This document was too large to scan as a single document. It has been divided into smaller sections.

Section 5 of 14

Document Information			
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Uncertainties about the data will be evaluated in the exposure assessment and the effects assessment steps.

8.6.1 Problem Formulation

Environmental concentrations of contaminants deposited on the soil and water at exposure locations will be based on many predictions. A degree of uncertainty exists about the predicted spatial distribution of contaminants. Exposure concentrations could be overestimated or underestimated, depending on how good the model is at predicting contaminant distribution. The assumption that all soil or surface water in a given exposure area contains the COPC concentrations and ROPC activities modeled for the maximum location results in an overestimate of risk to populations.

Because conservative exposure parameters (section 8.6.2) will be used to calculate HQs, the estimates of risk from ecological COPCs and ROPCs are conservative (that is, protective). Using conservative exposure concentrations decreases the likelihood of underestimating the risk posed by each ecological COPC/ROPC and increases the likelihood of overestimating the risk. Note that for wildlife receptors not living in soil, sediment, or surface water, HQ is a function of COPC dose (ADD) or radiological dose (R), which, in turn, depends on a number of exposure factors (in addition to contaminant exposure concentration). Thus, several factors determine how conservative an HQ might be (in addition to contaminant exposure concentration).

The distribution and abundance of organisms comprising the ecological receptors at exposure locations have not been quantified by field studies. The lack of quantitative data introduces uncertainties concerning whether, and to what extent, the risk characterization based on the selected receptor species underestimates, or overestimates, the risk to organisms that are not used in the risk computations but are found at exposure locations.

One (or more) unobserved species at exposure locations is possibly more sensitive than those ecological species for which toxicity data were available. It does not necessarily follow that these unevaluated species are at significantly greater risk of harmful ecological effects than that estimated in the SLERA, because their exposure may be less than the conservatively estimated exposure for WTP receptors.

8.6.2 Exposure Assessment

Movement of contaminants from the exposure locations through direct and indirect pathways to ecological receptors will be modeled rather than measured for the SLERA. The lack of site-specific measurements introduces uncertainties about the actual modes and pathways of exposure and the actual exposure concentrations of these contaminants to the ecological receptors. Exposure concentrations can differ from the predicted environmental concentrations as a result of physical and chemical processes during transport from source to receptor. These processes will not be predicted quantitatively in the SLERA.

The modes and pathways used to characterize the exposure of ecological receptors are the most important ones for the relatively large and active species in terrestrial habitats. Soil-dwelling terrestrial animals may be exposed to contaminants in soil by way of inhalation. However, it is expected that concentrations of VOCs will be very small and that gaseous concentrations in soil interstices, cavities, and burrows do not exist. Inhalation exposures will not be evaluated in the SLERA. Therefore, the exposure to burrowing organisms at the site from contaminated soil and porewater in the soil may be underestimated if gas concentrations are larger than soil concentrations. Overestimating exposure by using conservative exposure concentrations is thought to offset the underestimation of exposure that results from neglecting certain

exposure modes and pathways of lesser importance. Additional uncertainties are inherent in ingestion rates and dietary fractions of plants and animals. Likewise, the effects of dermal exposure may be underestimated; uncertainty about those effects will be discussed qualitatively. Exposure concentrations are likely overestimated because of conservative exposure factors. Sources of conservatism in the exposure factors include using published BAFs, irrespective of species and environmental conditions.

8.6.3 Effects Assessment

Toxicity thresholds are based on concentrations reported to have no, or little, effect on the test organism or are estimated conservatively from published toxicity data. TRVs for wildlife receptors exposed to soils are derived from NOAELs or LOAELs reduced by safety factors of 10 for chronic LOAELs and subchronic NOAELs or 100 for subchronic LOAELs (Sample and others 1996). These thresholds would underestimate the risks only to organisms at the exposure locations that are considerably more sensitive than the receptor organisms for the specific toxicological endpoint. The thresholds are more likely to overestimate the risk to organisms that are equally or less sensitive than the receptor organisms. The possibility remains that some thresholds are set at levels at or above which some harm would occur to organisms at the exposure locations because receptors may be more sensitive to other toxicological endpoints.

