EPA Certification Program Update

EMA Certification Workshop
April 17, 2012
Gasoline Engine Compliance Center
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AA Office
Phil Carlson
Emily Chen
Dan Cullen
Julia Giuliano
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*Senior Environmental Employment Program Enrollee
CI Assignments

On-Highway*
- Steven DeBord
- Jason Gumbs
- Greg Orehowsky
- Jay Smith

*Includes HD GHG

Nonroad
- Steven Debord
- Jason Gumbs
- Joe Hresko
- Michelle Ibarra
- Greg Orehowsky
- Melvis Strickland
- Carl Wick

Marine*
- Melvis Strickland
- Carl Wick

*Includes IMO

Locomotive
- Michelle Ibarra
- Larry Oeler

SI Assignments

On-Highway
- Jay Smith

Nonroad*
- Phil Carlson
- Dan Cullen
- Julia Giuliano
- Trina Vallion

*Includes Small & Large SI

Marine
- Dan Cullen

Motorcycles / Recreational Vehicles
- Emily Chen
Certificate Issuance by MY

Spark-Ignition

Evaporative

7/14/2022

U.S. Environmental Protection Agency
Certification Workload

• Experiencing significant workload reviewing applications for NRCI Tier 4 rollout
  – New technology (EGR, DPFs, early SCR)
  – Deterioration factor development
  – AECD reviews

• Significant focus on implementing new HD GHG regulation
  – Development of certification templates and database
  – Transferring knowledge base (vehicle aerodynamics, tire evaluations)
  – Early model year certification
Certification Process

• In advance of submitting an application
  – Provide notice of certification plans
  – Begin discussions early with certification representative on:
    • any new engine design or emission controls
    • DF development plans
    • AECD descriptions
    • NTE deficiencies or LTRs
    • any alternative/special procedure or exemption
Certification Process

• When submitting an application
  – Ensure application is complete and accurate
    • Specify correct engine family name
    • Include all models and parts
  – Be sure application fee is paid
  – Notify cert rep of application submittal (not needed for Verify applications)
  – Be sure statement of compliance is submitted (not needed for Verify applications)

• Carryover applications
  – Ensure test data has not changed from prior model year
  – Include running changes (make sure they don’t change carryover status)
DF Requirements

• Manufacturers should approach certification representatives well in advance of submitting application to discuss DF development plans
  – Selection of DF engines
  – Carry across of DFs to other engine families
  – Amount of planned service accumulation
  – Service accumulation duty cycle

• Presently coordinating with CARB to provide feedback on EMA cooperative DF program
Auxiliary Emission Control Devices

- Manufacturers should approach certification representatives in advance of submitting application to discuss AECDs
- Manufacturers expected to still utilize reporting template outlined in CCD-04-12
  - Provide clear description of need for AECDs, sensed and controlled parameters, and how they function
  - For those active off-cycle, need justification that they are the minimum strategy necessary
  - Verify modules will accommodate slightly revised format for reporting AECDs – expectations on substance, however, remain unchanged
Flow Through Filters (FTFs)

- Receive occasional inquiries about use of FTFs for nonroad applications
- Always discuss technology plans well in advance of submitting certification application
  - EPA has previously voiced concerns
  - Challenges publicly documented
    - Particulate Oxidation Catalysts – A. Majewski - DieselNet
Certification Fees

• Fees change annually
  – Fees are recalculated each year according to a formula in the fees regulation
  – The formula accounts for changes in the number of certificates issued each year and for effects of inflation on cost of labor
  – New fees are announced via guidance letter each February or March for the upcoming calendar year
    • Guidance letters can be found at www.epa.gov/otaq/fees.htm

• Important to remember
  – Manufacturers should pay the fee corresponding to the calendar year in which the application is submitted
  – Be sure to submit a fee filing form
    • Fillable PDF version can be found at www.epa.gov/otaq/fees.htm
  – Applications cannot be processed until the certification fee is paid
Status of Electronic Certification

- Information Management System (IMS)
  - EPA’s historical engine certification and compliance system
  - FileMaker Pro database software
  - Mfrs submit applications via e-mail using template files
    - Templates can be found at www.epa.gov/otaq/certdat2.htm
  - IMS still utilized for on-highway CI, marine CI, and on-highway SI (including evaporative) sectors
  - IMS recently updated for processing of HD GHG cert applications
Status of Electronic Certification

