TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Adjusted Dermal RfD (5.1)	The adjusted reference dose (RfD) for each cehmical of potential concern detected which is derived from the oral RfD.	Derivations of the adjusted dermal RfD should be performed in accordance with Regional guidance.
Adjusted Dermal Cancer Slope Factor (6.1)	The dermal cancer slope factor for each chemical of potential concern, which typically is derived from the oral cancer slope factor.	Derivation of the dermal cancer slope factor should be performed in accordance with Regional guidance.
Adjusted Inhalation RfD (5.2)	The inhalation RfD for each chemical of potential concern which is derived from the reference concentration (RfC) value.	The derivation of the RfD from RfC should be performed in accordance with Regional guidance.
Adjustment (6.2)	The value used to derive the inhalation cancer slope factor from the unit risk value.	Toxicity values for carcinogenic effects also can be expressed in terms of risk per unit concentration of the substance in the medium where human contact occurs. These measures are called unit risks and can be calculated from cancer slope factors.
Arithmetic Mean (3)	The arithmetic average of detected concentrations.	
Background Value (2)	The background value for the chemical in that medium as defined by Regional guidance.	Refer to Regional guidance for how background values are determined and how background values are considered for COPC screening. If Regional guidance requires a "t- test" or other test which requires backup information, this information should be presented. A footnote should be added to this column to clarify the Regional method used for background. (e.g., literature value, data from a nearby site, statistical tool).
Cancer Risk (8)	The result of the cancer risk calculation for each COPC for each exposure route and pathway.	

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Cancer Slope Factor (8)	A plausible upper-bound estimate of the probability of a response per unit intake of a chemical over a lifetime. Usually, the cancer slope factor is the upper 95th % confidence limit of the dose- response curve.	Slope factors presented in Table 6 for each COPC are the same as cancer slope factors presented in Table 8.
Cancer Slope Factor Units (8)	Usually, the cancer slope factor is the upper 95th % confidence limit of the dose-response curve and is expressed as (mg/kg-day) <sup>-1</sup> .	
Carcinogenic Risk (Ingestion, Inhalation, Dermal) (9,10)	The cancer risk value calculated by receptor for each COPC for each exposure route for each exposure point.	The value at the bottom of each column presents the cancer risk by exposure route for each exposure point.
Carcinogenic Risk (Exposure Routes Total) (9)	The total cancer risk for each COPC across all exposure routes at each exposure point.	
CAS Number (2)	The Chemical Abstract Registry Number, a unique standardized number which is assigned to chemicals.	Provide CAS Number for chemicals detected in the samples for the medium.
Central Tendency (CT) (3)	Risk calculations which result from using less conservative methodologies, instead of reasonable maximum methodologies.	Refer to Regional guidance.

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
CT Rationale/ Reference (4)	The reason and reference for the parameter value used. If the parameter used is inconsistent with guidance values, provide a detailed explanation of the rationale and a complete reference for the value used.	Refer to Regional or National guidance for intake parameter values appropriate for each exposure pathway.
CT Value (4)	The parameter value used for the central tendency exposure intake calculation.	
Chemical (2)	The name of the compound detected in samples for the medium.	Chemicals can be arranged in the order that the risk assessor prefers.
Chemicals of Potential Concern (COPC) (3,5.1,5.2,5.3,6.1,6.2, 6.3,7,8)	Chemicals that are potentially site-related, with data of sufficient quality, that have been retained for quantitative analysis as a result of the screening documented in Table 2.	Provide the chemical name of the COPC based on the results of the screening documented in Table 2. Chemicals can be arranged in the order that the risk assessor prefers.
COPC Flag (2)	A code which identifies whether the chemical has been selected as a COPC, based on Regional screening guidance.	Yes No
Chronic/Subchronic (5.1,5.2,5.3)	Identifies whether the RfD for a particular chemical is for chronic (long-term) and/or subchronic (short-term) exposure.	The risk assessor should use professional judgement when extrapolating to time-frames shorter or longer than those employed in any crticial study referenced. As a Superfund program guide-line, chronic is seven years to a lifetime; subchronic is two weeks to seven years (RAGS Part A, Sections 6 and 8).

