ERT Version History

ERT Version	Version Date	Description of updates
3	2/12/2008	This version has a Printable Test Report
	7/22/2008	fixed it to trap for invalid drives when looking for existing project data sets on startup
3-1	9/22/2009	6/4/09 - Getting it ready for the Boiler MACT 114 letters: • added Methods: 0011, 26, 8 • added compounds: Total TEQ Dioxins, Total Furans, Total PCBs • added mouse overs for labels • added Show Tips for larger help text (uses Tags; Just add text to tag and it will create popup help) 8/19/09 - fixed Import to delete temp tables before a new import (in case the previous import was stopped) 8/24/09 - added Hydrogen Flouride and Hydrogen Bromide to Method 26A 9/1/09 - upscale calibration gas can now be low, med or high (as opposed to med or high) 9/14/09 - reduced white space in between detail data run report for test report 9/16/09 - fixed Printed Test Report • it was duplicating runs and it was not showing all compounds • also fixed the Emissions summary - that was only showing emissions if they were in a table it shows all Emissions 9/17/09 - fixed BuildMassByLocation to include the method in the select now it is Location, Method, Compound • Had situation where the location and compound were the same for 2 diff. methods; this caused an extra record in the emission summary section of the test report. 9/17/09 - fixed ISO run data tabs so they recalculate without having to close it down • fixed on change event of the tab control 9/22/09 - fixed test plan report to show the correct SCC description • also added UOM, Target, and Comment fields to the testplan screen for APCD's
3-1	10/5/2009	9/30/09 - took formatnumber() off of Mass_mg calc for qrymasscalcs - this was causing incorrect emission calcs for lower numbers and units 10/5/09 - Added combo methods for: • Method OTM 27/28; • Method 5/OTM28; • Method 17/OTM28; • added congeners for Method 23
3-1	12/9/2009	10/14/09 - fixed the Test Report to show the correct SCC description. 10/15/09 - took out the formatnumber() for the CalcCGas calculation; before if the Cgas number was below .09, it would give 0 for the answers 10/22/09 - fixed the Test Report to handle odd number of ITM runs (transposerMass, transposerCalcs) 11/9/09 - fixed Method 26 to be an ISO method - it is actually a manual method, but it needs the ISO tabs 11/30/09 - fixed so you can add more than 10 process runs • also can now edit the comments in the process run data- 12/2/09 - changed the format of the emissions to scientific notation - in apptblEmisConcsFull • also can add a target pollutant after the run data has been entered. 12/9/09 - fixed the delete target pollutant and the run data calcs when using target polls with a single quote in the name
3-1	12/23/09	12/21/09 - fixed compile error on Cgas calc 12/23/09 - fixed problem with selecting and deselecting PCB's w/ Prime's; added 2,3',4,4',5,5'-HxCB and 2,3,3',4,4',5,5'-HpCB

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3-1	1/20/10	For Method 23: - Changed Total TEQ Dioxins to Total TEQ - Added: Total Dioxins Total Mono-CBs Total Di-CBs Total Tri-CBs Total Tetra-CBs Total Penta-CBs Total Hexa-CBs Total Hepta-CBs Total Octa-CBs Total Nona-CBs 2,3,3',4,4',5/2,3,3',4,4',5'-HxCB
3-1	2/5/10	For Method 23, grouped the compounds and set display order. - Fixed so you cannot add target parameters that already exist - Added ability to add notes to the individual runs for process, process lab, and APCD's; ERT will automatically update the table structure of older project data sets so there is no data loss.
3-1	2/8/10	Fixed the RunDataLab Screen to show the sorted Method 23 targets to allow easier entry from Lab Reports.
3-1	3/11/10	2/9/10 - fixed order for Method 23 in Printed Test Plan and Test Report 3/5/10 - fixed the single quote problem in the Test Report Printout for Method 23 congeners; (buildmassbylocation) 3/11/10 - added signature statements to the Printed Test Report and the Signature page.
3-1	8/2/10	7/17/10 - fixed import pick list to only show ISO methods; Also run number pick list now limits for location (was showing runs at other locations with same method name for ITM data) -8/2/10 - Process/lab/apcd parameters added at the test plan now add the params to all runs. • Added Methods 5B, 5F; 12; 13A,13B; also added columns for Method 1A • Test Report shows the Moisture % and Moisture % Saturated in the Summary portion • Can delete Process/Lab/APCD runs (cannot delete run 1) • can now change the name of the location
3-1	8/5/10	fixes error when adding the first process lab and/or APCD parameter • shows the process run data comment in the printed test report.
3-1	8/31/10	8/12/2010 - can change run date 8/13/10 - can now enter Fc when selecting "override" fuel type - added next/previous buttons to run data screen 8/20/10 - do not have to enter a UOM if the lab value is 0 (conv2mg) • will now print Method 26 without ISO data entered (put resume next in transposerCalcs) 8/23/10 - Fixed to handle the first location entry (check if savelocation isnull) 8/30/10 - took out formatnumber in qrybuildcalcs for detlaPavg • - created getAve function. Used in reports; gets rid of #error or #num 8/31/10 - added icon for popup help
4	4/18/11	10/5/10 - took out "me." reference in location combobox / frmrundatadetailsmaster; Keeps it from crashing with Access 2010 10/7/10 - add 19 for Fwt for Total Floride • took 0's out of apptblCOMPNDS for Molwt; this will keep it from getting a div 0 error on printing test reports; just shows blank 11/23/10 - neg. Cgas now has popup asking to keep negative or make it a 0

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		2/2/2011 -UPDATES FOR ACCESS 2010 UPDATE 1. Added PtrSafe in between the Declare and Function for declare statements; Gets past the opening problem 2. changed the getopenfiledialog .. Now using application.filedialog(msoFileDialogFilePicker) 3. deleted master/child links in frmRunDataISO and frm RunDataITM; set them in code in frmRunDataDetailsMaster.cboLocation event 4. now using the .accdb format 5. added EF calc for "tons/hr" 3/20/11 - changed to .accdb format 4/5/11 - fixed to import new and old spreadsheet • fixed attachments to work with .mdb and .accdb; changed subfrmattachments to be from query instead of fields (.mdb was xfile ole object) 4/13/11 - fixed EFCalc to work; now correctly works with all poll units in the SCC table • added popup button in header data to show impingers info for Vlc 4/15/11 - Test Report button now lets you view/export full report or data summary tables 4/18/11 - Date/Version on the Main Access Title • Main Menu now in Main Access Window; all others are popups • Fixed the Attach buttons for .mdbs and .accdbs • can now size popup report screens • took out DQQ screens • works with 2007 or 2010 runtime • took out OTM27 and 28; can now see custom methods • added QAQ tables, screens and queries; Some data links are included; no scoring yet or auto checking
4	6/16/11	1. added QA button to frmTestPlanSA; this brings up the protocol eval calculations screen (from NJ's spreadsheet) 2. added apptblDQQ back so the WebFIRE export will work .
4	6/23/11	1. for the EF export; Fixed: • now averaging the process values • added lb/mmBtuO2 column • changed formats to scientific notation; now shows small numbers • now works with PCB's 2. changed emission averages in test report to scientific notation 3. fixed getprocessvalue() to return a 0 instead of a blank so the avg function in qryEFwebfireexport would work
4	6/30/11	fixed issue not being able to create empty data set; • also added Beta to version • changed the structure of the tblMethodParams.lblimits field to be a double
4	7/29/11	- fixed rounding issue on average field in summary emissions report
4	8/25/11	8/8/11 - can now give a CAS number and name for custom target parameter. 8/12/11 - now handles custom methods that were created in a different ERT app. It also handles custom methods that were deleted from the tblMethodParams but still has run data. 8/25/11 - fixed problem showing test review page; isISO now pulled from Group
4	10/11/11	8/26/11 - added link to CAS number search website to add custom compound form 8/29/11 - lat/long fields must now have at least 5 digits after the decimal • NAICS field must now be 6 digits 8/31/11 - fixed issue with emission summary not showing correct locations; Had to change isISO to pull from getMethType(); Fixed all isISO cases 9/1/11 - fixed deleting last emission unit issue;

