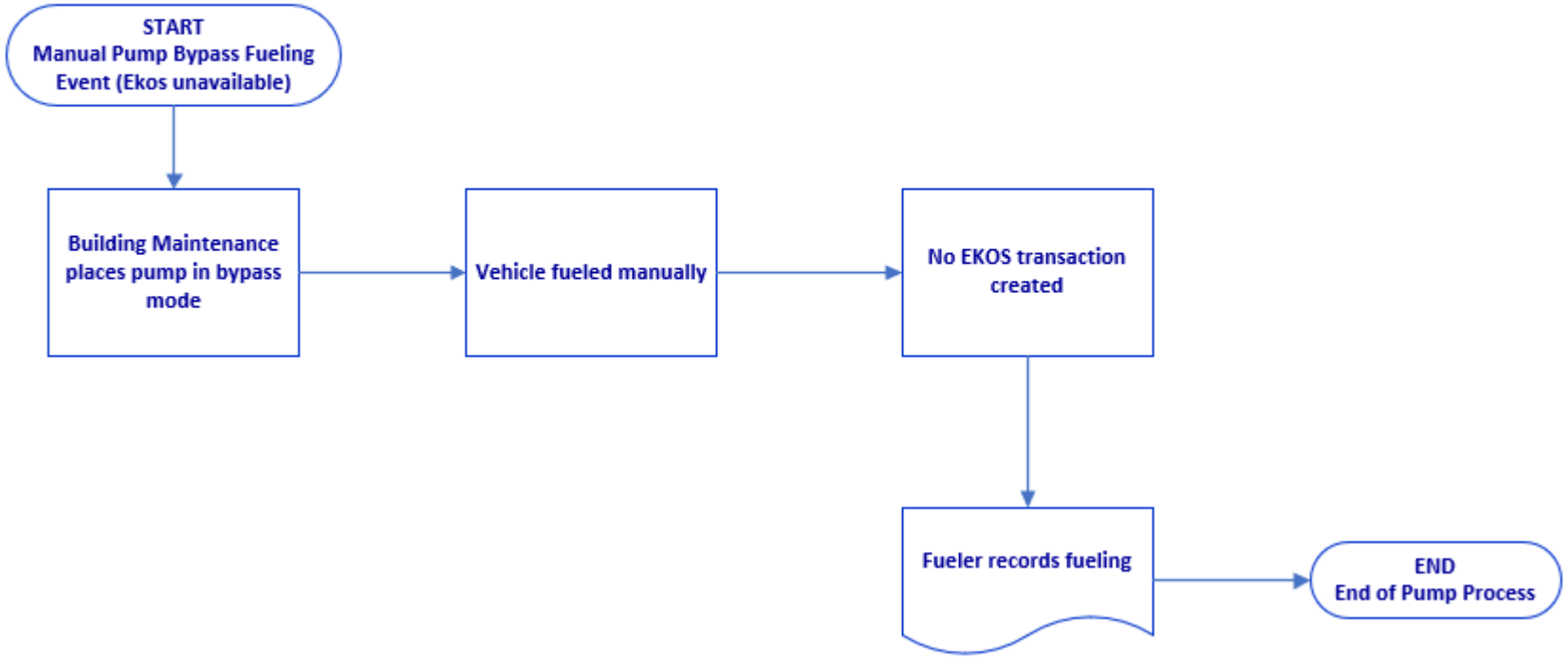


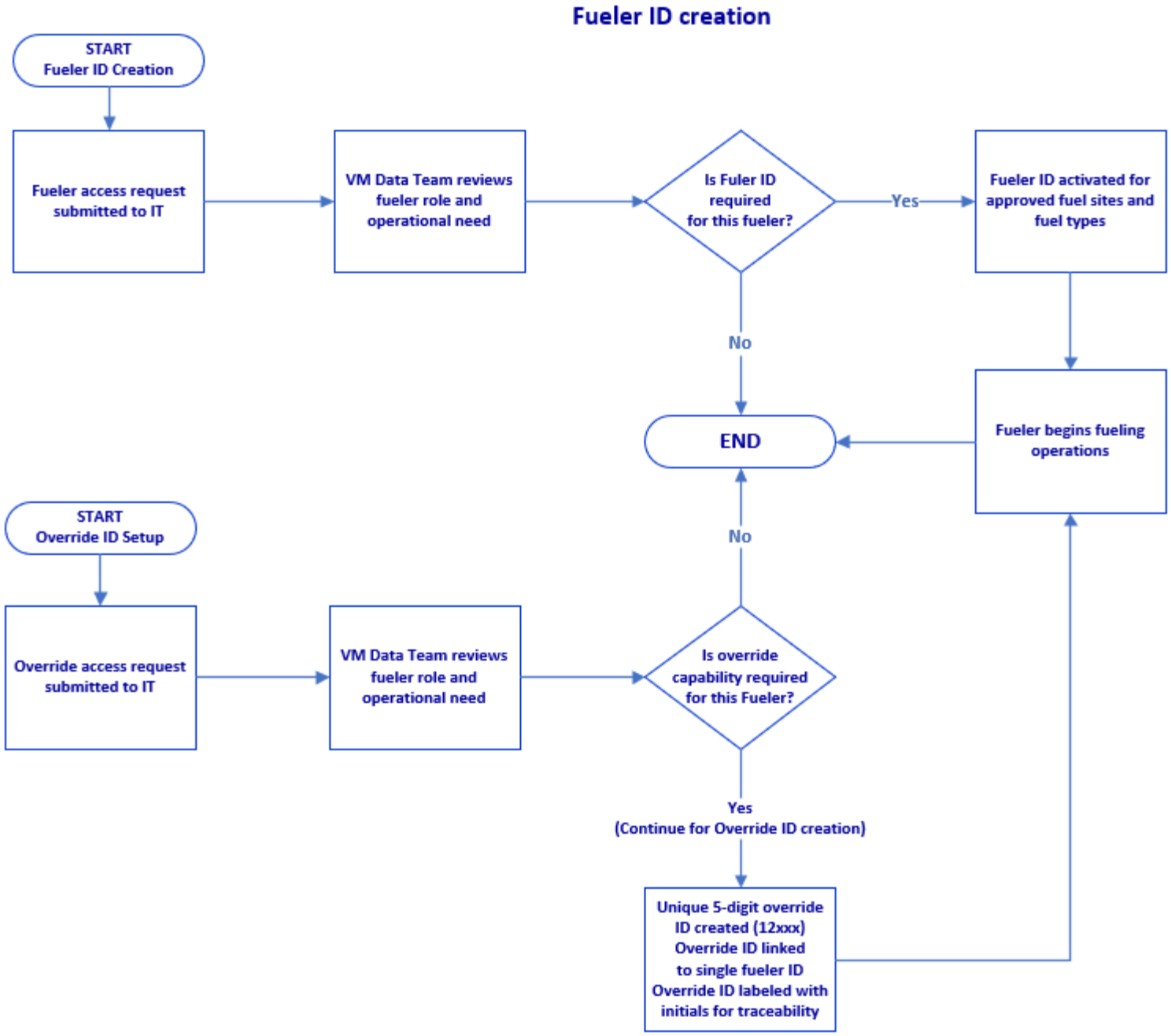

1. Regular Fueling Event
START
Regular Fueling
Vehicle enters fuel lane
Fueler initiates fueling
Is Ekos operational?
No
No
Go to
Event 3
Yes
Ekos reads vehicle identifier – ring or cube
Fueler enters odometer
Does odometer pass Ekos reasonability test?
No
Go to
Event 2
Ekos energizes pump
Fuel is dispensed
Ekos creates fueling transaction
Ekos updates vehicle odometer record
Fueler records fueling
END
Ekos transmits transaction to data warehouse
EAM imports fueling and mileage transaction

