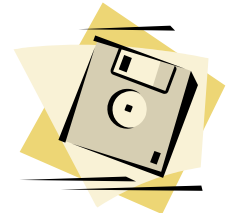# *Verify Project Update*

Light-Duty Cars and Trucks

U.S. Environmental Protection Agency
Office of Transportation and Air Quality
November 16, 2005
1:00 p.m.

Agenda

- Verify Project Status Update

- Confirmatory Test Process/Requirements

- Fuel Economy Process/Requirements

- Certification Process/Requirements

- Next Steps

Project Objectives

- Integrate all compliance databases to achieve program efficiencies
  - Certification and Fuel Economy Information System (CFEIS) replacement along with replacements for heavy-duty (HD) and nonroad (NR) database systems
  - Administrative compliance systems, such as Fees

- Create a secure infrastructure for electronic collection of data and documents

- Support reengineered and streamlined compliance processes

- Partner with the California Air Resources Board (CARB) to harmonize data

- Implement new regulations

FY 05/06 Deliverables

Release	Description	Timing
1	Motorcycle/All Terrain Vehicle (ATV) Certification (certification pilot for all industries)	Spring 2005
2	Common Services for all industries (request for manufacture (mfr) code, maintenance of mfr info, document submission, request for certificate)	Fall 2005
3a	HD Diesel In-use Testing, Front End Testing (Beta release) Deployment	Winter 2006 Jan. 2006 Feb. 2006
3b	Locomotive Certification Testing (Beta release) Deployment	Spring 2006 Feb. 2005 Apr. 2006
3c	HD Diesel In-use Testing, Back End Testing (Beta release) Deployment	Summer 2006 May 2006 July 2006

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FY 06/07 Deliverables

Release	Description	Timing
4	Light-duty (LD) Vehicle Certification, Confirmatory Test, and Fuel Economy	Summer 2006
5	Defect Reporting, Fees, and LD In-Use Testing	Fall 2006
6	HD Diesel, HD Gas, and NR Compression Ignition (CI) Certification Requirements gathering Testing (Beta release)	Winter 2007 Summer 2006 Fall 2006
7	Small Spark Ignition (SI); Marine SI; and Averaging, Banking, and Trading	Summer 2007
8	Snowmobile, Large SI, and Marine CI Certification	Fall 2007

Project Status

- Re-engineered and streamlined the compliance processes and information needs for all industries

- Developed web-based manufacturer interface for data and document submission

- Developed a prototype of the new system (architecture and functionalities)

- Completed data requirements for
  - Motorcycle/ATV
  - Locomotive (EPA-only)
  - HD on-hwy in-use testing

Project Status (cont'd)

- Completed Web-based database application for
  - Motorcycle/ATV certification
  - Request for Manufacture Code
  - Manufacturer Information
  - Document Submittal System (EPA – only)
  - Request for certificate (EPA Motorcycle/ATV only)

- Completed first draft of Release 4 LD confirmatory test and fuel economy data requirements

- Working on EPA/CARB harmonization activities with Release 4 LD certification data requirements

Manufacturer Involvement

- Provide comments on distributed drafts of data requirements

- Provide comments on shared previews of designs

- Provide input on connectivity and security issues

- Test the new system as modules are deployed

- Join the workgroup addressing CFEIS to Verify transition issues

Next Steps

- Send comments to ccdit@epa.gov

- EPA and CARB will post Certification data requirements as soon as issues are resolved

- Contact us if you are ready to work with us on connectivity or transition issues

EPA's Light-Duty Confirmatory Test Process

M= Mfr

E=EPA

M1 Manufacturer submits test vehicle information to Verify

M2 Manufacturer submits confirmatory test (CT) decision information to Verify

EPA compliance representative makes CT decision **E1**

Verify sends CT information to EPA's Laboratory Operations Division (LOD) computer **E2**

LOD assigns test date in Verify **E3**

Verify sends CT decision and test date if applicable to the mfr and EPA compliance rep **E4**

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EPA's Light-Duty Confirmatory Test Process

