Department of Ecology EIM Environmental Information Management

EIM Help – Entering Non-Detects and Estimates

Draft

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Detection Limit

When a lab analyzes a sample, they can distinguish analytes from background only above a certain concentration, referred to as the detection limit. When the concentration of an analyte falls below the detection limit, it is reported as a non-detect and is qualified with a U (or U-variant).

Reporting Limit

When a lab analyzes a sample, they can accurately quantify analytes only above a certain concentration, referred to as the reporting limit. When the concentration of an analyte falls below the reporting limit but above the detection limit, it is usually reported as an estimate and qualified with a J (or J-variant). Labs report estimates as non-detects in some cases, if that's what they are required to do.

Both non-detects and estimates should be entered into EIM, along with detected result values. Even if an analyte is estimated or isn't detected, it's important to make a record of the fact that it was estimated or wasn't detected at a specific location and time.

Follow these steps for entering non-detects and estimates into EIM:

(1) Depending on your requirements, enter the lab's reporting limit, estimate, or detection limit in the ***Result Reported Value*** field (Column AX).

- Do ***not*** enter any of the following (exception - zero is applicable in rare instances):

ND	0 (zero)	>	<

(2) For non-detects, enter "U" (or special case U-variants – see full qualifier list in Result help) in the ***Result Data Qualifier*** field (Column BD).

- **U -** Analyte was not detected at or above the reported result.
- **UJ -** Analyte was not detected at or above the reported estimate.

(3) For estimates, enter "J" (or special case J-variants - see full qualifier list in Result help) in the ***Result Data Qualifier*** field (Column BD).

- **J** - Analyte was positively identified. The reported result is an estimate.

(4) Enter the lab's reporting limit into the ***Result Reporting Limit*** field (Column AZ) and indicate the ***Reporting Limit Type*** (below) in Column BA.

- **CRQL** - Contract-Required Quantitation Limit
- **EQL** - Estimated Quantitation Limit
- **LABDEF -** Lab-Defined
- **LOQ** - Limit of Quantitation

- **MRL** - Method Reporting Limit
- **PQL** - Practical Quantitation Limit
- **SQL** - Sample Quantitation Limit
- **UNKNOWN** - Unknown

(5) Enter the lab's detection limit into the ***Result Detection Limit*** field (Column BB) and indicate the ***Result Detection Limit Type*** (below) in Column BC.

- **CRDL** - Contract-Required Detection Limit
- **LOD** - Limit of Detection
- **MDL** - Method Detection Limit
- **UNKNOWN** - Unknown

EXAMPLE: The following shows the entry of BTEX results with a lab reporting limit of 5 ug/L and a detection limit of 1 ug/l. Benzene was detected, Toluene was not detected, and Ethylbenzene and Xylene were estimated.

Result Parameter Name (AS)	Result Reported Value (AX)	Result Value UOM (AY)	Result Reporting Limit (AZ)	Result Reporting Limit Type (BA)	Result Detection Limit (BB)	Result Detection Limit Type (BC)	Result Data Qualifier (BD)
Benzene	8	ug/L	5	LABDEF	1	MDL	
Toluene	1	ug/L	5	LABDEF	1	MDL	U
Ethylbenzene	3	ug/L	5	LABDEF	1	MDL	J
Xylene	2	ug/L	5	LABDEF	1	MDL	J