Results Qualifier

Qualifier	DESCRIPTION
!	Refer to RSLT_PREFIX_QUALIFIER for more information
*	ALL ANALYSIS TYPES: Duplicate analysis was not within control limits; DI FURA/HERB/PPCB/SVOA/TCLPHRB/TCLPVOA/TCLPSVL/TCLPPST/VOA: Surrogate values outside of control limits (pre 1/1/15 definition); ALL ANALYSIS TYPES: Duplicate analysis not within control limits (pre-05/30/03
+	METAL: Correlation coefficient for MSA (Method of Standard Additions) < 0.995
<	Numerical value reported was less than the requested reporting limit (e.g. MDL, MDA, RRL, IDL).
>	Actual value was greater than the reported result.
?	Other, defined in COMMENTS column
A	SVOA/VOA: TIC (Tentatively Identified Compound) was suspected aldol condensation product; PPCB/SVOA/VOA: Suspected aldol-condensation product (pre-05/30/03 definition) RAD: Analyzed but not detected at the analyte quantitation limit. (LAB_CODEs PORTS, PGDP
B	ANION/METAL/OTHIN/TCLPMET/WETCHEM: Value was less than the CRDL (Contract Required Detection Limit) or RRL (Required Reporting Limit) specified, but greater than or equal to the IDL (Instrument Detection Limit)/MDL (Method Detection Limit); DI FURA/HERB/PPCB/SVOA/TCLPHRB/TCLPVOA/TCLPSVL/TCLPPST/VOA/OTHOR: Compound was found in the associated blank as well as in the
C	METEO: Calm wind (wind speed only); PPCB: Pesticide confirmed by GC/MS(Gas Chromatography/Mass Spectrometry); METAL: Possible
D	METEO: Channel disabled during interval; RADS: Sample is statistically different from duplicate; BIOPOP: Value reflects decrease due to sampling; DI FURA/HERB/PPCB/SVOA/TCLPHRB/TCLPVOA/TCLPSVL/TCLPPST/VOA/OTHOR: Identified in an analysis at a secondary dilution;
E	ANION/METAL/OTHIN/TCLPMET: Result estimated due to matrix interferences; DI FURA/HERB/OTHOR/PPCB/SVOA/TCLPHRB/TCLPVOA/TCLPSVL/TCLPPST/VOA: Concentration exceeds calibration range of the
F	BIOSURVY: Fat individual; RADS: For alpha spec., FWHM(Full Width at Half Max) exceeded acceptance limits
G	BIOTOX: Male
H	Analysis performed outside holding time requirement.; METEO: High alarm limit exceeded(data valid)
I	BIOTOX: Indeterminate sex; RADS: Tentatively identified isotope(Mixed Waste Characterization Project, Y-12 Oil Land Farm
J	BIOSURVY: Estimated value; ALL ANALYSIS TYPES: Estimated Quantitation; ANION/DI FURA/HERB/PHYSC/PPCB/RADS/SVOA/VOA: Estimated, TIC (Tentatively Identified Compound) or < specified detection limit (pre-05/30/03 definition)
K	RADS: Missing one or more lines in spectrum
L	LCS and/or LCSD recovery outside of control limits. METEO: Low alarm limit exceeded (data valid); RADS: Reported measurement is associated with a negative blank; RADS: Laboratory Control Sample activity exceeds plus/minus 3 standard deviations of the mean (pre-05/30/03 definition)
L1	All anatypes: LCS/LCSD RPD outside acceptance criteria
M	METAL: Duplicate injection precision not met; RADS: Matrix Spike recovery is < 80% or > 120% (pre-05/30/03 definition)
N	ANION/METAL/OTHIN/TCLPMET/WETCHEM: Spike recovery not within control limits; SVOA/VOA: Applied to TIC (Tentatively Identified Compound) results that are reported as specific compounds based on a mass spectral library search; ALL ANALYSIS TYPES: Test was terminated prematurely (pre-05/30/03 definition); ANION/METAL: Spike recovery not within control limits (pre-05/30/03 definition); SVOA/VOA: Applied to TIC (Tentatively Identified Compound)results that are reported as specific compounds based on a mass spectral library search - does not apply to TICs reported as general classes of compounds (pre-05/30/03 definition)
N1	METAL/TCLPMET: MS/MSD RPD outside acceptance criteria
O	METEO: Rate of change alarm limit exceeded (data valid)
P	HERB/PPCB: Difference between results from two GC columns outside control limits; HERB/PPCB: > 25% difference between two columns for Pesticides/Aroclors (pre-1/1/15 meaning); METEO: Power down during reporting interval; BIOPOP: Value reflects loss to