There is limited data for developing inhalation TRVs and very limited data for developing dermal TRVs. Little is known about the actual absorption across the dermal layer of wildlife receptors. There is also uncertainty about the extrapolation of TRVs for ingestion to inhalation. Therefore, inhalation exposures will not be evaluated quantitatively. The uncertainties associated with neglecting dermal contact and inhalation toxicity will be discussed in the PRA.

The risks from exposure to multiple contaminants depend on contaminant interactions; effects could be greater or less than those from a single chemical. This RAWP provides methods for estimating ecological COPC-specific risk estimates and assumes additivity for calculating HIs. Overall, the effects assessment probably overestimates toxicity because the TRVs are based on concentrations that cause no observed effect in test animals rather than an effect that may be observable but is not great enough to threaten populations.

TRVs are not available for some COPCs. This lack of TRVs is especially true for organic COPCs. This situation will likely result in underestimated risks.

The TRVs for radiation exposure were proposed as doses that are unlikely to harm populations (IAEA 1992, Barnthouse 1995). Individual plants or animals or tissues of plants and animals may be more sensitive to radiation damage than the populations evaluated by IAEA (1992). For example, rapidly growing tissues such as root hairs may be particularly sensitive to external radiation if they are in close contact with contaminated media. Therefore, the SLERA may underestimate risks from radiation by an unknown amount.

Additional uncertainty exists as to the pertinence of individual organism toxicity for characterizing the risk to individuals, populations, and ecosystems. Populations possibly may compensate for the loss of large numbers of juveniles or adults with increased survival or birth rates, and habitats or ecosystems may possess functionally redundant species that are less sensitive to contaminants. Although the desert habitat at the exposure locations likely possesses some buffering mechanisms, a conservative risk assessment approach is still justified based on organismal toxicity thresholds (that is, NOAELs), which probably result in an overestimate of risk.

8.6.4 Risk Characterization

The uncertainties described above ultimately produce uncertainty in the quantification of current and future risks to plants and animals at the exposure locations. An additional area of uncertainty in the risk characterization is risk to receptors outside of the four exposure areas to be modeled.

It is unlikely that receptors outside the areas of maximum concentration and within the 50 km study area would have lower toxicity thresholds for contaminants than the thresholds used for receptors within those exposure areas. All representative organisms are assumed to be present at the locations of maximum concentration regardless of their actual distribution. In addition, there is little reason to expect that contaminants migrating outside the study area would be concentrated above predicted concentrations at the exposure locations. In general, the risk to receptors outside the exposure areas is likely to be overestimated rather than underestimated by the risk estimate for receptors outside the four exposure areas and within the 50 km radius of the site (Spromberg and others 1998).

8.6.5 Summary of Uncertainties

The most important uncertainties in the ecological portion of the SLERA for exposure locations are those surrounding the estimates of the contaminant concentrations to which ecological receptors are actually exposed (EPCs) and the concentrations that present an acceptable level of risk or harmful effects (toxicity thresholds or reference values). These uncertainties arise from multiple sources, for example, the lack of site-specific data on contaminant transport and transformation processes, organismal toxicity, animal behavior and diet, population dynamics, and the response of arid land plant and animal populations to stressors in their environments. Despite these uncertainties, the modeled exposure concentrations and published exposure and effects information will allow risks to be characterized for various exposure locations according to exposure/effects scenarios.

8.7 Summary for Screening-Level Ecological Risk Assessment

Risks to ecological receptors from the potential emission of COPCs and ROPCs result from exposure to and ecological toxicity of the COPCs and ROPCs. The SLERA will utilize the estimated emission rates (section 5) and results of fate and transport modeling (section 6) to calculate potential ecological receptor exposure to COPCs and ROPCs. This exposure information is combined with toxicity data to estimate the potential for adverse effects to terrestrial and aquatic organisms and populations in the vicinity of the WTP.

The SLERA will use conservative exposure assumptions to compensate for the high level of uncertainty associated with conducting a risk assessment for a facility that is still in the final design phases. The PRA will include a qualitative uncertainty analysis. The exact procedures that may be used to identify and evaluate the primary sources of uncertainty in the FRA will be determined at a later time.