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Combined Uncertainty/ Modifying Factors (5.1,5.2,5.3)	The factors applied to the critical effect level to account for areas of uncertainty inherent in extrapolation from available data.	Refer to IRIS/HEAST for these values. Examples of uncertainty to be addressed include: - variations in the general population - interspecies variability between humans and animals - use of subchronic data for chronic evaluation - extrapolation from LOAELs to NOAELs.
Concentrations Used For Screening (2)	The detected concentration which was used to compare to the screening value.	Refer to Regional guidance in determining this value. For example, maximum or average values.
Date (MM/DD/YY) (5,6)	The date of the document that was consulted for the toxicity and target organ information.	The MM/DD/YY format refers to month/day/year. For example, the MM/DD/YY version of the date March 30, 1995 is 03/30/95.
Dermal (9,10)	The predicted route of chemical exposure through the skin.	
Detection Frequency (2)	The number of times the chemical was detected versus the number of times it was analyzed, expressed as the "fraction" X/Y.	Refer to Regional guidance for an explanation of how detection frequency should be interpreted and applied. For example, 5/9 indicates that a chemical was detected in 5 out of 9 samples.
Exposure Medium (1,2,3,4,7,8,9,10)	The contaminated environmental medium to which an individual is exposed. Includes the transfer of contaminants from one medium to another. For example, 1) Contaminants in Groundwater (the Medium) remain in Groundwater (the Exposure Medium) and are available for exposure to receptors. 2) Contaminants in Groundwater (the Medium) may be transferred to Air (the Exposure Medium) and are available for exposure to receptors. 3) Contaminants in Sediment (the Medium) may be transferred to Animal Tissue (the Exposure Medium) and are available for exposure to receptors.	Choose from the following picklist: Groundwater Leachate Sediment Sludge Soil Surface Water Debris Liquid Waste Solid Waste Air Plant Tissue Animal Tissue Spring Water Surface Soil Subsurface Soil Particulates Vapors Other

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Exposure Pathway (1)	The course a chemical takes from the source to the exposed individual. An exposure pathway analysis links the sources, locations, and types of environmental releases with population locations and activity patterns to determine the significant pathways of human exposure.	
Exposure Point (1,2,3,4,7,8,9,10)	An exact location of potential contact between a person and a chemical within an exposure medium. For example: 1) Contaminants are in Groundwater (the Medium and the Exposure Medium) and exposure to Aquifer 1 - Tap Water (the Exposure Point) is evaluated. 2) Contaminants in Groundwater (the Medium) may be transferred to Air (the Exposure Medium) and exposure to Aquifer 1 - Water Vapors at Showerhead (the Exposure Point) is evaluated. 3) Contaminants in Sediment (the Medium) may be transferred to Animal Tissue (the Exposure Medium) and Trout from Dean's Creek (the Exposure Point) is evaluated.	Provide the information as text in the table (not to exceed 80 characters).
Exposure Point Concentration (EPC) (1,2,3,4,7,8,9,10)	The value that represents a conservative estimate of the chemical concentration available from a particular medium or route of exposure.	The EPC may be calculated, measured, or modeled.
EPC Selected for Risk or Hazard Calculation (7,8)	The EPC that will be used to quantify potential cancer risks and non-cancer hazards.	M (i.e., Medium-Specific EPC) R (i.e., Route-Specific EPC) Follow Regional guidance for selection of this value.
EPC Units (3)	The units of the data being used to calculate the exposure point concentration (EPC).	Units may vary depending on the environmental medium.

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Exposure Route (1,4,7,8,9,10)	The way a chemical comes in contact with a person (e.g., by ingestion, inhalation, dermal contact).	Choose from the following picklist: Inhalation Ingestion Combined (i.e., Inhalation/Ingestion) Dermal Absorption Not Documented External (Radiation)
Exposure Routes Total (9,10)	The arithmetic sum of cancer risk and non-cancer hazards for the COPCs for the exposure point.	For non-cancer totals, follow Regional guidance.
Hazard Quotient (7)	The ratio of a single substance exposure level, over a specified time period, to a reference dose for that substance, derived from a similar exposure period.	
Ingestion (9,10)	The route of chemical exposure through eating (ingestion).	
Inhalation (9,10)	The route of chemical exposure through breathing (inhalation).	
Inhalation Cancer Slope Factor (6.2)	A plausible upper-bound estimate of the probability of a response per unit intake of a chemical over a lifetime.	Usually the cancer slope factor is the upper 95th % confidence limit of the dose-response curve for inhalation.
Inhalation RfC Units (5.2)	The RfC units for each chemical detected.	
Inhalation RfC Value (5.2)	The reference concentration value for each of the COPCs.	
Intake (Cancer) (8)	A measure of exposure expressed as the mass of a substance in contact with the exchange boundary per unit body weight per unit time (e.g., mg chemical/kg body weight/day).	Refers to the intake result using the parameters and equations/calculations and/or models presented in Table 4.