R	Rejected
S	VOA/SVOA/PPCB/HERB: Sample surrogate recovery outside acceptane criteria. METAL/TCLPMET: Determined by Method of Standard Additions; DI FURA: Signal-to-noise ratio of the confirmation ion does not meet 2.5 S/N requirement but peak was determined to be positive in the judgement of the GC/MS analyst

T	Tracer recovery outside control limits of 30-110%. BIOSURVY/BIOTOX: Thin individual; RADS: Tracer recovery is <20% or >105% (pre-2016
U	ALL ANALYSIS TYPES EXCEPT RADS: Not detected; RADS: Value reported is < MDA and/or TPU.
V	Incomplete sample (e.g., sample is a partial filet); METEO: Variable wind direction
W	METAL: Post-digestion spike recovery out of control limits
W1	METAL: Post-digestion spike and post-digestion spike duplicate RPD out of control limits
X	Other specific flags and footnotes may be required to properly define the results (see comments). METEO: Rate of change exceeded; DI
Y	Chemical yield exceeds acceptance limits
Y1	VOA/SVOA/PPCB/HERB: MS/MSD recovery outside acceptance criteria
Y2	MS/MSD RPD outside acceptance criteria
Z	Flag three, defined in COMMENTS column
Validation Qualifiers	
Qualifier	**DESCRIPTION**
=	Validated result, which is detected and unqualified
?	Other, defined in COMMENTS column(historical)
D	Analyte, compound or nuclide detected above the reported detection limit, and the reported detection limit is approximated due to quality
DJ	Detected above the reported detection limit, the reported detection limit is approximated due to quality deficiency;Positively identified, the associated numerical value is the approximate concentration of the analyte in the sample.
E	E= J=The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in
ED	E= J=The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the
EJ	E= J=The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in
EN	E= J=The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the
ENJ	E= J=The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	Presumptively present at an estimated quanitity (use with TICS only).
R	Result rejected by validator.
RD	Result rejected by validator;Detected above the reported detection limit, and the reported detection limit is approximated due to quality
REN	Result rejected by validator;E= J=The analyte was positively identified; the associated numerical value is the approximate concentration of
RJ	Result rejected by validator;Analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
RN	Result rejected by validator;Indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte, compound or nuclide not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated; Refer to the RSLTQUAL field for more information
XV	Not validated; Refer to the RSLTQUAL field for more information
XX	Unknown; Refer to the RSLTQUAL field for more information
XZ	Data evaluation performed; Validation qualifiers not applied; Refer to RSLTQUAL field for more information
Data Assessment Qualifiers	
Qualifier	**DESCRIPTION**
?	Other, defined in COMMENTS column
ASRECD	Lab reported result on an as-received basis. This needs to be considered when reviewing the data.

BH-CONT	Result may be biased high due to contamination of the sample from the field or laboratory.
BH-CONT, NOVAL	Result may be biased high due to contamination of the sample from the field or laboratory; Validation requested but qualifier not
BH-ER	Result may be biased high; chemical detected in associated equipment rinseate
BH-FB	Result may be biased high; chemical detected in associated field blank
BH-FB BH-RI	Result may be biased high; chemical detected in associated field blank and Result may be biased high, chemical detected in associated
BH-FB BH-TB	Result may be biased high; chemical detected in associated field blank and result may be biased high; chemical detected in associated
BH-FB, ?	Result may be biased high; chemical detected in associated field blank & Other, defined in COMMENTS column.