The FRA will focus on ecological COPCs and ROPCs that exceed risk thresholds in the PRA and may utilize additional site-specific emissions, fate and transport, and exposure data collected after the completion of the PRA.

Table 8-1 Policy Goals, Ecological Assessment Endpoints, Measures, and Decision Rules for 200 Areas and Surroundings

Policy Goals	Assessment Endpoint	Measures	Decision Rule
Policy Goal 1: The conservation of threatened and endangered species and their critical habitats.	**Assessment Endpoint 1:** Protection of individuals of state or federally designated threatened or endangered (T&E) species. Endpoint species: bald eagle.	**Measure 1:** Modeled contaminant concentrations in prey (such as, deer mouse, western meadowlark, Great Basin pocket mouse, mourning dove, and fish) based on modeled concentrations of vapors in air and particulates, depositions of contaminant particulates to soil and surface water, and measured concentrations of contaminants in abiotic media. These concentrations are used to evaluate exposure of threatened and endangered predators. Chronic exposure concentrations and doses associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 1:** If threatened or endangered species are not present, or exposure point concentrations in the media do not contribute to the chronic NOAEL, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, the threatened or endangered species should be preserved. If the HQ $\geq$0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
Policy Goal 2: The protection of terrestrial populations and ecosystems.	**Assessment Endpoint 2:** Stable plant community for erosion control and energy production. Endpoint species: cheatgrass, rabbitbrush.	**Measure 2**: Modeled concentrations of vapors in air and particulates and depositions of contaminant particulates to soil. Chronic exposure concentrations associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 2:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, the plant populations and communities are maintained. If the HQ $\geq$0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.

Table 8-1 Policy Goals, Ecological Assessment Endpoints, Measures, and Decision Rules for 200 Areas and Surroundings

Policy Goals	Assessment Endpoint	Measures	Decision Rule
Policy Goal 2: The protection of terrestrial populations and ecosystems.	**Assessment Endpoint 3:** Stable soil-dwelling invertebrate community for nutrient and energy processing. Endpoint species: earthworms and darkling beetles.	**Measure 3:** Modeled concentrations of vapors in air and particulates and depositions of contaminant particulates to soil. Chronic exposure concentrations associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 3:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, the terrestrial invertebrate community is maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
	Assessment Endpoint 4: Stable populations of herbivorous animals. Endpoint species: mammals - mule deer; birds - mourning dove.	**Measure 4:** Modeled contaminant concentrations in food chain (such as, plants) based on modeled concentrations of vapors in air and particulates and depositions of contaminant particulates to soil. Chronic exposure doses associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 4:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of the herbivores (such as, mule deer and mourning dove) are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
	Assessment Endpoint 5: Stable populations of plant-eating or insectivorous animals (omnivores). Endpoint species: bird - western meadowlark.	**Measure 5:** Modeled contaminant concentrations in earthworms, plants, and other prey based on modeled concentrations of vapors in air and particulates and depositions of contaminant particulates to soil. Chronic exposure doses associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 5:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of omnivores (such as, western meadowlark) are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.

Table 8-1 Policy Goals, Ecological Assessment Endpoints, Measures, and Decision Rules for 200 Areas and Surroundings

Policy Goals	Assessment Endpoint	Measures	Decision Rule
Policy Goal 2: The protection of terrestrial populations and ecosystems.	**Assessment Endpoint 6:** Stable populations of terrestrial predators. Endpoint species: mammal - coyote; bird - burrowing owl and red-tailed hawk.	**Measure 6:** Modeled contaminant concentrations in prey (such as, western meadowlark and Great Basin pocket mouse) based on modeled concentrations of vapors in air and particulates and depositions of contaminant particulates to soil. These concentrations are used to evaluate exposure of predators. Chronic exposure doses associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 6:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of terrestrial predators are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
Policy Goal 3: The protection of aquatic populations and ecosystems.	**Assessment Endpoint 7:** Stable populations of sediment-dwelling organisms. Endpoint species: clams, insects, snails, and worms.	**Measure 7:** Modeled sediment contaminant concentrations from dispersion and deposition. Chronic exposure concentrations associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 7:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of sediment-dwelling organisms are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
	Assessment Endpoint 8: Stable planktivorous fish and small invertebrate populations. Endpoint species: water fleas and other invertebrates.	**Measure 8:** Modeled surface water contaminant concentrations. Chronic exposure concentrations associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 8:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of small invertebrates are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.