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Intake (Non- Cancer) (7)	A measure of exposure expressed as the mass of a substance in contact with the exchange boundary per unit body weight per unit time (e.g., mg chemical/kg body weight/day.	Refers to the intake result using the parameters and equations/calculations and/or models presented in Table 4.
Intake (Cancer) Units (8)	The units for intake for each COPC and exposure route.	
Intake (Non- Cancer) Units (7)	The units for intake for each COPC and exposure route.	
Intake Equation/Model Name (4)	The calculation, equation or model used for intake estimates for each exposure route.	
Location of Maximum Concentration (2)	The sample number which identifies the location where the sample was taken.	
Maximum Concentration (2)	The highest detected concentration of the chemical in the medium.	<i>Refer to RAGS - Part A (EPA, 1989) page 5-8 for guidance on detection/quantification limits.</i>
Maximum Detected Concentration (3)	The highest detected concentration of the chemical in the medium which is above the sample quantitation limit.	
Maximum Qualifier (2)	The alpha-numeric code assigned to the concentration value by the analytical chemist during data validation for the maximum concentration value.	

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Medium (1)	The environmental substance (e.g, air, water, soil) originally contaminated.	Choose from the following picklist: Groundwater Leachate Sediment Sludge Soil Surface Water Debris Liquid Waste Solid Waste Air Surface Soil Subsurface Soil Other
Medium EPC Rationale (for RME or CT) (3)	The reason the cited statistic was used to represent the EPC for RME or CT.	
Medium EPC Statistic (for RME or CT) (3)	The statistic selected to represent the Medium EPC Value (RME or CT), based on Regional guidance, the distribution of the data, number of data points, etc.	<i>Often, this is the 95% Upper Confidence Level (UCL) of the log-transformed data.</i>
Medium EPC Units (7,8)	The units associated with the Medium EPC Value.	Units may vary depending on the Medium.
Medium EPC Value (for RME) (3,7,8)	The EPC, based on either a statistical derivation of measured data or modeled data, that was selected to represent the medium- specific concentration for the RME exposure calculations. The Medium EPC differs from the Route EPC in that the Medium EPC does not consider the transfer of contaminants from one medium to another.	The Medium EPC Value may be developed from a statistical derivation of measured data or from modeled data. For example, the Medium EPC value may be statistically derived by calculating the 95% UCL of measured groundwater contaminant concentrations from multiple residential wells. Alternatively, the Medium EPC value may be selected as a single measured value if one data point is used to calculate the risk for each residential well individually. In some cases, the Medium EPC value may be a modeled value (e.g., if upgradient groundwater contaminant concentrations are used to model a downgradient exposure point.) Note that none of these examples consider the transfer of contaminants from one medium to another, as is evaluated by Route EPC.

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Medium EPC Value (for CT) (3,7,8)	The EPC, based on either a statistical derivation of measured data or modeled data, that was selected to represent the medium- specific concentration for the CT exposure calculations. The Medium EPC differs from the Route EPC in that the Medium EPC does not consider the transfer of contaminants from one medium to another.	The Medium EPC Value may be developed from a statistical derivation of measured data or from modeled data. For example, the Medium EPC value may be statistically derived by calculating the 95% UCL of measured groundwater contaminant concentrations from multiple residential wells. Alternatively, the Medium EPC value may be selected as a single measured value, if one data point is used to calculate the risk for each residential well individually. In some cases, the Medium EPC value may be a modeled value (e.g., if upgradient groundwater contaminant concentrations are used to model a downgradient exposure point.) Note that none of these examples consider the transfer of contaminants from one medium to another, as is evaluated by Route EPC.
Minimum Concentration (2)	The lowest detected concentration of the chemical in the medium.	
Minimum Qualifier (2)	The alpha-numeric code assigned to the concentration value by the analytical chemist during data validation for the minimum concentration value.	
Non-Carcinogenic Hazard Quotient (Primary Target Organ) (9,10)	The primary effect reported as a primary target organ effect in IRIS and HEAST.	
Non-Carcinogenic Hazard Quotient (Ingestion, Inhalation, Dermal) (9,10)	The non-cancer hazard calculated by receptor for each COPC for each exposure route for each exposure point.	The value at the bottom of each column presents the non-cancer hazard by exposure route for each exposure point, for all effects considered together.
Non-Carcinogenic Hazard Quotient (Exposure Routes Total) (9,10)	The total non-cancer hazard calculated for each COPC across all exposure routes at each exposure point.	The totals in each column present the total non- cancer hazards across all exposure routes for each exposure point. The values at the bottom of this column present hazard quotients for specific target organs.