BH-FB,&	Result may be biased high; chemical detected in associate field blank. See comments for additional assessment qualifiers
BH-LAB	Result may be biased high; compound is a known or probable lab contaminant
BH-LAB R	Result may be biased high; compound is a known or probably lab contaminant; Result unusable.
BH-LABPR	Result biased high due to laboratory process
BH-PURGE	Result may be biased high; sample may be diluted with driling fluid due to insufficient purging prior to sampling
BH-QC	Result may be biased high based upon lab QC (i.e. surrogate, MS/MSD, etc.)
BH-RB	Result may be biased high; chemical detected in associated refrigerator blank
BH-RI	Result may be biased high, chemical detected in associated equipment rinsate.
BH-RI, BL-T	Result may be biased high, chemical detected in associated equipment rinsate and Result may be biased low; sample holding time
BH-SOLID	Result biased high due to sample containing a large amount of solids
BH-SS	Result may be biased high; sample may contain particles of the acetate sampling sleeve
BH-TB	Result may be biased high, chemical detected in associated trip blank
BH-TB, BL-TEMP	Result may be biased high, chemical detected in associated trip blank, result biased high due to a temperature exceedance.
BH-TEMP	Result biased high due to a temperature exceedance.
BL-ABSORB	Result may be biased low due to the amount of abosorbent material that was added during sampling in order to homogenize
BL-AIR	Biased low due to air rotary drilling method.
BL-AIR,&	Biased low due to air rotary drilling method. See comments for additional assessment qualifiers.
BL-HS	Biased low due to headspace in sample container
BL-HS, BL-TEMP	Biased low due to headspace in sample container & result biased low due to a temperature exceedance.
BL-LAB	Result may be biased low; compound is a known or probable lab contaminant
BL-LABPR	Result biased low due to laboratory process
BL-PRES	Result may be biased low due to improper preservative added.
BL-PRES, ?	Result may be biased low due to improper preservative added., Other defined in COMMENTs column.
BL-PURGE	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling
BL-PURGE,&	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling. See comments for
BL-QC	Result may be biased low based upon lab QC (i.e. surrogate, MS/MSD, etc.)
BL-SAMP	Result may be biased low due to sample collection problems.
BL-T	Result may be biased low; sample holding time exceeded
BL-T, BL-QC	Result may be biased low; sample holding time exceeded and result may be biased low based upon lab QC (i.e. surrogate, MS/MSD,
BL-T,J	Result may be biased low; sample holding time exceeded, estimated
BL-TEMP	Result biased low due to a temperature exceedance
BL-TEMP, BL-PRES	Result biased low due to a temperature exceedance, Result may be biased low due to improper preservative added.
BL-TEMP, J	Result biased low due to a temperature exceedance, estimated.
BL-TEMP, NOVAL	Result biased low due to a temperature exceedance, Validation requested but qualifier not provided due to missing Form I
BL-TEMP, U	Result biased low due to a temperature exceedance, not detected.

BL-TEMP, U, BH-QC	Result biased high due to a temperature exceedance, Not detected, may be biased high based upon lab QC.
CCCSEXP	Continuous Calibration Check Standard Expired
DIL	Result is obtained from dilution
DIS-EDDF1	Discrepancies exist between the EDD and the Form 1. Form 1s are generated by instrument software that automatically reports all detected compounds. It is the lab's policy to not report quantities below LCRs within their EDD format. Both sets of data are correct.
DR	Discrepancy between summary data report and raw data.
DRY	Result reported on a dry weight basis.
FDUP-OUT	Field duplicate exceeds the RPD criterion
ICPTIMS-ER	ICP-MS and TIMS error for the concentration of Uranium-235 is less than the 285 pCi/g level at one standard deviation.
ICSEXP	Initial Calibration Standard Expired
IN-LAB	Result should be considered information only. Compound is a known or probable lab contaminant
IN-LAB,&	Result should be considered information only. Compound is a known or probable lab contaminant. See comments for additional
IN-LABQC	Result should be considered information only. Quality control requirements of the laboratory method were not met.