| | | - Can't edit Q7a; Fixed; had to give apptblcompnd a unique key (CAS,Name)
9/7/11 - View All Runs button now to rebuilds trnsBuildCalcs before showing report
9/17/11 - added "Press Ctrl+P to Print" for all reports
9/18/11 - added PSTs screens, reports added button on ITM to add new run; this carries over all data from the record you are on to the new record and adds 1 to the run number for PST's, enter the Method 3O2, CO2 for the runs, then enter ref methods for 10-CO, 6c-SO2, 7E-Nox; then go to the PST method and enter the cems for the O2 and CO2; then go to the PST method and enter the CEMS data 9/22/11 - took layouts out of PST reports so it will work in 2007 Runtime incorporated comments into Testplan QA screen added CDX Submission button (creates .zip with: 1) XML export file, 2) renamed zipped PDS) 9/27/11 - Add Run button for ITM run data only shows on the last record; also updates the cbomethod fixed ppm calculations (had to change case statement from "to" to "," 9/29/11 - CDX submission button now calls form to 1)review/set associations; 2)enter submit info; 3)create pkg file; 4)go to website submission file updates the submittal history.. This will be used for all submissions to all parties; (states, sources, error reports, etc.) 10/5/11 - added Email button to CDX submission for; (still have to manually select attachment-email body has file name) updated formats for frmQAScreen(and subforms) updated ERT Version History Report Select PDS now updates changes to field types and will unzip, save, and open the PDS from a pkg.zip file Changes screen colors added Help/Sys. Admin button; can view manual, version info, version history, calculations 10/6/11 - fixed isISO problem with Test Review form; Test was failing when selecting run data added Reports to show the formula's for Fields and Emission/Concentrations Calculations updated the wording in Question 12 to reflect new policy 10/7/11 - for ITM's pick flow, moisture, CO2, O2 from earlier runs; what is picked for flow defaults to others; can override select data set now lets you select from a …pkg.zip and .zip file; it pulls out the PDS, saves it locally under ProjectDate (creates projectdate if not there), and opens it 10/10/11 - ISO/Manual methods can pick CO2, O2 from Methods 3A CO2, 3A O2 Now you give a Mol. Wt. for custom target params that are not in ERT; this lets the ITM emissions be calculated; (note, ISO emissions don't need this); Molwt for custom params is stored in tblmethodparams. Getfwt() checks apptblCOMPNDS and tblMethodParams for weight. updated the apptblCOMPNDS; added Methane, Ethane, Carbon, Propane; added CAS numbers and weights to others 10/11/11 - New methods: 102, 103, 104, 108, 0061, 215, 316, 0011 (was here, added targets) add web links, methods with targets report to admin screen |
| 4 | 10/24/2011 | 10/12/11 - q7a (tblparams) was locking after a sort; took out old sort order (because it was a join and that was causing problems)
10/19/11 - Revise ERT main menu to show that there are several tabs where one can enter the test plan. (Some users are confused |

and assume that each menu item is a different part of the test plan rather than each menu item goes into the test plan at a
different place.)

- Make Test Plan Title & Date, Facility Name, Address, Contact, Phone, email, Testing company, Test Company Address, Contact, Phone, email required fields. (NOTE: DON"T WANT TO MAKE THIS TOO RESTRICTIVE BECAUSE OF OPENING OLD PDS's W/OUT DATA; WOULD FORCE ENTRY OF DATA THAT's NOT THERE!)
- Change the Help popups near the "Facility Name"
- Change the Help popup for the Testing Company to provide more detail.
- Make Select SCC from list a required field.
- For Item 7a & 7b, in the ? "Help Tip" screen. Delete the text about the Section 114 request.
- The main screen is deceiving. No matter which button under "setup/test plan" you click on it takes you to the same thing. This makes the ERT seem like there's more to fill out than there really is. There is no reason to have 5 button options when you can have just one and people can click the tabs.
- The intro screen has two errors. It should be sector policies (not policy), and measurement (not monitoring)
- Fix select zip if projectdata folder not there; NOW unzip and package puts file in folder where PDS was
- fixed index error on selecting PDS when a field had changed
- Q5b. Changed "UOM" to Units
- Add Facility State ID on Facility screen
- Add Testing Co. project number
- Set default operational hours to 8760

10/20/11 - Fix "Attach File" buttons...took off "locked" in query

- Fix lat/long format field to be at least 5 places after the decimal
- reworded the "how to attach file text"; added how to add new attachment record and tips on making smaller PDF files
- removed CTM 40, updated wording and descriptions for PST methods
- "Custom" is first for the Methods list
- changed "reject" to "notice of deficiency" in action type

10/24/11 - added form for Q6 location

- fixed error when selecting "select" from ISO and ITM run data screens for associating runid's in dropdown list
- added form for Q4 Process; added target low, target high for process target range

4	12/8/11	10/25/11 - fixed error on frmTestPlanSA load…. Was looking for frmtestplan.savelocation

- changed QAQ screen choices to "Completeness/Regulatory"

10/26/11 - added "Included Attachments" to the printed test plan and test report
10/27/11 - added the ability to create submission file with incomplete or bad run data… (sendanyway = yes)

- added detail form for Process lab and APCD's
- add detail form for Regulations; Added process param and unit to tblRegs; ProcessParam picklist notinlist pops up subfrmProcess1 to add ProcessParam

10/28/11 - subfrmLocation; have to enter location name to enable other fields
12/8/11 - added previous page to the TestPlan and TestPlanSA pages

- ISO Screen; CO2/O2 dropdowns; Show date in column; don't keep in field

4	1/30/12	1/30/12- 1. Add county in testplan 2. Aded the following fields to XML file:

a. Facility Name, City, State, County, FRS, State ID, AFS Number, Testing Company, Testing Company Project Number,
Permitted State Source ID, Permitted State Name, Last Run Date
3. Fixed XML Export; 2010 doesn't allow functions in queries with ExportXML; so made qryEFWebFireExport into a make
table, then used table with export xml
4.FacilityTester Page:

- Made the FRS a required field
- Provide a Pop-Up help button (Blue question mark bullet) for Latitude/Longitude stating:
- Provide the location of the emissions release point. Enter latitude and longitude in decimal format (i.e. 32.123456) with accuracy of at least five decimal places (10 ft)
- Q5a help text = This description should describe the process and associated controls to differentiate the facility from, or document similarities with others in the same SCC. A summary text description should be inserted in the box provided and more detailed description and process flow diagrams attached in a separate file.
- "Signatures" page (Test Plan and Test Report pages) Change Tab title from "Signatures" to "Pre Submission Review" Change Date Signed to Date Reviewed. Add field for email address for both Permitted Facility Representative and Testing Company Representative
- updated "tips" for smaller PDF's on attachments page
- added to and from email addresses for all POC's, reviewers, signers, and submitters… for submitters can pull from picklist of previously entered values
- changed the "Instrument Response" on the ITM Run Data page should be changed to "System Response"
- fixed Testplan and Test Report to show attachment list from old .mdb files
- added button on Run Data Methods screens that allows for the use to view/edit the location information for that location without having to go back to the test plan screens.

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4	2/14/12	2/3/12 - turned off "Compact on Close" so will not get message when closing from Runtime version • added "refence field" back to XML export; also updated the "view" export screen to show the new fields 2/14/12 - added "zip" to XML export; also made it so it will export County, even if county is null
4	3/2/12	3/2/12 - Fixed Testplan and Test Report attachments list printouts to work with .mdb and .accdb PDS's.
4	3/30/12	3/15/12 - added fields to emptytblPSTHeader and emptytblRunDataITM to handle the PST methods • took out extra space in the method "Nox to …." • can now import 9 runs from spreadsheet template • fixed import of probe; Comes in a "Pitot" from spreadsheet header data 3/20/12 - made spreadsheet import routine loop based on imported header runs; so it will loop and import point data for however many header rows they have in their spreadsheet (they could add more or less if they wanted) • locked location name on location screen when started from Run data details master; also changed it so ERT checks the • location.oldvalue against the location.value to see if it has changed and to see how to change the other tables; took out • need for save location in on current 3/22/12 - Save As will now not let you save as the same name as the current PDS • Save As will now create .accdb instead of .mdb files

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		• submittal history getting in zipped PDS now • fixed relative accuracy report; in GetCEMSO2(), now returns 0 instead of "" if isnull • added Relative Accuracy Results to the reports pulldown; grouped report by location&method; new page each group 3/23/12 - made "lb/mmbtus" on PST report be 4 significant digits 3/26/12 - XML WebFIRE export file now has ERT version, puts "000", "Uncontrolled" if "Controlled" is not checked (location screen), and the runs are grouped by location, method, pollutant • now will not create submission package file if they have process data (>0) and they have not associated ALL data runs with process runs • For PST's you do not have to have PPM, Lb/Hr, and Lb/MMBTUO2 selected for the method. The report will work with no matter what has been selected. 3/28/12 - can now enter 20.9 for O2% header and 0 for CO2% header; checks for this in qryMassCalcsISO, qryMassCalcsITM • now stays on correct tabs (ISO or ITM) after deleting emission in methods tab • now creates XML file; made left join to qryEFU (not used now) in qryEF • now filters on location, method, compound on test review page 3/20/12 - fixed folder select button in save as screen - will now always create XML file, when they create the submittal package; will have 0 for EF
4	4/26/12	4/2/12 - fixed extra space in tblMethodsLink in "Nox to" for PST method 4/3/12 - fixed "calc points" in frmlocation; Now handles duct sizes and non-particulate traverse 4/16/12 - for SCC's with no Poll_Unit, etc.; Changed convFromLB just keep the lbvalue • had SCC form preload pick lists with what was there 4/20/12 - you now enter Unit_Poll, Measure, Material, and Action for SCC's without default data • has new SCC table 4/24/12 - SCC table now only has Point Sources + Wood Stove SCC's • updated SCC pick list to work with the 10 digit Wood Stove SCC's • took out uncertified Wood Stove SCC's 4/26/12 - SCC picker, now will keep the description at level one
4	7/10/12	5/8/12 - took out Cal drift correction for Cgas for Method 25A • Method 3a O2 - make Cgas populate O2%, hide CO2, Moisture, Flowrate, runids • Method 3a CO2 - make Cgas populate CO2 %, hide O2%, runids 5/9/12 - added check for latest version on "continue" of splash screen and button on admin form 5/18/12 - locked Corr Analyte and % on Q7b. 5/21/12 - created form for Corr. Analyte and % … has limits of O2, CO2 and 0-12 5/30/12 - took out sort(all quick menus) from lab form screen… for 2010, it would lock the fields if you did a sort (sorting 2007 did not lock fields) • took away default emiss/conc on pick emiss/conc screen 6/1/12 - fixed the test report review q16 and q19; they were the same, now fixed and shows up on the report. 6/15/12 - when adding a process parameter, you now enter the Poll_unit, Material, Measure, and Action; have new process screen, prevents tabbing through to new record 6/20/12 - prevent tabbing to new record on location, process lab and parameter, apcd screens 6/22/12 - Will now handle process based emissions; Updated qryBuildMass to create process based emissions; the header will show the compound / process • updated the Emissions report to show process based emissions 6/25/12 - changed

