APPENDIX V
"J" DATA QUALIFIER SOURCE AND MEANING[1]

Appendix V lists the parameters and criteria that produce a "J" flag in accordance with the *National Functional Guidelines for Organic Data Review* (EPA 1991e) and *Laboratory Data Validation Functional Guidelines for Inorganics Analyses* (EPA 1988e) as applied to data from the Contract Laboratory Program. The appendix also indicates the likely implication of this flag on the associated result(s).

The criteria listed in this guidance should be used to flag CLP data as "J," or "estimated concentration" (the associated numerical value is an estimate of the amount actually present in the sample). With proper interpretation, the results of analytes which are flagged "J" can often be used in making decisions.

Data flagged with "UJ" indicates that the value is undetected and quantitation limit may be imprecise. Data flagged with "NJ" indicates that the value is tentatively identified and confirmation is needed in future sampling efforts.

PARAMETER	CRITERIA	ACTION	LIKELY IMPLICATION[2]
ANALYSIS: Organic (3/90) VOA & BNA			
Holding times	14 < VOA < 30 days 7 < BNA < 22 days	Associated samples (+ results)	Low
Mass Calibration			No generalization
Ion Abundance	Several data elements in expanded window	All associated data	Precision
Calibrations			
-- initial	Average RRF < .05 %RSD > 30%	Compound specific (+ results) Compound specific (+ results)	Low
-- continuing	RRF < .05	Compound specific (+ results)	Precision
	%D between initial and continuing calibration > 25%	Compound specific (+ results)	
Blanks	If associated result is between detection limit and CRQL	Compound specific	High

PARAMETER	CRITERIA	ACTION	LIKELY IMPLICATION[2]
Surrogates	If surrogate recoveries are low but > 10%	Fraction specific (+ results) (negative results are flagged w/sample quantitation limit as estimated (UJ))	Low
	Any surrogate in a fraction shows < 10% recovery	Fraction specific (+ results)	Low
	If surrogate recoveries are high	Fraction specific (+ results)	High
Internal standards	If an IS area count is outside -50% or +100% of the associated standard	Associated compounds (+ results) (non-detects flagged w/sample quantitation limit - UJ)	No generalization
TICs	None	All TIC results - (NJ)	No generalization
ANALYSIS: Pesticides (2/88)			
Holding Times	7 < PEST < 22 days	Associated positive results (negative results - UJ)	Low
Instrument Performance	DDT breakdown > 20%	Associated positive DDT results (J) Results for DDD and/or DDE (NJ)	Low
	Endrin breakdown >20%	Associated positive Endrin results (J); Results for Endrin Ketone (J)	Low

PARAMETER	CRITERIA	ACTION	LIKELY IMPLICATION[2]
Calibrations			
-- initial	If criteria for linearity not met	Associated positive results	No generalization
-- continuing	If %D between calibration factors > 15% (20% for compounds being confirmed)	Associated positive results	No generalization
Surrogates	If low surrogate recoveries obtained	Associated results	Low
Compound Quantitation and Detection Limits	Quantitation limits affected by large, off-scale peaks	Estimated quantitation limit (UJ)	No generalization
ANALYSIS: Inorganic (3/90)			
Holding Times/ Preservation	Exceeded	Associated samples > IDL [<IDL (UJ)]	Low
Calibrations	Correlation coefficient <0.995	Associated samples > IDL [<IDL (UJ)]	No generalization
	Midrange CN-standard not distilled	Associated samples	Precision
-- ICV or CCV	%R outside windows but within the ranges of 75-89% or 111-125% (CN, 78-84% or 116-130%; Hg, 65-79% or 121-135%)	Associated samples > IDL	Low/High
-- ICS (for ICP)	If ICS recovery > 120%	Associated samples > IDL	High

PARAMETER	CRITERIA	ACTION	LIKELY IMPLICATION[2]
	If ICS recovery falls between 50-79%	Associated samples > IDL [<IDL (UJ)]	Low
	Interferents with concentrations comparable to or higher than analyte levels	Associated samples > IDL [<IDL (UJ)]	High
	ICS Al, Ca, Fe, and Mg interfering elements > 2xCRDL and 10% reported concentration of the affected element	Associated samples	High
LCS (Aqueous)	Recovery within range 50-79% or > 120%	Associated samples > IDL [<IDL (UJ)]	Low/High
LCS (Solid)	Recovery outside control limits	Associated samples > IDL	Low/High
	Recovery lower than control limits	Associated samples [<IDL (UJ)]	Low
Duplicate	Outside control limits	Associated samples of same matrix > IDL	Precision
Matrix Spike Sample	Recovery > 125% or < 75%	Associated samples > IDL	Low/High
	Recovery within range 30-74%	Associated samples [<IDL (UJ)]	Low
AA Post Digestion Spike	Duplicate injection outside + 20% RSD (or CV) and sample not rerun once	Associated data > IDL	Precision

PARAMETER	CRITERIA	ACTION	LIKELY IMPLICATION[2]
	Rerun sample does not agree within + 20% RSD (CV)	Associated data > IDL	Precision
	Post digestion spike recovery < 40% even after rerun	Associated data > IDL	Low
	Post digestion spike recovery > 115% or < 85%	Associated data [<IDL (UJ)]	High/Low
	If sample absorbance is < 50% of post digestion spike absorbance and if furnace post digestion spike recovery not within 85 - 115%	Associated samples > IDL [<IDL (UJ)]	Low/High
	MSA not done	Associated data > IDL	Precision
	Any samples run by MSA not spiked at appropriate levels	Associated data > IDL	No generalization
	MSA correlation coefficient <0.995	Associated data > IDL	No generalization
ICP Serial Dilution	Criteria not met	Associated data > IDL	Precision

[1] **Selected Acronym Key**

BNA	--	Base/neutral/acid or semivolatile
CRDL	--	Contract required detection limit (inorganics)
CRQL	--	Contract required quantitation limit (organics)
CV	--	Coefficient of variation
ICS	--	Interference check sample
ICV	--	Initial calibration verification
IDL	--	Instrument detection limit
IS	--	Internal standard
PEST	--	Pesticide
RRF	--	Relative response factor
RSD	--	Relative standard deviation
TIC	--	Tentatively identified compound
VOA	--	Volatile

[2] **Implication Key**

Low: The associated result may underestimate the true value.

High: The associated result may overestimate the true value.

Precision: The associated result may be of poor precision (high variability).

No generalization: No generalization can be made as to the likely implication.