M= Mfr

E=EPA

E5 — Verify sends request to mfr to submit supplemental CT Info for selected vehicles
(info that LOD needs to conduct CT and EPA needs to generate CT report)

M3 — Mfr submits supplemental CT Info to Verify
(Shift Schedules, Mfr Test Results, Mfr CT Info, Emission Standards and Deterioration Factors)

E6 — Verify sends validated supplemental CT Info to LOD computer

E7 — LOD conducts OBD checks and confirmatory test

E8 — LOD performs basic test validation immediately after CT
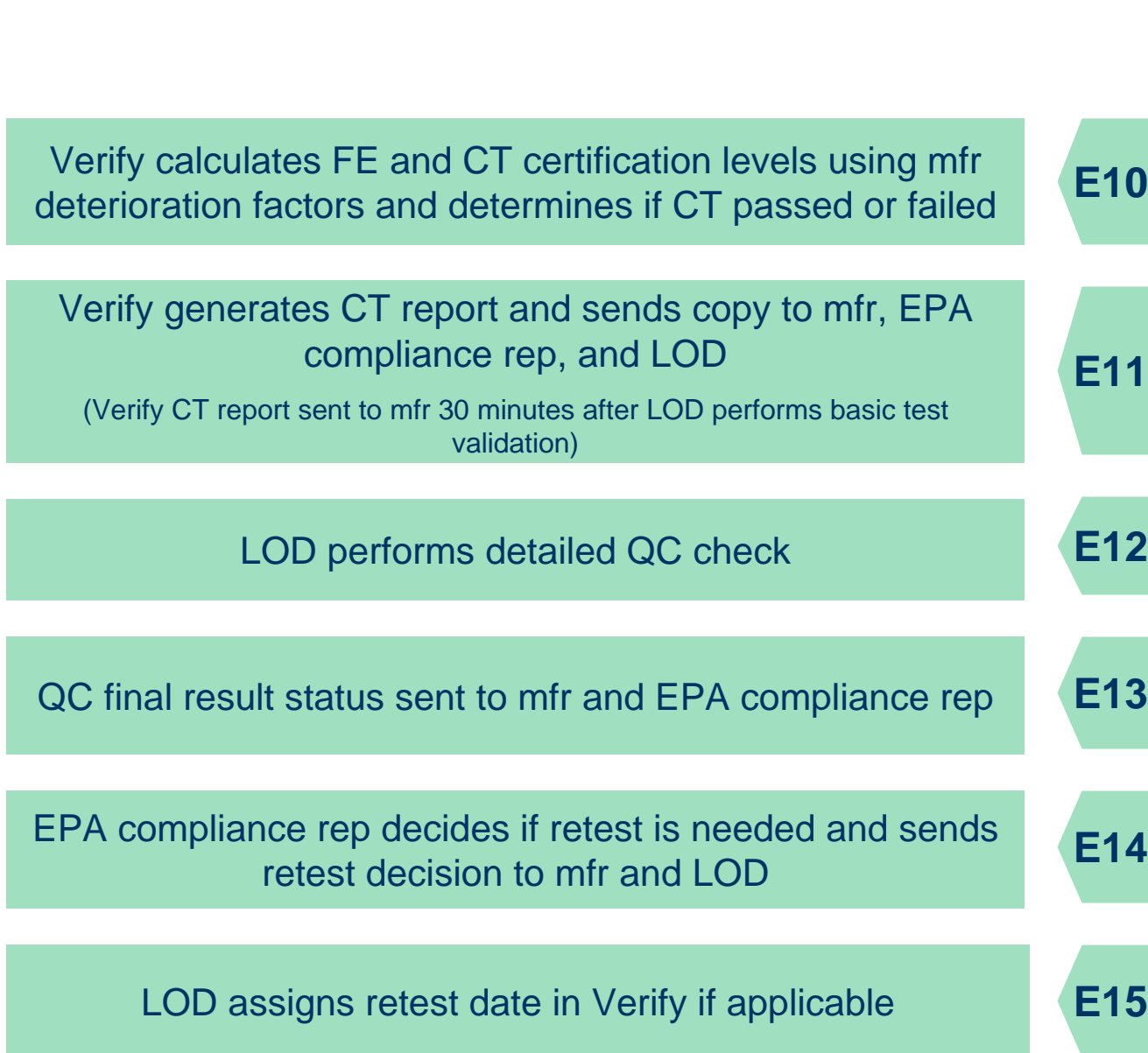
E9 — LOD sends test results and LOD test report to Verify