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		Vmstd:Format(([Y]*[Vm]*([Pb]+([DeltaH]/13.6))*Round((459.67+Min([tstdHDR]))/(Min([PstdHDR])*(459.67+[tm])),2)),"#.00") Vwstd: Format([Vlc]*ROUND(((459.67+Min(tstdHDR))*21.849*0.0022006)/(Min(PstdHDR)*18.02),5),"#.00") • Test Plan Report - changed 7. to 7a.; took out Points column from 7b 7/10/12 - changed PPM to Percent in the PS3 Rata screens and reports
4	9/6/12	7/12/12 - fixed Add New Button on ITM Data screen; now updates the location and method dropdowns and works with runs higher than 9 8/1/12 - update PST Methods and Report based on Ron's Calculations 8/8/12 - updated Vmstd and Vwstd calculations based on Ron's Calculations Vwstd: FormatNumber([Vlc]*((459.67+Min([tstdHDR]))*21.849*0.0022006)/(Min([PstdHDR])*18.02),2) vmstd: FormatNumber([Vm]*[Y]*((Min([tstdhdr])+459.67)/Min([pstdhdr]))*(([pb]+([deltah]/13.6))/([tm]+459.67)),2) 8/16/12 - changed Pi to 5 decimal places • formatted DeltaP to show 5 dec. places on screen. Formula has no format so full number is used. 8/21/12 - updated RATA reports for latest calculations from Ron 8/23/12 - took out Scientific notation in buildmasscalcs() for PST calculations; This was causing rounding errors on PST reports • can now exclude runs in PST reports 8/24/12 - only lets you exclude up to 3runs 8/27/12 - updated O2/CO2 1.05 acceptance criteria to include the confidence coefficient • forced dropping of the primary key for tblREGS on updatetables(); This was causing the regulations screen to hang in some PDS's • change run to type number in process, lab, apcd; Fixed issue of adding process with more than 9 runs • must have 9 runs to run RA report • fixed process screen saving data on exit; and changed form.cycle to current record to stop tab throughs 8/29/12 - fixed Add New Run; Added location to qratblrunlabaddrun; fixed that it would show all compounds if methods were the same but the locations were different in Lab screen • took out time unit (/hr, /minute) in Emissions header for process based emissions • added target parameters for Method 201A and Method 201A/202 9/4/12 - updated cosmetic and help items from User Manual Comments • Comment field in Test Report Review Report now grows 9/5/12 - added Flag and Flag_Detail to XML Export to show lab BDL, DLL, Non BDL comments • added footnote to PST reports (rounding) 9/6/12 - changed CDX link to the CDX home page
4	9/7/12	9/7/12- RATA Reports show in print preview mode
4	3/18/13	9/27/12 - has new QAQ questions; need to update how historical run adds are done • fixed Save As Template; now creates dbversion120 (access 2007) database. 9/28/12 - ITM help button now shows and hides with add new button • Will not import manual method data when there exists the same location, method, and Run number 10/2/12 - ERT will now show message if it can't get the ERT version from the web, instead of getting error and stopping

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		10/9/12 - QAQ questions will now update when QAQ button is clicked. This will bring old PDS's up to date 10/29/12 - added Method 30B • added FRS and AFS number to the protocol review screen, changed "Non-particulate" to "Non-Isokinetic" • added checkboxes for Q1 (Part61, etc.) • changed limits (took out of q2, q4; put in q7b) 12/6/12 - locked location subform on testplan screen… to edit, double click on the location name. 2/18/13 - testplan, rundata, testplan review screens open expanded, fields grow; Option to open test plan maximized 2/27/13 - moved locations/methods/emiss page before regulations in testplan, testplan review, test plan report • put reglimits back in regulation question • updated help screen messages, screen units, and screen edits based on Ron's 2/27/13 email 3/6/13 - - forced Fd, Fc, Fw on Run Header page to not be blank. Caused error when creating Export file(lbmmbtu) -3/7/13 - fixed issues on adding new runs, updated help bubbles and screens based on Rachel's 3/7/13 email 3/12/13 - imported new SCC's 3/18/13 - made field widths wider on Q4 and 7b - updated process based emissions now correctly show in reg limits drop down "lb/tons of material processed" - replaced emission summary table with limits table in full test report
4.1	4/11/13	3/19/13 - added Method 306 Chromium, Hexavalent Chromium • cannot change process parameters from selected SCC process • imports data from 3/19/13 version of manual test DE spreadsheet • checks for gas meter, stack temp, and velocity before deleting empty records in import 3/20/13 - fixed issue with adding location with same name (location screen would not close) 3/21/13 - updated all QAQ showdata buttons 3/26/13 - changed doubleclick to click for popup screens (double click put window in back in 2007, worked in 2010) • fixed TestPlanSA review to match question numbers • made testplan cycle current record; fix for "enter parameter" msg. 3/27/13 - rundata screen hides emissions tab for Method 1-4 (flowrate, moisture calculated with the sampling/stack data results) 3/28/13 - fixed StateRev Comments to shwo Q2b; had to check old PDS and add record for EmisCon if not there • fixed Rundata number of traverse points.. Now sums based on if deltap is empty or not • add new ITM button now forces recalcs; Also one change forces cascading recalcs • ITM link dropdowns now show all methods • fixed location screen to be active unless opened from state review; Location is disabled if opened from rundata screen. 4/2/13 - Now answers completeness QAQs and gives completeness scores 4/4/13 - fixed new attachments to start at ID 40… this is for old PDS's that added attachments 4/9/13 - shows scores for Completeness and Reviewer Reviews 4/11/13 - Has Completeness and Reviewer Reports

ERT Version	Version Date	Description of updates	6/23/25

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4.1	4/24/13	4/13/13 - New tabbed QAQ screen • Attachment tables to print 4/17/13 - Save AS now converts tblattachments to new format • Selecting a .mdb now warns that It can not be sent to EPA • Create submission file stops if the PDS is a .mdb format • Regulatory review questions have the option to include the completeness questions • added help screens and formats from Ron's 4-17-13 email • fixed emissions summary screen to work with 2007 • testplan attachment buttons turn blue text when they have attachments 4/18/13 - Testplan Review now shows attachment buttons (blue if attach. Exists); cannot add/remove attachments • Regulatory review cannot add/remove attachments • updated main menu • completeness button hides regulatory questions • print buttons for questions 4/22/13 - fixed frmlocation (was not enabled) • updated link texts in QAQ based on ron's spreadsheet 4/22 • added attachments based on the spreadsheet above 4/23/13 - added CARB Methods 428, 429 • now cannot add a new location with the same name as an old location • changed XML export to now always at least show facility data • added Test_Report_Rating to XML export • fixed process description and test notes from truncating at 255; now memo fields • qraEFExport forces " " if null so all fields export to XML file 4/24/13 - fixed Test Plan Review Report to match the new question numbers • testplan review now has " ", Yes, No, N/A pulldown; defaults to " " • testplan review "add/view comments" buttons now turn blue if they have a comment; black if empty
4.1	4/29/13	4/29/13 - Sorts the point data on the Gas Meter field • Checks for required fields (in tblRequired) before creating submission file. Shows list of missing fields with links to the data for data entry. • updates the -1 to "Yes" and 0 to "No" for the old State Testplan reviews.
4.1	3/18/14	7/31/2013 - added pick lists for state, county in testplan 8/15/13 - added in new QAQ questions and scoring 8/19/13 - deleted attachments 41,42 (certs for team leader and non reg reviewer)… combined 41 with 40 by changing description 9/16/13 - added 30b screens 9/24/13 - fixed pick emissions and add run screens to show on main monitor • fixed QAQ's to take into account Yes/No questions when determining the answer 11/18/13 - added updated 30B screens from spreadsheet 2/4/14 - updated 30B based on Ron's email 2/17/14 - now excludes runs for o2/co2 rata's 3/12/14 - updated text in Reg Review screen 3/13/14 - deleting index when selecting PDS. Older PDS's had this index which prevented adding the same pollutant to the location despite it being from a different method (old index was Location, Pollutant) • added Method 108 3/17/14 - ITM calibration page now refreshes on tab click (forces recalcs) 3/18/14 - imported new 30B tables, screens, queries, modules • point data sample rate field is not double number • excludes Method 1-4 in export file