IN-METH	Result should be considered information only. Lab utilized a modified method.
J	Result estimated
KYRHTAB-50	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with
KYRHTAB-ER	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with
KYRHTAB-LT	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the results are less than (LT) the minimum detectable activity (MDA) or detection limit and should
KYRHTAB-NE	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with
KYRHTAB-OK	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with
LAB-PREP	Prep method used by the lab valid but not proceduralized.
LCSEXP	LCS Expired
LCSNA	Laboratory control sample not analyzed.
LCSNI	LCS Not Independent
MDA-METHOD	The recalculated MDA is considered a method-wide MDA. Batch specific MDAs were not calculated.
MDA-RECALC	The original MDA of 21.4 pCi/L was calculated incorrectly and was recalculated during the Field Laboratory evaluation.The recalculated
MDL-RL	Analyte detected between the lab's reporting limit and method detection limit. See comments for additional information.
MSMSDEXP	Matrix Spike/Matrix Spike Duplicate Standard Expired
N/A	Not Applicable
NOVAL	Validation requested but qualifier not provided due to missing Form I
NOVAL-FLAB	Validation targeted for this project but not required for field laboratory data.
NR	Assessment question not resolved.
PENP	PE Sample Not Performed
QUAL	This data should be considered qualitative due to the sampling process, the variability in the medium sampled or issues with the
R	Result unusable.
R-C	Result questionable, credibility at issue.
R-C, ?	Result questionable, credibility at issue, other defined in COMMENTS column
R-C, BH-RI	Result questionable, credibility at issue. Result may be biased high, chemical detected in associated equipment rinsate.
R-C,&	Result questionable, credibility at issue. See comments for additional assessment qualifiers

R-DUPVAR	Result questionable, measured variability of the field duplicate is outside PARCC parameter expectations, therefore population estimates of variability may be off by several orders of magnitude.
R-H	Result unusable due to historical trending (i.e., outlier).
R-HSS	Rejected due to high suspended solids content.
R-MTRX	Result rejected due to matrix interference.
R-NORAD	Result unusable; Uranium-235 portion of calculation is below reliable detection limits.
R-NORAD,&	Result unusable; Uranium-235 portion of calculation is below reliable detection limits. See comments for additional assessment
R-NTRS	Result rejected; not a true representative sample
R-NTRSFW	Result rejected; not a true representative sample of formation water
R-PRES	Result rejected due to improper preservative added.
R-RERUN	Result unusable, results from re-analysis should be used
R-T	Result rejected due to missed holding time
REM	Location sampled has been remediated due to a CERCLA or RCRA action and should not be considered representative of current site
U	Not detected
U,J	Not detected and result estimated
U-RAD	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result
U-RAD,&	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result, see comments for
USEC-ASRECD	The USEC-PGDP lab has historically reported results on an as-received or wet weight basis. This needs to be considered when reviewing
USECNITRIC-CF	During the period from May 2004 to September 2009, the USEC-PGDP lab used method RL-7128-NITRIC for isotopic uranium analysis by alpha spec. Method RL-7128-NITRIC utilizes only nitric acid for dissolution rather than hydrofluoric/nitric acid. The use of nitric acid only is a less aggressive dissolution for isotopic uranium analysis by alpha spec. It has been demonstrated that Method RL-7128-NITRIC can only be utilized for isotopic uranium analysis of soil with activity greater than 10 pCi/g due to low recoveries below that level. Therefore, if the data from Method RL-7128-NITRIC will be screened against the background values reported in Background Levels of Selected Radionuclides and Metals in Soils and Geologic Media at the PGDP (1997), the following adjusted background values must be used: U-234: 1.73 pCi/g surface and 1.63 pCi/g subsurface, U-235: 0.10 pCi/g, and U-238: 0.40 pCi/g (Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Appendix E (2009)). Risk assessors may use data from this time period for comparison against other thresholds below 10 pCi/g without adjusting the values as long as the level of uncertainty and its impact on the risk assessment/evaluation are adequately discussed. No

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