• Verify
  – EPA’s engine and vehicle compliance information system
    (http://epa.gov/otaq/verify/)
  – Web-based system consisting of two elements
    • Public interface – consists of web screens and programs that collect and process
      manufacturer data
    • EPA-only database – gathers and processes data, issues certificates, and supports
      compliance functions (access limited to EPA staff)
  – Will aid in streamlining certification processing

• Engine Module Development
  – Locomotive
    • Deployed late 2006
    • Does not include non-OEM component certification or AESS systems
  – Nonroad SI
    • Deployed August 2010
    • Covers multiple sectors: small nonroad, large nonroad, marine, and nonroad
      evaporative component
  – Nonroad CI
    • Deployed August 2010 (mandatory use began February 1, 2011)
Status of Electronic Certification

• NRSI and NRCl Verify Modules
  – Implementation has been successful
  – No major issues reported by manufacturers
  – Improvements being made as time and resources allow

• What’s next
  – Updating locomotive module for component and AESS certification
  – Marine CI module planned for deployment during FY13
  – HD on-highway module (criteria and GHG certification) to follow
  – Development schedule contingent upon budget and resource availability
Availability of Certificates / Data

• Posting of certificates on website
  – Historically, have not posted certificates
  – Not frequently requested by public
  – Viewed as having small utility relative to posting non-CBI certification data

• Posting of certification data on website
  – IMS data posted a minimum of every 6 months at www.epa.gov/otaq/certdata.htm
  – Plan for posting of Verify data will be developed later this year after completion of CBI class determination
CBI – Certification and Compliance Data

• Currently trying to harmonize data treated as CBI among various regulated sectors
  – Will accomplish through class determination for information with common characteristics
  – Currently only have class determination for light-duty (issued 1977)
  – Will provide predictability to businesses and reduce burden on EPA of making repetitive CBI determinations
• Undertaking effort so that we can continue to publish same general certification data as in past
• General categories being considered as CBI
  – Small SI bond information
  – Projected sales
  – Production dates
  – Aftertreatment device details
  – AECD names/details
  – Engine technical descriptions
  – Engine family comments
• No current plan to publish compliance data (credit balances, etc.), but will follow up with manufacturers if this changes
• Will share draft with industry once we have completed internal reviews – timing TBD
• Plan to publish FR notice later this year with final determination
Electronic Data Reporting

• Verify also used to collect data from manufacturer-run in-use program
  – System deployed early 2006
  – Covers only on-highway sector
  – Recently revised data reporting requirements to add processing capabilities for PM test results
  – Changes planned for production environment in mid-May

• Supporting information can be found at www.epa.gov/otaq/verify/publications.htm#hd
HD Defects, Voluntary Recalls, and Progress Reports

• New electronic reporting system (EDIR/VERR System) for only HD on-highway
  – Replaces hardcopy reporting process
  – Announced for heavy-duty June 30, 2011
    • Webinar conducted August 2, 2011
    • System officially opened August 30, 2011
    • Some manufacturers began submitting early
    • Same system as utilized for light-duty
  – Increasing use of internal defect database for nonroad review
    • Planning to include nonroad reporting in Verify for the future
  – Guidance documents can be found at www.epa.gov/otaq/verify/publications.htm#edir
Manufacturer Compliance Reports

- EPA has developed MS Excel-based templates for reporting of other manufacturer compliance data and a Compliance Database to manage reports.
- Manufacturers may submit reports via e-mail (next slide)
  - Alternately, may submit electronic copy (CD, etc.) via postal service
  - Regardless of submission method, please always provide an electronic copy – hard copies are not effective
  - Submit questions / comments about templates to appropriate e-mail addresses
  - Submit questions about compliance programs and regulations to your EPA certification representative
- EPA is working to develop capability for manufacturers to submit compliance reports through Verify
  - Do not submit reports through Verify yet – they are extremely difficult to retrieve
  - Plan to have capability developed this Fall
Manufacturer Compliance Reports