ERT Version	Version Date	Description of updates
		• hides lab data tab for Method 1-4
4.1	4/7/14	3/21/14 - fixed 30b emissions calculation • 30b now included in XML export file • F numbers now go to zero (never null) if fuel type is deleted from dropdown lists on header pages. This was causing the xml export not to work because it was trying to average a null value. 3/24/14 - new Sorbent trap section 2 breakthrough • ITM header screen now locks values if picked from other runs 3/25/14 - ITM tabs now recalculate when opened and on current • for Method 3A CO2 and O2, the CO2% and O2% are yellow to indicate a calculated field; also the flowrate drop down does not update the CO2 or O2 fields if method 3A CO2 3/26/14 - Facility name will now not accept special characters; special characters would cause a problem when creating the package file name. 3/27/14 - Changed the way the export works. Now exporting three tables, EFExport(table), qryEFExportFac, and qryEFtblRegs; qraEFExport puts qryEF into the EFExport (table) because the grouped query would not export to XML, so had to go to a table first • added regulation limit fields, and test purposes to XML export 3/28/14 - 30b reports now show sample a and sample b where applicable 3/31/14 - QAQ for calibration, drift, and system bias test now checks if any records in tblCals 4/1/14 - updated QAQ questions per ron's 3/13/14 email (changed some text and made some multfrm pop ups 4/2/14 - added PDSid and PDSidDate; these are unique PDS identifiers that are created when a PDS is created, saved as, or when selected if they are empty (meaning the PDS was from an earlier version) 4/7/14 - ERT now automatically includes the uncorrected analyte when a corrected one is selected in the emissions/concentrations pick list.
5	5/7/14	4/8/14 - changes calsets now recalculates everything on itm run data screen 4/10/14 - added all emissions to the XML export • xml export for webfire now by runs instead of average runs 4/15/14 - fixed Rata's so calibration data is correct (subfrmPSTHeaderCal changed to lnkLocation, lnkMethod) 4/17/14 - link location pull downs wider to handle location to 50 Characters • added Part-SubPart combo for tblRegs; Took out Compliance on qryEFtblRegs (export file) 4/18/14 - now prints PST reports from reports menu… PST reports are NOT included in the Full Test Report • linked fields (ISO, ITM, 30B) are now updated when the forms are closed… so changes are pushed to the linked fields • linkedID fields are now 75 characters 4/29/14 - changed. updates to SQL in transbuildcalcs, transbuildmass; the old way would cause ERT to bloat unless the row level locking was unchecked. 4/30/14 - check box to check version on startup • checks row level locking on start up and turns it off; gives message to restart ERT • EF XML export has list of locations and methods • EF XML export has list of emissions • EF XML export (and emissions results page) excludes Method 1-4 and Method 3A O2 5/6/14 - incorporated 30B XLS and XML imports and exports • shows message when you delete a emis/conc from rundata screen that it will be removed from the emissions tab next time method is selected

		• cannot delete emis/conc with correction until the correction is deleted first 5/7/14 - updated import routines
5	6/30/14	5/13/14 - turned off switch to turn off row level locking • added code to turn on compact on close if access 2010 or later, turns off otherwise; Pre 2010 versions can't compact ERT and give error message on close 5/14/14 - put timer in copy table routine to slow it down… fixed problem with creating new PDS • changed on change to after update in frmSCCpicker 5/19/14 - added Method 30B QA/QC report • updated version checker to look for "/ertv5/ERT5_"; 5/29/14 - fixed transposerCalc and transposerMass to kick out on non multiples of 3 6/2/14 - 30b screens now only refresh current page • the regulation description defaults to the description selected in the Part60 dropdown on the regulations screen 6/4/14 - updated the APCD Table with new items from Ron • "Degrees Fahrenheit", "Degrees Celsius", "Percent Opacity", "Pounds per Square Inch", "Pascal", "Inches of Water", "Inches of Mercury", "Atmosphere" to the list of Measures • "Six minute average" to the list of time units c • "Observed", "Measured" to the list of Actions. • fixed completeness check not show ERT questions. 6/19/14 - added RunDate to emptytblRunLab30B so import will work 6/23/14 - XML export file will now be created even if bad data 6/25/14 - fixed it to delete 30b run data from PDS when being saved as a template 6/30/14 -"User Entered" will now always show on dropdown list where applicable; changed query to pull from tblTestPlan where there will always be a record. • when creating a new PDS, the empytblHeader(30B), emptblPointData(30B) table records are deleted before creation of new PDS. This will catch if the import data routine was exited unnaturally.
5	9/10/14	7/1/14 - set input masks for FRS, phone numbers, and zip codes • put timer in LinkDataSet to slow it down… was getting error when trying to link to .mdb's 7/28/14 - added "RATA" check box to Test plan review screen • - deleted emptytbl30B so it will not create the table when creating new PDS. The tbl30B is not used. • - updated XML Export file to: get rid of qryEFMethodParams; add lat/long, NAICS, Air Permit number, Qaw, Stack Temp(ts) process parameter rate (all 5), made pollname and emissionunit fields names match 8/14/14 - completely changed the XML export format; Tables, no nesting 8/19/14 - deleting method parameters now deletes emission/concentrations and will ask to delete run data if it is the last parameter for that method and if run data exists. 8/20/14 - deleting location now prompts to delete associated run data… if yes, location and run data will be deleted, if no, nothing is deleted 8/25/14 - fixed XML import… changed from docmd.savedxmlimport to application.xmlimport • forcing "- user entered -" on import for ids,xml and xls 8/26/14 - XLM, XLS imports for 30B, ISO now work 9/5/14 - when submitting or resubmitting a test report, you are now prompted to review the completeness check during the creation of the package file. 9/8/14 - took out updatealllinkedfields; was crashing if linked field changed to #error; may fix later • can edit the target High and Low for SCC process parameters

		9/9/14 - changed process, apcd, and process lab reports to include general comments and SCC for process 9/10/14 - added location to tblAPCDcontrols
	10/27/14	9/11/14 - added Method 306A Chromium (Manual) • added grams/sec; Format([Qsd]*[lb/dscf]*453.592/60,'Scientific') AS [g/sec] 9/12/14 - added Vlc and DeltaP to 30B import spreadsheet and ERT import routines 9/16/14 - took out "compound <> O2" in qrybuildcalcsITM 9/22/14 - updated popup text for Vm, Vmstd, and Vwstd in Method 30B 10/1/14 - fixed format for tester zip code 10/10/14 - debug for Release 10/15/14 10/20/14 - ERT5 error in 30b when selecting o2 id's; check field lengths for new PDS's 10/23/14 - completeness questions include manual questions for M30b 10/24/14 - fixed method, run number swap on qryEFMass 10/27/14 -M30B total sample volume now includes the correction (multiplying by Y) • M30B corrected %H20sat calculation • M30B Cw now uses the lower of %H20 and %H20sat • Add Test Run Mercury Concentration (wet… ug/scm) under the Test Run Mercury field; will be average of the Cw's • updated version check message to explain corporate blocks to internet access and how disable auto version check. • locked the location and method field in the upload data review grids so they cannot be changed.
5	11/19/14	11/3/14 - added "lb/trillion Btu using CO2 and O2" to emissions concentration list 11/5/14 - Method 30**;** Fixed Qsd picklist, added moisture pick list, grouped temp, moisture and CO2, O2 • color coded point data columns to show required fields 11/6/14 - Method 30B header leak checks can now be zero and will show zero %... Updated QA comments to reflect valid 0% • fixed QA "Sample flow rate checks"… now will show zero % or say insufficient data, check the point data if empty or incomplete data. Also fixed the refreshes for the tabs to incorporate recalcs of other pages if needed for the current page 11/13/14 - added popup formula's on data results pages • fixed M30 ts drop down to always have User entered (used tbltestplan) • ActualOrificePresure field defaults to zero so DeltaH shows… corrected the calculation for DeltaH • using stacktempA instead of volume to count points for 30B; 30B doesn't require volume (deltaP) • Fixed (method 30b) QSD pull down… made PercH2O default to 100; was causing error in QSDcacl • Method 30B Sample page - Vt now = Vmstd *35.315; this changes it to M3 • AVT and BVT now = vmstd/35.314666; This fixes the emissions calcs for 30b 11/15/14 - M30B Section 1 A and B Mass now has components 11/19/14 - DeltaH now uses number of traverse points instead of average…took out round for VmA,VmB,VmstdA,VmstdB • fixed calculation for lowH2O • sent to Ron for Release
5	12/2/14	12/1/14 - RATA's now pick if they want to use CO2 or O2 for lb/MMBTU • Ms now uses lower of H20 and H20sat (iso and 30b methods) 12/2/14 - added number of sampling points (stratification attachment) Method 30B QA to page and report • sent to ron for release