2. Override Fueling Event

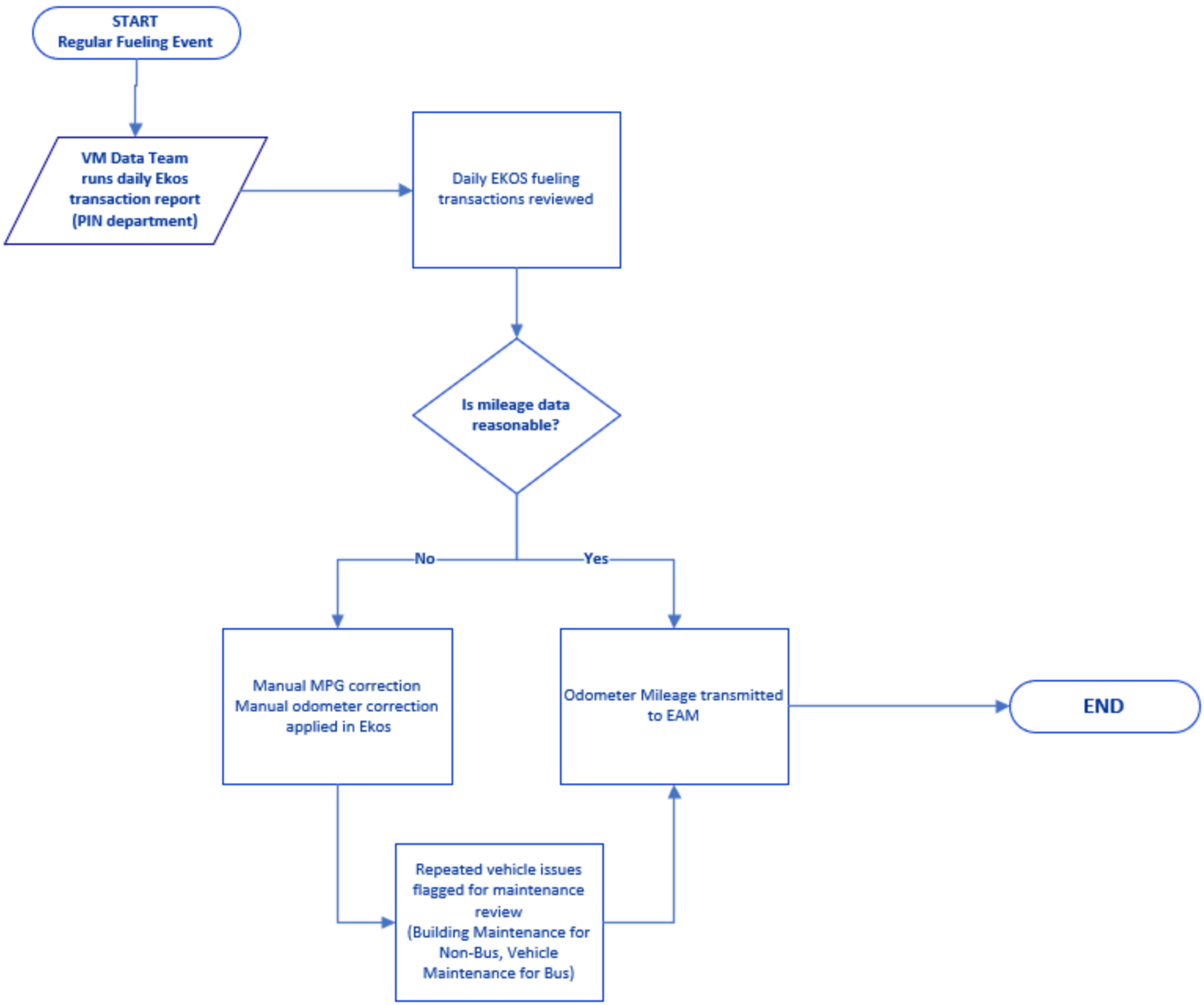


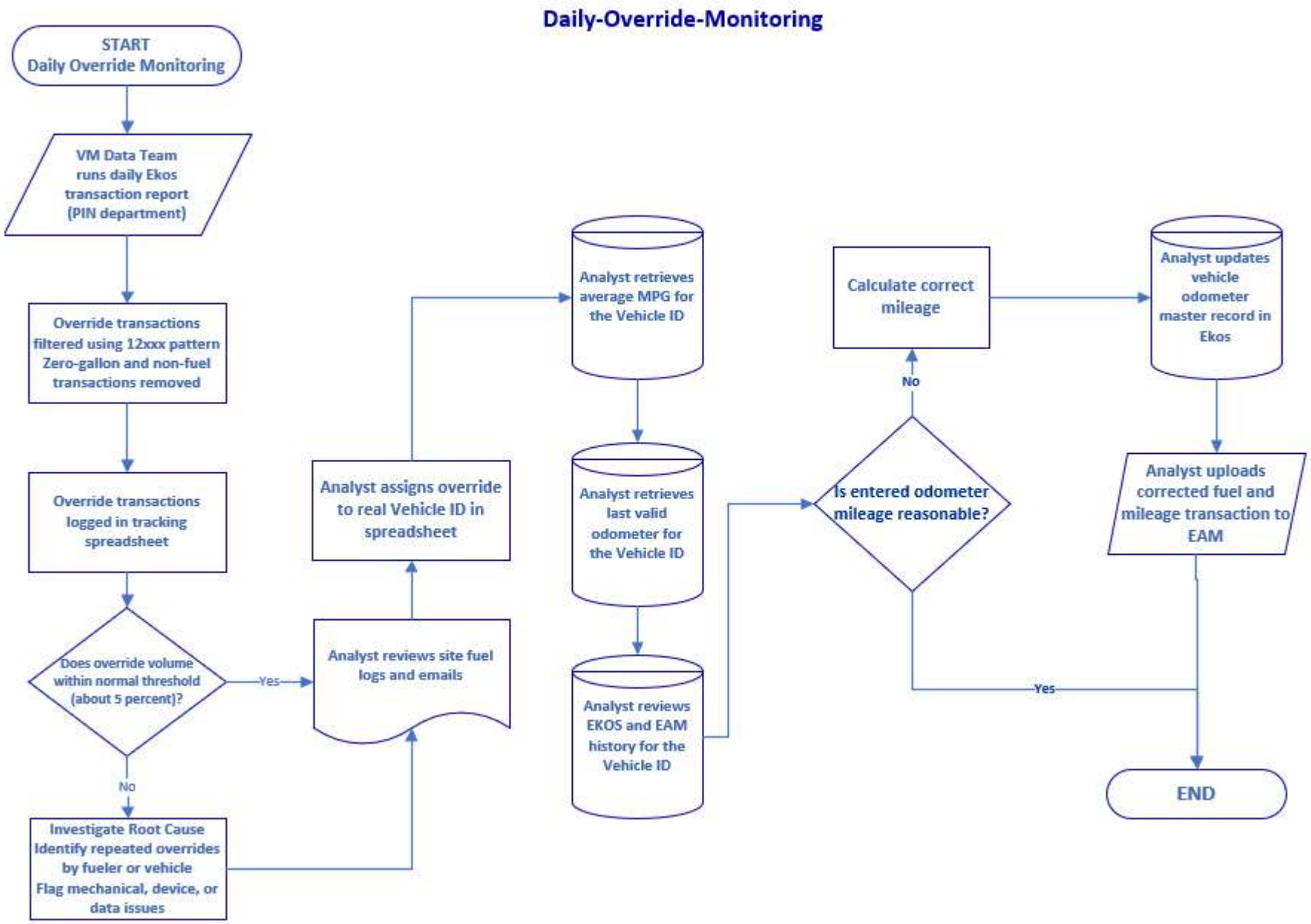
3. Manual Pump Bypass Fueling Event




Fueler ID creation
START
Fueler ID Creation
Fueler access request submitted to IT
VM Data Team reviews fueler role and operational need
Is Fuler ID required for this fueler?
Yes
Fueler ID activated for approved fuel sites and fuel types
No
END
Fueler begins fueling operations
START
Override ID Setup
Override access request submitted to IT
VM Data Team reviews fueler role and operational need
Is override capability required for this Fueler?
No
Yes
(Continue for Override ID creation)
Unique 5-digit override ID created (12xxx)
Override ID linked to single fueler ID
Override ID labeled with initials for traceability

Daily-Regular-Monitoring




Daily-Override-Monitoring
START
Daily Override Monitoring
VM Data Team runs daily Ekos transaction report (PIN department)
Override transactions filtered using 12xxx pattern Zero-gallon and non-fuel transactions removed
Override transactions logged in tracking spreadsheet
Does override volume within normal threshold (about 5 percent)?
Yes
No
Analyst reviews site fuel logs and emails
Investigate Root Cause Identify repeated overrides by fueler or vehicle Flag mechanical, device, or data issues
Analyst assigns override to real Vehicle ID in spreadsheet
Analyst retrieves average MPG for the Vehicle ID
Analyst retrieves last valid odometer for the Vehicle ID
Analyst reviews EKOS and EAM history for the Vehicle ID
Is entered odometer mileage reasonable?
No
Yes
Calculate correct mileage
Analyst updates vehicle odometer master record in Ekos
Analyst uploads corrected fuel and mileage transaction to EAM
END

Monthly and Periodic Review