Table 8-1 Policy Goals, Ecological Assessment Endpoints, Measures, and Decision Rules for 200 Areas and Surroundings

Policy Goals	Assessment Endpoint	Measures	Decision Rule
Policy Goal 3: The protection of aquatic populations and ecosystems.	**Assessment Endpoint 9:** Stable waterfowl and shorebird populations. Endpoint species: Canada goose, spotted sandpiper.	**Measure 9:** Modeled contaminant concentrations in benthic invertebrates or aquatic plants based on modeled contaminant concentrations in surface water or sediments from dispersion and deposition. These concentrations are used to evaluate exposure of predators. Chronic exposure doses associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 9:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of waterfowl and shorebirds are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
	Assessment Endpoint 10: Stable populations of large carnivorous fish population for regulation. Endpoint species: salmon, bass, channel catfish.	**Measure 10:** Modeled surface water and sediment contaminant concentrations. Chronic exposure concentrations associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 10:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of large carnivorous fish are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.
	Assessment Endpoint 11: Stable fish-eating terrestrial predator populations for population regulation. Endpoint species: mammal - mink; birds - great blue heron, bald eagle.	**Measure 11:** Modeled contaminant concentrations in large carnivorous fish and planktivorous fish and small invertebrates based on modeled surface water and sediment concentrations. These concentrations are used to evaluate exposure of predators. Chronic exposure doses associated with no adverse effect on survival and reproduction.	**Decision Rule for Assessment Endpoint 11:** If the HQ is <0.25, then it is indicated that the contaminant alone is unlikely to cause adverse ecological effects and, therefore, populations of fish-eating terrestrial predators are maintained. If the HQ ≥0.25, lines of evidence will be evaluated to determine the potential for ecological risk and the need for any additional measurements or calculations.

T&E = Threatened and endangered.
NOAEL = No observed adverse effects level.
HQ = Hazard quotient.

Table 8-2 Toxicity Equivalence Factors for Chlorinated Dioxins, Chlorinated Dibenzofurans, and Polychlorinated Biphenyls[a]

Congener	Receptor		
	Mammals	Birds	Fish
Dioxins [b]			
2,3,7,8-TCDD	1	1	1
1,2,3,7,8-PeCDD	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.05	0.5
1,2,3,6,7,8-HxCDD	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01
1,2,3,4,6,7,8-HpCDD	0.01	<0.001	0.001
OCDD	0.0001	NA	NA
Dibenzofurans [c]			
2,3,7,8-TCDF	0.1	1	0.05
1,2,3,7,8-PeCDF	0.05	0.1	0.05
2,3,4,7,8-PeCDF	0.5	1	0.5
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01
OCDD	0.0001	0.0001	0.0001
Polychlorinated Biphenyls [d]			
3,4,4',5-TCB	0.0001	0.1	0.0005
3,3',4,4'-TCB	0.0001	0.05	0.0001
3,3',4,4',5-PeCB	0.1	0.1	0.005
3,3',4,4',5,5'-HxCB	0.01	0.001	0.00005
2,3,3',4,4'-PeCB	0.0001	0.0001	<0.000005
2,3,4,4',5-PeCB	0.0005	0.0001	<0.000005
2,3',4,4',5-PeCB	0.0001	0.00001	<0.000005
2',3,4,4',5-PeCB	0.0001	0.00001	<0.000005
2,3,3',4,4',5-HxCB	0.0005	0.0001	<0.000005
2,3',4,4',5,5'-HxCB	0.00001	0.00001	<0.000005
2,3,3',4,4',5,5'-HpCB	0.0001	0.00001	<0.000005
2,2',3,3',4,4',5'-HpCB	NA	NA	NA
2,2',3,4,4',5,5'-HpCB	NA	NA	NA

T = tetra, Pe = penta, Hx = hexa, Hp = hepta, O = octa, NA = not available.