ERT Version	Version Date	Description of updates
5	12/19/14	12/4/14 a. Method 30b blowing up when going to just added run… was because I had changed DeltaH to be calculated by dividing the nettravpts instead of average…. So this was dividing by zero on new runs with no points… now checks if nettravpts is 0 first b. For Qsd drop downs, have to not include method runs if there is no flow 12/5/14 - updated qrybuildcalcs (30**b**) to check for empty or incomplete data; should get rid of #error problems • updated apptblFieldDesc to have new formula's • ITM screen calc fields will now show formula on double click 12/9/14 - Fixed Method 30B import … changed apptblimportrundata fields F16 -F21 to double instead of integer; was importing zeros for small numbers • Fixed qrySampleRateCalcs30B to use function to pull InitRate(A and B) instead of linking qryinitsamplerate30b in query; this drastically reduced load time for Method 30B screens • sent to Ron/Stef for review 12/12/14 - fixed qrymasscalcs so that the same process rate parameter can be associated with multiple units of measure • fixed qrylimits to match million and trillion with mm and T (on emissions screen) to match limits • updated calculations for lb/trillion BTU using CO2 and O2 • added lb/Year; ng/joule using CO2 and O2; kg/hr • fixed renaming run; conflict message; now closes run data form first. • sent to Ron and Stef for review 12/19/14 - updated splash and admin screen with Stef's info
5	1/28/15	1/8/15 - fixed RATA report… had problem if PercCO2 was null. Updated qrymasscalc to check first 1/16/15 - added sort order to qrymasscalc to fix order of emissions in test reports 1/22/15 - fixed HGConcetraion() fuction to trap nulls… this would cause 30b to throw error if the YhdrA value was null 1/28/15 - fixed post leak checks on 30B header to use Vta, Vtb instead of Avolume and Bvolume
5	7/5/15	7/5/15- move set warnings up in exeCreateEmptyDB to stop delete warnings in Access 2013
5	10/9/15	imported emptytbls with descriptions for Data Dictionary 8/12/15 - added required fields and keys to data dictionary • created rptDataDictionary; to get word version, create PDF, then inside PDF, convert to word; that keeps the lines and colors. Can access report through admin screen. 8/13/15 - fixed issue where it would hang on step 3 if you went straight to create package file when ERT was first opened. This was because the "Date Created" was not part of the currname 8/20/15 - checks to see if "eyeyey" exists before trying to create it to uppack the zip package on selecting PDS 9/3/15 - uncommented on error in frmEFLink.load to show incomplete data message on package create • fixed ISO,30b run screens causing "file in use" error on package create… commented out UpdateCurrRun; not needed 9/8/15 - red '*' on fields required to calculate emissions/concentrations on ISO header page 9/14/15 - Fast ISO fix … commented out assignment of master and child form links (except for emissions subform) in cbolocation.afterupdate. The lab and emissions were causing error in 2010. 9/15/15 - updated the message to show "only the target high, target low and comments" can be changed for the process associated with the selected SCC. - 9/18/15 - had to uncomment link to lab form to fix 2010 run data error

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		- 9/22/15 - custom methods no longer save to apptblMethodsFull. The method dropdown now pulls custom methods from tblMethodParams. This allows a user to delete custom method if they enter it wrong (ITM or ISO). • sent to EPA for review 10/7/15 - Method 30b now has DeltaHA and DeltaHB 10/9/15 - updated with new SCC's from Theresa Lowe… updated splash and admin screen to have Theresa's info • sent to EPA for review
5	10/29/15	10/29/15 - added Mod. Method 26A Sub. S and compounds • added Method 0010 and compounds • added Method 29 front and back half metals • fixed FRS hyperlink on testplan and admin screen • updated admin screen email link to Theresa Lowe • help button on admin screen will now prompt for ERT manual if it can't find what it is looking for. So for a new manual, • delete the old manual (in the same folder as ERT) and click the button. You will be prompted to select the new manual. • created zipped .exe that has ERT and manual for release on EPA website
5	11/13/15	11/13/15 - took out "nz" in tm calc; This was causing it to average an extra row. • Changed 30B printed report to not include leak checks that = zero
5	12/3/15	12/1/15 - RATA's; being done wrong; CEMS O2 was coming from Method 3A O2; this is wrong, all CEMS data should come from plant - Add column for CEMS O2 Corr on Rata page • Change calc to CEMS O2 from new field instead of Method 3A 12/2/15 - Fixed ITM data screen where it was zeroing out the emission for the first selected run. Had to uncomment the subform assignment in the colocation after update on master run data form • sent .exe file for live version post to web 12/3/15 - Now when submission package file action is submit or resubmit test report, it catches and prompt to enter when the SCC process values are null or zero • created .exe for live release
5	1/15/16	1/5/16 - added Method 30B calculations to the calculations report. • added popup calculations for Method 30B Sample Data Screen. • created .exe for live release 1/15/16 - added attachment records for M18 and M320 supporting data
5	2/14/16	2/14/16 - fixed it so manual test methods without flow information will still create XML files, however there will be no emission factor. • PS3 RATA report now grouped by location. • RATA reports and screen now sorted by val([run]) • created .exe for live release
5	3/15/16	3/15/16 - updated the text for location explaining the upstream and downstream. Also fixed the upstream and downstream labels in the test plan review qa • added updated users manual 3-11-16, created live zip exe
5	4/22/16	4/8/16 - fixed Testplan review QA form to show the limits from tblRegs. 4/14/16 - expanded rounding from 5 to 10 for ExpectedMDL; 5 was causing it to round to zero which would show zero on the 30B header form and cause the printed 30B report to show a QA error 4/22/16 - added "getfwt()" to buildmasscalcs for 30B … this lets it calc ppm
5	5/2/16	5/2/16 - Added CTM 027 and OTM 029 • Added mg/hr, ug/hr, and ng/hr

ERT Version	Version Date	Description of updates
		• Updated conversion for standard temperature from 459.67 to 460 to match CFR value • Updated conversion for water density from 0.0022005 to 0.002201 to match CFR • value • Updated conversion for ideal gas constant from 21.8405 to 21.85 to match CFR value • created zipped EXE for release
5	6/20/16	5/4/16 - added the function ExportRawData() in the Tableinfo Module; this will export all of the raw data tables into an XML file. 5/12/16 - created code to include the raw and summary data in the XML file in the package; commented out now; but works. 6/7/16 - qrybuildcalcs30B now uses the tsHDR for stack temp… tsHDR is determined based on the dropdown list in the header screen. It can be user entered, pulled from another run, or calculated from the stack temp point data. 6/16/16 - Method 0023A added; updated SCCs; removed SIP classification in test plan 6/21/16 - in 6/20/16 release; took PS5 and PS7 out of Methods and Target Parameter report; created .exe for release
5	8/11/16	6/22/16 - added PS8 6/23/16 - updated PS8 report to show correct labels • upped the correction limit to 20%; frmCorrAnalye 6/28/16 - Excess Air on Sample Detail printed report now shows Not Applicable if O2 (20-21%) or N2(79-80%) • turned on Raw Data XML; Now the summary and raw data are exported to the XML file on package file creation. 7/19/16 - will now show custom ISO methods on import screen method dropdown list. • added Method 25B. • created zipped .exe file for release, sent to Theresa 8/9/16 - updated users guide to 6-28-16 version • Attachment now says "Method 320/321 …. " • Vmstd now to 3 decimal places • add lb/day, kg/day, kg/year, tons/hr, tons/day, tons/year to the emissions/concentration table • added Method 25B to PS8 8/10/16 - Fixed Test plan attachment button; Hide the "Test company…", changed name of other to include all the certifications (except lab); this points to attachment 40. In 3/18/14, attachments 41,42 were combined into 40. Also fixed getscore for 40 to be 15 instead of 5 • For Method 26, This is the only Manual (ISO type) method. Which means they don't enter DeltaP or Stack Temp point data; this causes errors to %H20sat, Mfd, Ms, Vs, Qsd, Qaw, and MMBtu/Hr in qrybuildcalcs; So this keeps the XML from being created. Put test in qrybuildcalcs for Method 26 • linked it to the 8/10/16 release of the users guide • added attachment record for full test plan (did not update scoring) • created .exe for release 8/11/16 - add /day to process and SCC time unit drop down • The submission package file is now created by using the TestPlanTitle. The label was renamed to ERT Submission Package File Name
5	10/6/16	8/12/16 - fixed labels on PS3 Cal Drift report 8/12/16 For Method 30, if they use a Mass Flow control, then there would be no dry gas entries in point data. DryGas readings are used to correct the concentration…. So put check that if drygas is empty, then use the standard temp (Tstd 68) instead of drygas calc…. FIX…