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Not Documented (picklist term)	The CERCLIS 3 picklist term used when no information is available.	
On-Site/Off-Site (1)	The location of potential contact between a person and a chemical (contaminant) as it relates to the site boundary.	Choose from the following picklist: On-site Off-site On-site/Off-site Not Documented
Oral Cancer Slope Factor (6.1)	Cancer slope factor for ingestion.	
Oral Reference Dose (RfD) Units (5.1)	The oral reference dose (RfD) units for each COPC.	
Oral RfD Value (5.1)	The oral RfD value for each of the COPCs.	
Oral to Dermal Adjustment Factor (5.1,6.1)	The adjustment factor used to convert the oral RfD values to dermal RfD values.	
Parameter Code (4)	The code used for parameters in the intake equation.	See the instructions for standard codes. Other codes may be added if appropriate.
Parameter Definition (4)	The parameters used in the intake equation.	
Potential Applicable or Relevant and Appropriate Requirements and To Be Considered (ARAR/TBC) Source (2)	The type or source of ARAR/TBC value entered into the adjacent column.	For example, MCL SMCL
Potential ARAR/TBC Value (2)	ARAR/TBC values.	They could be MCL values, soil cleanup level values, or other values to be considered. Refer to Regional guidance regarding the requirements for this column.

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Primary Target Organ (5.1,5.2,5.3,9,10)	The organ that is affected most (i.e., experiences critical effects) by chronic or subchronic exposure to the specific COPC, and upon which the RfD is based.	
Range of Detection Limits (2)	The lowest and highest detection limits.	Refer to Regional or National guidance for definitions of detection limits.
Rationale for Contaminant Deletion/Selection (2)	The reason the chemical was selected or not selected for quantitative or qualitative analysis.	Follow Regional guidance for the rationale codes.
Rationale for Selection or Exclusion of Exposure Pathway (1)	The reason the exposure pathway was selected or not selected for quantitative or qualitative analysis.	Follow Regional guidance for the rationale codes. The narrative in the Table can not exceed 200 characters.
Reasonable Maximum Exposure (RME) (3)	The highest exposure that is reasonably expected to occur.	
RME Rationale/Reference (4)	The reason and reference for the parameter value used. This rationale may be Regional or National guidance.	If the parameter used is inconsistent with guidance values, provide a detailed explanation of rationale and a complete reference for the value.
RME Value (4)	The parameter value used for the RME intake calculation.	

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Receptor Age (1)	The description of the exposed individual as defined by the EPA Region or dictated by the site. For example, an adult (Receptor Age) resident (Receptor Population) who drinks contaminated groundwater.	Choose from the following picklist: Child Adult Adolescents (teens) Pre-Adolescents Not Documented Child/Adult Geriatric Sensitive Infant Toddler Pregnant Other
Receptor Population (1)	The exposed individual relative to the exposure pathway considered. For example, a resident (Receptor Population) who drinks contaminated groundwater.	Choose from the following picklist: Resident Industrial Worker Commercial Worker Construction Worker Other Worker Golfer Jogger Fisher Hunter Fisher/Hunter Swimmer Other Recreational Person Child at School/Daycare/Playground Trespasser/Visitor Farmer Gardener Other
Reference Concentration (7)	The toxicity value for inhalation typically reported as a concentration in air (mg/m <sup>3</sup> ) which can be converted to an inhaled dose (mg/kg-day).	
Reference Concentration Units (7)	The units associated with the reference concentration.	
Reference Dose (RfD) (7)	The preferred toxicity value for evaluating non-cancer effects resulting from exposures.	