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EPA's Light-Duty Confirmatory Test Process

M= Mfr

E=EPA

Verify calculates FE and CT certification levels using mfr deterioration factors and determines if CT passed or failed	E10
Verify generates CT report and sends copy to mfr, EPA compliance rep, and LOD (Verify CT report sent to mfr 30 minutes after LOD performs basic test validation)	E11
LOD performs detailed QC check	E12
QC final result status sent to mfr and EPA compliance rep	E13
EPA compliance rep decides if retest is needed and sends retest decision to mfr and LOD	E14
LOD assigns retest date in Verify if applicable	E15

EPA's Fuel Economy Data Requirements

- Must satisfy the needs of:
  - Corporate Average Fuel Economy (CAFE) – National Highway Transportation Safety Administration (NHTSA)
  - General Label – EPA
  - Fuel Economy Guide – EPA / Department of Energy
  - Green Vehicle Guide – EPA
  - Fuel Economy Trend Report – EPA
  - Gas Guzzler List – Internal Revenue Service (IRS)
  - Tax Incentive Vehicle List - IRS

- Other uses:
  - Regulation Development
  - Research
  - Other

EPA's Fuel Economy Data Requirements

- Similar to current requirement, due to:
  - Pending regulation changes on CAFE and labels
  - Pending regulation changes on fuel economy calculation formulas

- Changes:
  - Added new technology related elements
  - Added place holders for the Reformed CAFE
  - Added place holders for tax incentive vehicles
  - Modified elements where burden on mfr data entry can be reduced
  - Deleted elements which are no longer appropriate or usable

EPA's Fuel Economy Data Requirements

- Review Status:
  - Posted on the Web: October 13, 2005
  - Last mfr comments received: October 28, 2005
  - EPA responses posted on the Web: November 21, 2005
  - Additional mfr comments due: December 7, 2005

- Anticipated timing*:

Program	Optional	Required
FE labels	2008 Modal Year (MY)	2009 MY
CAFE	2006 MY	2007 MY

*May change based on the new FE regulation timing and Verify progress

Certification Data Harmonization Accomplishments So Far

- EPA compliance staff identified information needed in EPA's certification database
  - see draft data requirements spreadsheet (when posted)

- CARB compliance staff identified information needed in CARB's certification database
  - see draft Certification Summary Information (CSI) form (when posted)

- EPA and CARB staff completed detailed comparison of identified certification data elements and harmonized where possible
  - Each element characterized as: EPA-only, CARB-only, Both EPA&CARB
  - EPA and CARB staff identified issues that must be resolved before certification data requirements can be finalized

Certification Data Harmonization Issues to be Resolved

- How information will be submitted

- EPA and CARB have different business practices

Certification Data Harmonization
EPA Requirements

- One submission for each piece of information
  - Some information is needed first for EPA confirmatory testing and subsequently for certification
  - Some information applies to multiple test groups (such as evaporative family information, test vehicle information, tests, and carlines)

- Simplify the process so that it is easier for mfrs to submit corrections and updates to info previously submitted to EPA

- Determine best way for storing pollutant information

Certification Data Harmonization CARB Requirements

- Mfrs must submit a complete certification data set for each test group to CARB in a single submission
  - Some of the required information that might have been previously submitted to EPA in multiple submissions must be compiled into a single dataset and sent by the mfr to CARB

- A separate field is created for
  - Each combination of emission type (FTP, SFTP, GHG, FFH, and evap)
  - Pollutant name (NOx, NMOG, PM, CO, etc.)
  - Useful life mileage (4k, 50k, full useful life)
  - Value type (emission standard, raw test result, deterioration factor, and calculated/rounded certification level)

- How to handle regulatory differences for pre-cert and post-cert activities (fleet phase-in, NMOG fleet average, GHG, and production numbers)