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		in qryBuildPointsCalcs30B put test for tmA and tmB, if no drygas a or b in point data, then use 68 8/15/16 - if no test plan title, package name will pull from facility name • created .exe package for release 8/16/16 - save as template now deletes cal set data (tblCals) • Method 25A and 25B do not apply correction to Cave to get Cgas….Cgas = Cave instead of Cgas = (Cavg - Co) * (Cma / (Cm -Co)) 9/19/16 - Took out Total Organic Compounds from Method 25a; they now must choose the as what basis • created .exe package for release 10/6/16 - qryBuildCalcs now checks Method 26 and isnull(deltapavg); this let's method 26 show iso stuff if it was entered • created .exe package for release
5	4/20/17	10/17/16 - updated Vmstd from 459.67 to 460 (method 30B too) 11/29/16 - Does not hide oxygen in Method 3A CO2 screen .. CO2 is now a pollutant and could have an oxygen correction 12/6/16 - added Method 5A, 308 • cannot enter slash or backslash in PDS name on testplan screen 12/13/16 - added frmWSApp; woodstove application form with attachments - still hidden 12/20/16 - facility gets credit for all attachments if they have attached the full test report (id52) • added unit labels to iso header and point data; dscfm to flow on ITM run results; spell correction to seconday in SCC table; added citation and reporting requirements to completeness check and attachment tab; corrected rollover Pstatic label to in H2O on header tab 12/22/16 - fixed testplan qa form and location form verbage for distance and calculations • created .exe package with the new Manual from Theresa and sent to Theresa for release 1/12/17 - fixed Package Name on TestPlan to only allow Letter, Numbers, Dashes, or Spaces • created .exe package with the new Manual from Theresa and sent to Theresa for release 1/27/17 - took out the attachments of the XML export file 2/2/17 - fixed the Vmstd formula description to show "460" instead of "60" … calc in query was always correct! 4/7/17 - created from my computer; .exe for release (testing mising .dll) 4/20/17 - changed G40 on rptqryPSTRATAResultsO2CO2 formula from =IIf((([rasPPMdif]/100)*[avgRefPPM]>Abs([SumPPMDiff]),IIf(Round([rasPPMdif],0)<=20.5, "PASS",IIf(Abs([SumPPMDiff])<=1.05,"PASS","FAIL")),IIf(Abs([SumPPMDiff])<=1.05," PASS", "FAIL")) ; To =IIf(Round([rasPPMdif],0)<=20,"PASS",IIf(Abs([AvgPPMDiff])<1.05,"PASS","FAIL")); this uses the average not the sum for pass/fail • created .exe from my computer for testing and release
5	8/1/17	6/8/17 - changed text in label 2 of PST O2 to PS3 RATA; also took out "some State Rules" from the label • deleted top label field in above RATA and changed " < or =" to be the actual number • hooked to new User Manual • created .exe for test and release. 6/13/17 - fixed the report verification form to cycle through current record, not all…. Confirmed this switch on all related forms; Created release package and sent to Theresa

		6/19/17 - new website for version check https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert 8/2/17 - Microsoft Security updated made the getGUID() stop working, this caused the create new PDS to not work. Fixed this with new way to create guid • **created .exe package and sent to Theresa for testing and release**
5	1/25/18	1/4/18 - updated Wood Stove B415 queries to not use dlookup functions. Now create temp tables for apptblWSB415RunPointsNext and apptblWSB415DryWtNow which must be created each time before the qryWSB415BuildCalcs gets run. This much faster than having everything be queries. 1/23/18 - added screens for WS2515E-11 … still need to add tabs for Ambient, Results, and Efficiency 1/25/18 - Finished WS2515 screens
5	3/7/18	3/7/18- Theresa changed wording on WS Main menu buttons • she added new appstandard types • I updated the appstandard field length to 50 in emptytblWSApp • fixed the WS add new run; the drop down list had changed and had to update the case statement to match.
5	3/19/18	3/19/18 - made the upstream and downstream report text match the form
5	4/26/18	4/26/18 - attachments; changed AttachID from autonum to integer, updates tblattachment on select PDS, trap add attachment in frmtblAttachments, subMultiAttach (only places that allow adds to attachment) to get new number before insert.
5	5/2/18	5/2/18 - CalPreZSysBias and CalZPreDrift have the fields reversed in the ITM screen. The only place this showed up was on the printed reports. The Field Desc and sort order were swapped in the apptblFieldDesc table so the report will read correctly.
5	5/10/18	5/10/18 - -Million tons added to measure list; Total Dioxins and Furans, Semi-volatile metals (Pb, Cd, and Se), Semi-volatile metals (Pb and Cd), Low volatile metals (As, Be, and Cr), Low volatile metals (As, Be, Cr, Sn, Co, Mn, Ni), and Total Condensables (Organics + Inorganics) added to compound list
5	6/26/18	6/26/18 - Added the tester's DQ comments to the full report printout. • fixed to show all of the processes; Had to take out the TestplanID as the link. TestplanID is not used.
5	6/29/18	6/29/18 - SCCs list updated; compound threshold limits updated; edit on Stack and Sampling Data (%H2O from %H20)
5	7/27/18	7/27/18 - updated Methanol MW = 32.04
5	8/15/2018	8/15/18 - took my email address out of splash screen
5	10/29/18	10/29/18 - added first draft of WS Checklist • updated to include new SCC table
5	11/29/18	11/29/18 - changed caption of wood summary form to Hydronic Heater… will have to be updated to change for each type of heater picked
5	12/20/18	12/20/18 - added onehour pm to tblWS2515Header and put it on the 2515 results page
5	2/12/19	2/12/19 - added update table button on BoxA and BoxB that sets focus to the datasheet and does a save. This is to help with the pastenot saving issue.
5	2/27/19	2/27/19 - Changed label of time interval of Avg. to Time Interval of Data Recording in ITM Run Results tab; copyright permission and citation for CSA 415.1-10 (R2015) added to Method 415.1-10 header; WS2515PBtunnel PT (point) changed from number to short text; On summary A test duration changed to hour from minute basis; Wfuel changed from kg to lb and Mcave changed from wet to reporting dry basis; added appropriate titles to columns of Summary tables; added query to create summary table for adjustable wood heaters -needs first hr PM (g/hr), weighted average in g/h; need to add different burn categories for FAF, pellet stoves, single and adjustable burn rates

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5	3/28/19	changed label for Summary QryWSHHHangtag and changed the name of the tag to qryWSHHAdditional Information; qryWSHHAnnualwtg edited the column names; created qryAWBSsummary – this needs to be linked to methods 28R and ASTM E2780 from the applications for Wood Burning stoves – these methods will need another summary tab with Weighted Particulate emission average of the run, overall average efficiency from the runs and Total CO emissions.
5	4/30/19	4/30/19 - this is now the master version; copied from Theresa's 3/28/19 version
5	5/3/19	5/3/19 - has box C …. Efficiency and results are now popups for 2515
5	5/6/19	broke out the results and efficiency screens from the 2515 form. The form was taking too long to load because of the complex queries. Now the complex query only runs when you select results or efficiency.
5	5/7/19	5/7/19 - fixed box a, b, c update button to walk through datasheet to trigger calcs
5	5/17/19	5/17/19 - boxA calcBarmetricAVG would not calc unless BEG, MID, and END had values… fixed this and average is based on how many are not empty. Also did this for the Stove T avg temperature.
5	5/23/19	Added 13 wood species to fuel default list (apptblWSFuelDefault); corrected typo - position on lab and EPA third party reviewer tab; added mg to filter label; added Province to State/Province on application need to add ability to add what is not on the list; added country label; need to add country cell
5	6/3/19	6/3/19 - This was from Theresa; now the new dev master
5	6/9/19	6/9/19 - added button for WS attachments, fixed HH summary tables • fixed delete runs for WS • 415B burn categories pick list changes based on heater type
5	6/10/19	6/10/19 - fixed issue with category list; had to take out comma's
5	6/26/19	6/26/19 - updated WS Summary tables, has one hour pm, delete WS runs work
5	6/27/19	6/27/19 - updated pellet stove summary results total to show the value of the overall for qryWSFAFSumTotals and qryWSFAFSum changed ○ qryWS2515Efficiency. [Emissions (lb/MMBtu Out)] AS [Total Emissions Rate (lbs/MMBTU)], § Changed to: Total Emissions Rate (lbs/MMBTU): [qryWSB415Results]![MMBtuOutput_Part]
5	7/22/19	7/22/19 - FA Furnace summary… changed total to average emission on page b
5	7/24/19	7/24/19 - Adjustable Burn rate, Single Burn Rate, HH Part C summary tables added
5	7/25/19	7/25/19 - added Part C and Part D summary tables • added Cpi and Cpcf • On application main form, add "Manufacturer Instructions to Lab"; button for attachment
5	9/11/19	9/11/19 - changed Elapsed time to decimal in 415 and 2515 tables
5	9/16/19	9/16/19 - added runrownum to the temp table so we could find the #2 row for each run. This fixed the errors in qryWSB415BuildCalcs GP_CO and GP_HC • sent version to Theresa
5	9/17/19	9/17/19 – tl - In qryWSB415Results changed Avg(qryWSB415BuildCalcs.FGpercO2) AS O2Avg to Avg(qryWSB415BuildCalcs.CalcPercO2) AS O2Avg. This fixes the Air/Fuel Ratio.
5	9/18/19	9/18/19 – tl - In qryWSB415BuildCalcs, fixed equation for energy loss CO EL_CO from : 0.001*[DW_CO]*([HCC_N2]+282993) AS EL_CO to 0.001*[DW_CO]*([HCC_CO]+282993) AS EL_CO. This fixes the HHV output calculation.
5	9/30/19	9/30/19 – tl - used run row number to fix errors in row 2 of qryWS415BuildCalcs SL Loss, Total loss and Chem Loss 2; fixed typos in CSA 415 Copyright notice on frmWS415; this came from TL 10-2-19
5	10/14/19	10/14/19 - created qryWSBurnRatePi and qryWSKi to be used with qryWSAdjRateSumWtg to calculated based on the burnrate lookup table apptblWSBurnRatewgtedProb.
5	10/21/19	10/21/19 - added the "Weighted particulate emission average" on the summary page for Adjustable Rate WS