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
RfD or RfC Units (7,8)	The units associated with the RfD or RfC for each COPC.	Typically reported in mg/kg-day, a dose term.
Route EPC Units (7,8)	The units associated with the Route EPC Value.	Units may vary depending on the Route of Exposure.
Route EPC Value (7,8)	The EPC, based on either a statistical derivation of measured data or based on modeled data, that was selected to represent the route-specific concentration for the exposure calculations. The Route EPC differs from the Medium EPC in that the Route EPC may consider the transfer of contaminants from one medium to another, where applicable for a particular exposure route.	The Route EPC may be developed from a statistical derivation of measured data or from modeled data. The Route EPC may be identical to the Medium EPC or it may be modeled based on the Medium EPC. For example, for groundwater ingestion, the Medium EPC and the Route EPC will typically be the same value. Alternatively, for groundwater inhalation, the Medium EPC will often be a statistical derivation if measured concentrations in groundwater, while the Route EPC will often be a modeled inhalation concentration that is based on the measured concentrations.
Scenario Timeframe (1)	The time period (current and/or future) being considered for the exposure pathway.	Choose from the following picklist: Current Future Current/Future Not Documented
Screening Toxicity Value (2)	The screening level used to compare detected concentrations of chemicals.	Refer to Regional guidance for the source of the screening value and for guidance on comparing the screening value to detected concentrations.
Source (6.1,6.2,6.3)	A reference for the weight of evidence/cancer guideline description entry.	For example: IRIS HEAST NCEA
Source of Toxicity/Primary Target Organ (5.3)	The source of the toxicity value and primary target organ information.	For example: IRIS HEAST NCEA
Source of RfD/RfC/Primary Target Organ (5.1,5.2,5.3)	The source of the RfD/RfC and target organ information.	For example: IRIS HEAST NCEA

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Subchronic (5.1,5.2,5.3)	A short-term (two weeks to seven years) designation.	As a Superfund program guideline, chronic is seven years to a lifetime; subchronic is two weeks to seven years (RAGS Part A, Sections 6 and 8). The risk assessor should use professional judgement when extrapolating to timeframes shorter or longer than those employed in any crticial study referenced.
Summary Box (2,3,4,7,8,9,10)	A box in the upper left corner of a Table containing the combination of parameters that define a unique exposure pathway.	The Summary Box typically specifies the unique combination of Scenario Timeframe, Medium, Exposure Medium, and Exposure Point. For selected tables, the Receptor Population and Receptor Age are presented.
Total Hazard Index (9,10)	A summation of non-cancer hazards across media and exposure routes.	Refer to Region-specific guidance on summing toxic endpoint effects.
Total Risk (9,10)	A summation of cancer risk across media and exposure routes.	
Toxicity Units (5.3,6.3)	The units associated with the toxicity value.	
Type of Analysis (1)	The level of evaluation (quantitative or qualitative) to be performed for the exposure pathway based on site-specific analysis.	Choose from the following picklist: Quant (i.e., Quantitative) Qual (i.e., Qualitative) None
Units (2,3)	The concentration units for each chemical detected.	Refer to Regional guidance to determine if thereis a preference regarding the units used fordifferent matrices (e.g., mg/kg for soil, ug/L forgroundwater). Choices include:mg/lµg/lpg/l%pg/l%ppbpptg/kgµg/kgng/kgµg/m³fibers/lfibers/m³fibers/lfibers/m³fibers/lgibers/m³pci/kgpCi/gpCi/kgpCi/m³pCi/m²/secOtherNotDocumented
Units (for parameter codes) (4)	The units for the parameter code used in the intake equation.	

TERM (TABLE LOCATION(S))	DEFINITION	ADDITIONAL INFORMATION
Unit Risk (6.2)	Toxicity values for carcinogenic effects expressed in terms of risk per unit concentration of the substance in the medium where human contact occurs. These measures can be calculated from cancer slope factors.	
Toxicity Value (5.3,6.3)	The toxicity value for each of the COPCs.	
Weight of Evidence/Cancer Guideline Description (6.1,6.2)	An EPA classification system for characterizing the extent to which the available data indicate that an agent is a human carcinogen.	EPA Group: A - Human carcinogen B1 - Probable human carcinogen - indicates that limited human data are available. B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans. C - Possible human carcinogen D - Not classifiable as a human carcinogen E - Evidence of noncarcinogenicity Weight of Evidence: Known/Likely Cannot be Determined Not Likely
95% UCL of Normal Data (3)	The statistic for the 95% Upper Confidence Limit (UCL) on the arithmetic mean of measured data.	Refer to National guidance (Supplemental Guidance to RAGS: Calculating the Concentration Term, OSWER Directive: 9285.7-08l, May 1992) and Regional guidance for calculating this term. Supplemental information should be provided in the risk assessment.