• Templates can be found at www.epa.gov/otaq/certdat2.htm
  – Annual production volume
    • Available for all industries
    • Submit reports to prod_data@epa.gov
  – Averaging, banking, & trading (AB&T)
    • Available for on-highway CI & SI, nonroad CI (Part 89), small nonroad SI (Part 90 & 1054), marine SI (Part 1045), locomotive (Part 92 & 1033)
    • Submit reports to abt_engine@epa.gov
  – Production-line testing (PLT)
    • Available for small & large nonroad SI (Part 90, 1054, & 1048), marine SI (Part 1045), locomotive (Part 92 & 1033)
    • Submit reports to plt@epa.gov
  – In-Use testing
    • Available for small & large nonroad SI (Part 90 & 1048), marine SI (Part 91)
    • Submit reports to in_use@epa.gov
  – Other templates under construction
Manufacturer Compliance Reports

• Dear Manufacturer Letter (CISD-10-17) sent out September 2010
  – Reminder to manufacturers of reporting obligations by industry sector
  – Noted inconsistent reporting rates
  – Instructed manufacturers to begin using templates for reporting and to submit past due reports

• EPA will integrate the Compliance Database with Verify to link reports to certified engine families and carryover applications

• Failure to report may result in:
  – Referral of violation to OECA
  – Revocation, suspension, or voiding of existing certificates
  – Withholding of new certificates
EPA Compliance Testing

• Compliance testing program continues with goal to:
  – Ensure benefits stated in rulemakings are reflected in real world operation
  – Address level playing field issues for all market participants
  – Address compliance issues for new and in-use engines
EPA Compliance Testing

• Over past year, have conducted in-house confirmatory testing, contract lab confirmatory testing, on-site SEA, and in-use testing

• Multiple sectors are included in the testing
  – Initial focus on nonroad CI has been expanded to small nonroad SI (handheld and non-handheld) and on-highway CI
  – Expect to continue with compliance testing for nonroad CI and small SI, and expand to marine SI, large SI, and beyond
Confirmatory Testing in 2011
In-Use Testing at NVFEL

• Previous programs focused on 2004 and 2007-level technology
• Current program is evaluating 2010-level engines from multiple manufacturers
• Looking at a variety of metrics
  – NTE emissions performance (using Subpart T procedures)
  – Overall emission levels (impacts of idling, transient operation, etc.)
  – Inducement strategies for SCR (if SCR equipped)
• Plan is to test between 20 and 30 vehicles in 2012
EPA Compliance Testing

• Compliance testing and analysis will utilize all of the available tools, including:
  – Confirmatory tests
  – Selective enforcement audits
  – General laboratory and records audits
  – In-use data evaluation from manufacturer and EPA test programs
  – Informal site visits
Manufacturer In-Use Testing

- 2011 selections for on-highway industry sector
  - Reports due December 30\textsuperscript{th}, 2012
  - Selections for 2012 coming in June
- Prior testing
  - 2008 – 12 engine families, 7 manufacturers
  - 2009 – 18 engine families, 8 manufacturers
## Manufacturer In-Use Testing

Preliminary Analysis of Pass Ratios for 2009

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HD GHG Rule

• Final rule signed August 9, 2011
• Conducted industry workshop on November 3, 2011
  – Outreach / early questions
  – Workshop presentations and Q&A materials can be found at www.epa.gov/otaq/climate/regulations.htm#1-2
• Certification templates and database have been developed
  – Templates can be found at www.epa.gov/otaq/certdat2.htm
• Issued first certificates to Daimler Trucks North America on February 21, 2012
Transition Program for Equipment Manufacturers (TPEM)

- EPA has developed MS Excel-based templates for nonroad CI and SI
  - Will be posted soon at www.epa.gov/otaq/certdat2.htm
  - Engine manufacturers
    - Annual TPEM production reporting (in addition to other production reporting)
  - Equipment manufacturers
    - Notice of participation
    - TPEM report (one-time under Part 89; annually under Part 1039)
    - Bond waiver calculation / request (may be used to calculate the value of the bond)
- Submit TPEM questions (Part 89 / 1039) and reports to TPEM-CI@epa.gov
Compliance Report

• EPA produced compliance reports in 2007 and 2008
  – Reports present convenient reference for environmental data collected from manufacturers and generated in our test programs
  – Available at www.epa.gov/oms/about/420r08011.pdf and www.epa.gov/oms/about/420r10022.pdf

• Next report to cover 2009 and 2010 activities