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5	10/21/19	10/21/19 - been updated to pull the efficiency calcs (Heat output rate btu/hr and MJ/hr, emissions lb/MMBTU output and g/MJ) from either qryWS2515Efficiency or from qryWS2515EfficiencyG415MMTbuOutput (which pulls from B415) depending on the heater type. Below is the code that determines which is used (basically, only the Hydronic Heater uses qryWS2515Efficiency, all the others use the other one with the B415 data).
5	10/31/19	10/31/19 - Includes ITM spreadsheet import (remember to setup the parameters in the test plan); sent to TL
5	11/1/19	11/1/19 - added Access version, build, and bit info to the frmAdmin screen
5	11/5/19	11/5/19 - corrected tunnel velocity (vs) equation to use dry molecular wt (Dilution Tunnel MW dry) not wet (calcDilution Tunnel MW wet) in the following queries: qryWS215BoxAPointscalc, qryWS215BoxBPointscalc, qryWS215BoxCPointscalc, qryWS215BoxAPointscalc_1hr, qryWS215BoxBPointscalc_1hr, qryWS215BoxCPointscalc_1hr, qryWS215Results_1hr, qryWS215Results
5	11/7/19	11/7/19 - changed formula in QryWSB415Results Qin Initdrylb*8600 to Qin = Initdrylb * HHVkg * 0.430211
5	11/27/19	11/27/19 - Added Canadian provinces to apptblStateCounty table and added regs to apptblFedRules table
5	12/2/19	12/2/19 - TL - Added missing fed rules to apptblFedRules table; new master dev as of 12/2/19
6	12/6/19	12/6/19 - Fix or checkout one hour (a.) Fix: make the one hour gram = the field above it. Has Import spreadsheet for 2515 tables; one run per spreadsheet. Fix for non-working efficiency calc button was deleting the orphan record in the tblWS2515HHPoints table added country field in application for all contacts; sent to TL for review (along with 2515 import template spreadsheet)
6	12/12/19	12/12/19 - save to template now saves WS application, attachments and deletes all other WS data; single burn rate now shows the correct burn categories Proportional RateA and B now are red if not between 90-110
6	12/13/19	12/13/19 - qryWSPelletSumTotals; Changed OverAll CO Emissions from g/hr to g/min
6	12/16/19	12/16/19 - qryWSFAFSum.Delivered Efficiency is now: HHVOutputBtu/Qin (didn't add the * 100 because don't need it when you make the column a Percent Format); HH summary - Added % format, changed to Qout/Qin; AdjRatesummary - changed Ndel to % format; Pellet summary - removed "Overall" from CO emissions header; Preburn form - corrected lb/lb-mole text; HH summary - Ndelfi now % format; Singleburn - fixed qrySWSingleRateSumTotals to use the qryWSSingleRateSum query
6	12/30/19	12/30/19 - summary tables will show red cells when PM is over the limits
6	1/22/20	1/22/20 - took out "Hangtag" in the summary table headers
6	2/9/20	2/9/20 - Added Fuel Info tab to 2515 Please go Header and data tab; We are missing the word "to" a. Take out "hangtag" in summary titles b. Take out "optional" in the attachment names … add "required" when required c. Look at adding new attachments; Getting errors! d. #3 dropdown box is too small for text e. The stove has to be conditioned for at least 50 hours before the test; add box on preburn 2515; Conditioning hour g. 60 day requirement; Must be submitted within 60 days of test; Add Submittal date to Application; show red if over 60 days; Add on application, if yes for postponed; add box saying this is partial data and does not need submitting to 3rd parties
6	2/10/20	2/10/20 - added print button for WS attachments and WS Summaries
6	2/11/20	2/11/20 - formatted summary values
6	2/12/20	2/12/20 - fixed Fuel screen calcs and formatting; added printed forms for B415, 2515, 2515 Efficiency to Run screen

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6	2/13/20	2/13/20 - added checklist print, updated the efficiency print to change datasources based on heatertype fixed issue with FAF not showing correct data in efficiency screen and in the summary screen updated summary for HH(qryWSHHSumB) to pull from qryWS2515Efficiency for Del. Eff. Also updated FAF to pull del. Eff from qryWS2515EfficiencyB415MMBtbOutput
6	2/28/19	2/28/19 - updated Method field to be 50 in the empty tables for tblEFLink, tblRunHeader, tblRunHeader30B, tblRunPoints, and tblRunPoints30B.… This will make an NEW PDS created from hear on out to have all Method fields be a length of 50.
6	4/15/20	4/15/20 - changed qrybuildcalcs.PercH20 to use Cdbl() instead of Val(). For values that contain "," it was resolving to 1 instead of the numerical value. New: PercH20: IIf(Val([vmstd])+Val([vwstd])>0,FormatNumber(100*(CDbl([Vwstd])/(CDbl([Vwstd])+CDbl([Vmstd]))),4,-1),0) Old: PercH20: IIf(Val([vmstd])+Val([vwstd])>0,FormatNumber(100*(Val([Vwstd])/(Val([Vwstd])+Val([Vmstd]))),2,-1),0)
6	5/29/20	5/29/20 - add button on Manual Field cut screen to show point to point isokinetics. Created query qryGasMeterNxt to get the previous end time and the next gasmeter reading for use in the calculations. Created query qryP2PISO to pull in qryGasMeterNxt and qryBuildCalcs to create iso calcs. The button displays the form frmShowPtISOs which is a datasheet form showing the Iso calcs from qryP2PISO filtered by the current runnumber. Note: had to add "and P2PISO <> 0 in the button to make the P2PISO field show; for some reason, if there is a filter on the form, that field would not display.
6	6/1/20	6/1/20 - took out Orifice, Stack, and Meter Temp from point 2 point iso form.
6	6/30/20	6/30/20 - Added RATA PST Hg to PS12B. Added Rata fields to tblRunLab30B; made qryPSTRATAResultsHg, subfrmPSTRunData30BHg, and rptqryPSTRATAResultsHg.
6	7/15/20	7/15/20 - added attachment for PS12B Rata; added check box for PS2, PS3, and PS4 Rata's to show if using wet values or not. This has a note on the report if they are using wet values
6	7/16/20	7/16/20 - 1. Statement 11 should have a space for website and a place for the statement In the application on the second tab for Compliance statement 11. Add "Statement and " in front of Website URL. 2. In the excel template for E2515 and the ERT, there is FB Rear Temp in both Box A and B. One should be Top temp; Change Box B FB REAR to FB Top in ERT and spreadsheet import(NOT DONE) 3. In 1 hour opt. tab of excel template, I feel redundant to enter again the firebox temperature since we have all of them in the Box A and B (and by the way, FB TOP TEMP is missing). Same thing for flue draft; Delete FB temperatures from Box C for 1 hour PM test – will it hurt anything to delete flue draft also?; Final Leak Rate change to Vacuum (in Hg) to where the second Final Leak Rate is. 4. Box A: The calendar appears when clicking on Test start time, so I entered the date. You should remove the calendar; True – remove calendar popup; ® PTB: this is a date/time field, the Calendar is part of the settings; it only shows a calendar if you click on the calendar. If I change it, it would change it everywhere. 5. Fuel Box: when you click on a cell where the is 0.00 written, you have to delete the 0 first before entering your number, really annoying; - PTB: This is a global Access seng that the user can change 6. Preburn: In reference document, no units for dP (in wc); I will update the manual 7. I figured out the volume data should be in cu ft instead of cu meter. It would be nice to be able to re-upload the excel spread sheet without having to fill again all the boxes.
6	7/27/20	7/27/20 - can print 201A Point to Point ISO calcs from "Select Report/Table" main menu
6	7/28/20	7/28/20 - added Vacuum to box A, B, and C. Also made the first leak rate be Initial for all boxes; for 2515Box A: took out impinger, added METER TEMP In, METER TEMP OUT, now calc's METER TEMP from the average of the in and out temps; Updated the import

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		tables and routines as well as the template spreadsheet and example import spreadsheets for 2515
6	8/4/20	8/4/20 - fuel update button on 2515 tab now only sums current run
6	8/5/20	8/5/20 - Box A Meter Temp will now use Meter Temp In or Meter Temp Out if only one value is entered. I will average the two if both values are entered.
6	8/17/20	8/17/20 - WS Checklist now prints Yes/No; HH Summary Navg(HHV) is now displayed in %; using wet RM in PS2 and PS3 now when checked; can print full report with or without 201P2P ISO's
6	8/18/20	8/18/20 - Added OMB numbers to federal regulation table - appFedRules; added red font explanation to frmWSAPP, frmWS2515 and frm WSHHSummary; updated SCC table
6	8/21/20	8/21/20 - RATA shows ABS() of difference; added Cgasw for NOX RATA
6	8/24/20	8/24/20 - some rata's would not show report; 1. Problem was in qrybuildCalcsITM, the getFWT function is looking for the compound; we took out the abbreviations in apptblCOMPNDS; I fixed the function to work with this… .also confirmed the wet ratas work for CO and NOx
6	8/27/20	8/27/20 - The SCC's have been added and the RATA text has changed
6	8/28/20	8/28/20 - fixed WS Partial Part C and Part D Summary tables. The steady state times were not calc correctly and the part d did not take into account the moisture. Startup PM emission index (g/kg fuel): $(([ZeroWt] - [StartWt])/2.2)/(1+[qryWSB415Results].[MCdry]/ 100)$ Steady State PM emission index (g/kg fuel): $(([StartWt]-[EndWt])/2.2)/(1+[qryWSB415Results].[MCdry]/100)$ End PM emission index (g/kg fuel): $(([EndWt]-[FinalWt])/2.2)/(1+[qryWSB415Results].[MCdry]/100)$
6	8/28/20	8/28/20 - updated the WS 2515 import to include the Fuel table… also fixed the above Part D calcs by adding the PM to the start of each equation!
6	9/21/20	9/21/20 - Fixed the isokinetic equation $(1-(H2O))/100$
6	10/29/20	10/29/20 - Fixed recovery calculation for Method 30B- Section 1 and section 2 now summed for each sorbent tube in apptblFieldDesc. AM3=SpikeRecovery([AM1]+[AM2],[AVT],[AMS],[BM1]+[BM2},[BVT],[Forms]![frmRunDataDetailsMaster]![subForm]![subfrmHdrData30B]![MercuryMassUnits]) BM3=SpikeRecovery([BM1]+[BM2],[BVT],[BMS],[AM1]+[AM2],[AVT],[Forms]![frmRunDataDetailsMaster]![subForm]![subfrmHdrData30B]![MercuryMassUnits]); in apptblFieldDesc, removed Section 1 from the field description of Spike Recovery (Crec) and Recovery Percentage (R)B; SCC table 30700110 recovery furnace added measure, material and action; in qryBuildCals and apptblFieldDesc changed 460 F to 459.67 in Qsd, PercI, Vmstd, VmstdA, VMstdB, Vs, Vwstd, VwstdA, and VwstdB; changed molecular wt of water from 18.0 to 18.015 in Vwstd, VwstdA, VwstdB; Removed DeltaPave from the frmRunDataDetails and frmRunData30B because it was not the ave delta P; updated apptblVersion
6	11/19/20	11/19/20 - updated SCCs, updated p2piso with temperature correction and molecular wt of water, updated help contact information
6	12/7/20	12/7/20 - correct links to Mod method 26ASubS, added PRA link to splash page, printed history update and zipped ERTv6 12/7/20 for posting
6	2/24/21	2/24/21 – Changed version check to point to new ERT Drupal site

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6	3/24/21	3/24/21 - Corrected qryspikevalues30B to calculate recoveries correctly (was not taking into account both fractions); added mg/wscm mg/scm and mg/acm at stack conditions; added blank process units of measure, material and action to SCC table for processes with no blanks so process can be specified if not available for primary aluminum; correct Vwstd formula for converting from grams to lb in Vwstd, VwstdA, VwstdB; added sqrtDeltaPave and removed Average velocity head from the report; fixed report to display 3 decimal for sqrtdeltaPave; fixed display of results in reports by formatting numbers; corrected a format issue that was causing ppm not to calculate - 3-25-21
6	4/7/21	4/7/21 - corrected the Mfd calculation so it would not truncate to two decimal places; FormatNumber(1-(IIf(Val([PercH20])>Val([PercH20sat]),[PercH20sat],[PercH20])/100),4) AS MfdCalc, FormatNumber(IIf([tblrunheader].[Method]="Method 26" And IsNull([DeltaPavg]),"",[MfdCalc]),4) AS Mfd; Ms, Md - 4 decimal places, squareroot of delta Paverage 6 decimal places - makes calculations for flow rate closer to excel calculations (approximately 0.1% difference). Updated manual formulas.
6	4/26/21	4-26 added missing SCCs 30400102, 30400103, and 30400110 - secondary aluminum
6	5/6/21	Corrected Ms formula; established link to formula for square root of delta P
6	8/4/21	Fixed tmA and tmB label on qryBuildCal30B; add Method 9 to Method selection list; fixed formula on form frmRunDataITM so cert date for high cal displays instead of displaying mid cal cert date; added PAH compounds to Method 0010.
6	2/28/2022	Added Method 326, OTM 45,OTM 46, and compounds to ERT; added SCC for Primary Magnesium Chlorine Bypass Scrubber; updated manual.
6		4 20 2022 - 508 compliance; 5 4 2022 fixed qryWSAdjRateSum - summary table HHV efficiency to percent instead of decimal
6		6 3-14 2022 add missing HAPs - acetonitrile, link methods with compounds added Method 0039, 0030, 0031, 0040, 0050, 0051, 0060, 0100, 105, 106, 107, 107A, 108, 108A, 108B, 108C, 10A, 10B, 11, 111, 114, 115, 14A, 15, 15A, 16, 16A, 16B, 16C, 18, 20, 204, 21, 22, 25, 25B, 25C, 303, 310, 312, 313, 318, 320, 321, and 323, 3B, 3C, 6, 6A, 6B, 7, 7A-d, 9 compounds; update SCC list
6		11-7-2022- Added tables and forms to support "Other Methods"; updated logic to support "Other Methods"
6		5-22-2023-Fixed bugs preventing new "Other Methods" tables, forms and logic from working as expected
7		8-21-23-added ug/wscm to units of measure list; removed next and previous buttons for instrumental form; updated SCC Measure column
7		9-6-23 fixed web links on frmAdmin page; updated missing SCCs; tabbing and color fix for 508 compliance; added SCC warning when creating new PDS from template; 10/3/23 corrected version check;
7		12-8-23 updated fed reg list; added mg/acm@160C; added methods; 12/20/23 added NCASI methods; fixed sum of Ki equation for adjustable wood appliances; 3/5/24 added OTM-50, corrected chloroform MW
7	3/11/24	3/11/24 release of Miscellaneous Methods summary table version 7
7	3/26/24	3/26/24 removed space from ppm@ unit of measure on Miscellaneous method table; fixed selecting associated process run on Miscellaneous Method Emission tab; added calculated values to xml schema
7	5/28/24	5/28/24 corrected mg/acm@160 calculation, removed facfax and testfax, fixed sorting of burn rates for adjustable wood appliances; updated SCC list - May 10,2024 was latest update.

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7	2/12/2025	fixed Miscellaneous methods table to allow multiple locations and link to process runs; updated SCC lists - added units, material and action for reciprocating engines g per horsepower-hr of work output and lb per MMBtu of fuel burned; added Total VOC as propane, Total HC as propane and Total NMHC as propane to compound list; added criminal false statement to wood heater application and OMB number, approval and expiration dates.
7	5/23/25	Fixed completeness check to always pop up when creating a submission file so an ITR is in the xml for EF development; fix g to grams, Added ASTM 6522; added compounds to ASTM D6348; checked SCC to make sure up-to-date; fixed fax error
7	6/23/25	Fixed gr/dscf to grains/dscf correction