[a] Values from WHO 1997.

[b] CDD = chlorinated dibenzodioxin.

[c] CDF = chlorinated dibenzofuran.

[d] CB = chlorinated biphenyl.

Figure 8-1 Ecological Conceptual Exposure Model

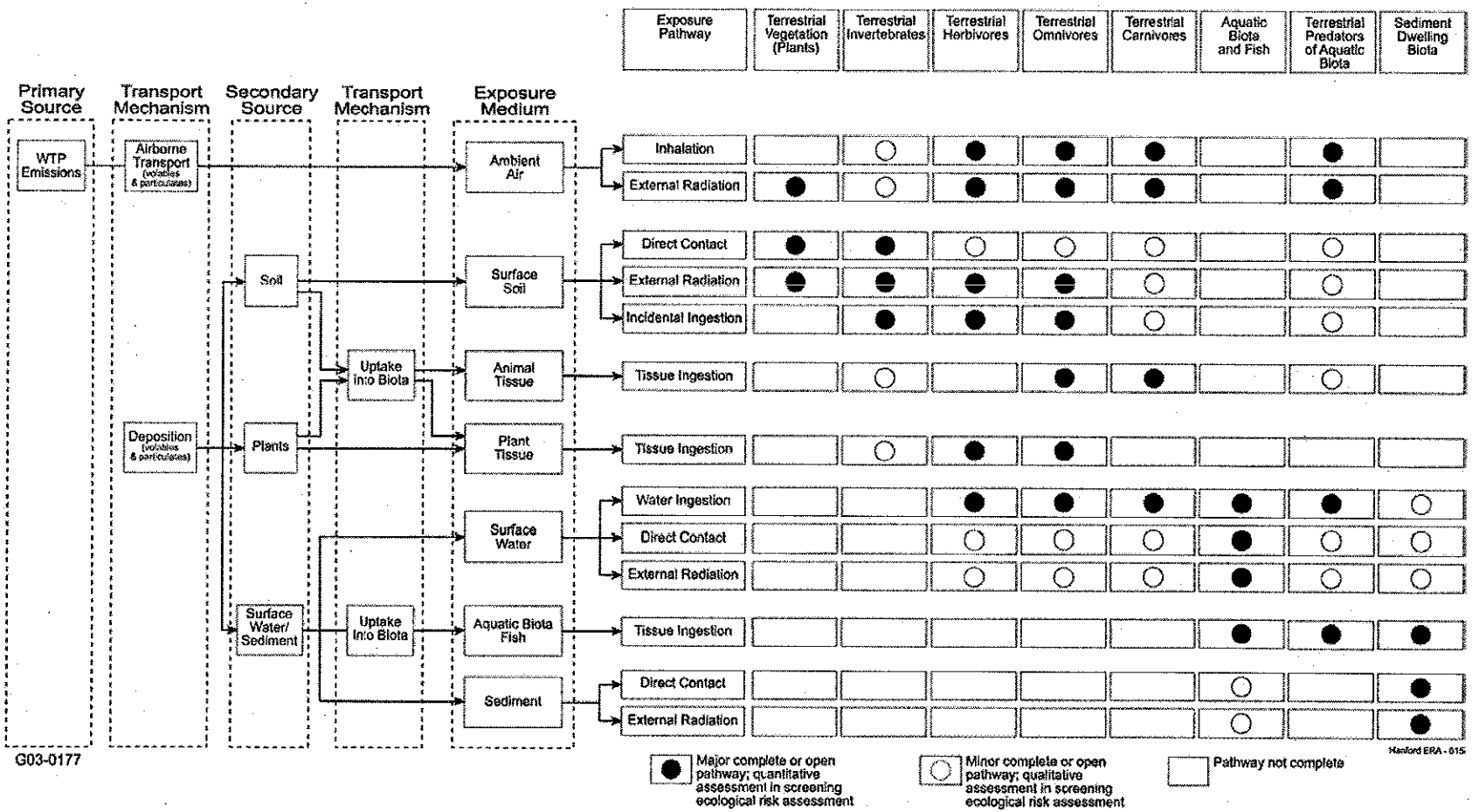


Figure 8-2 Recreation and Wildlife Areas and the Hanford Reach

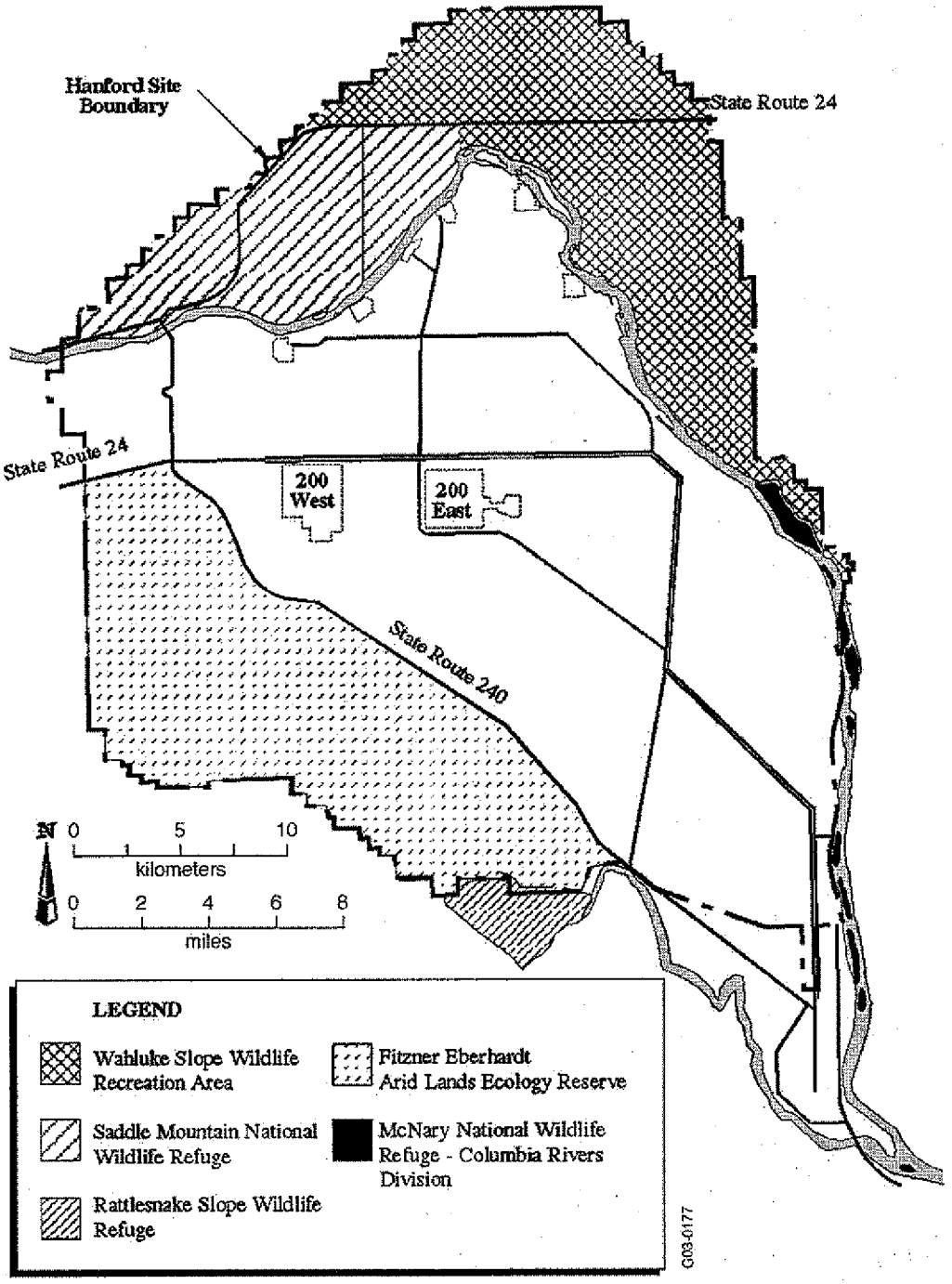
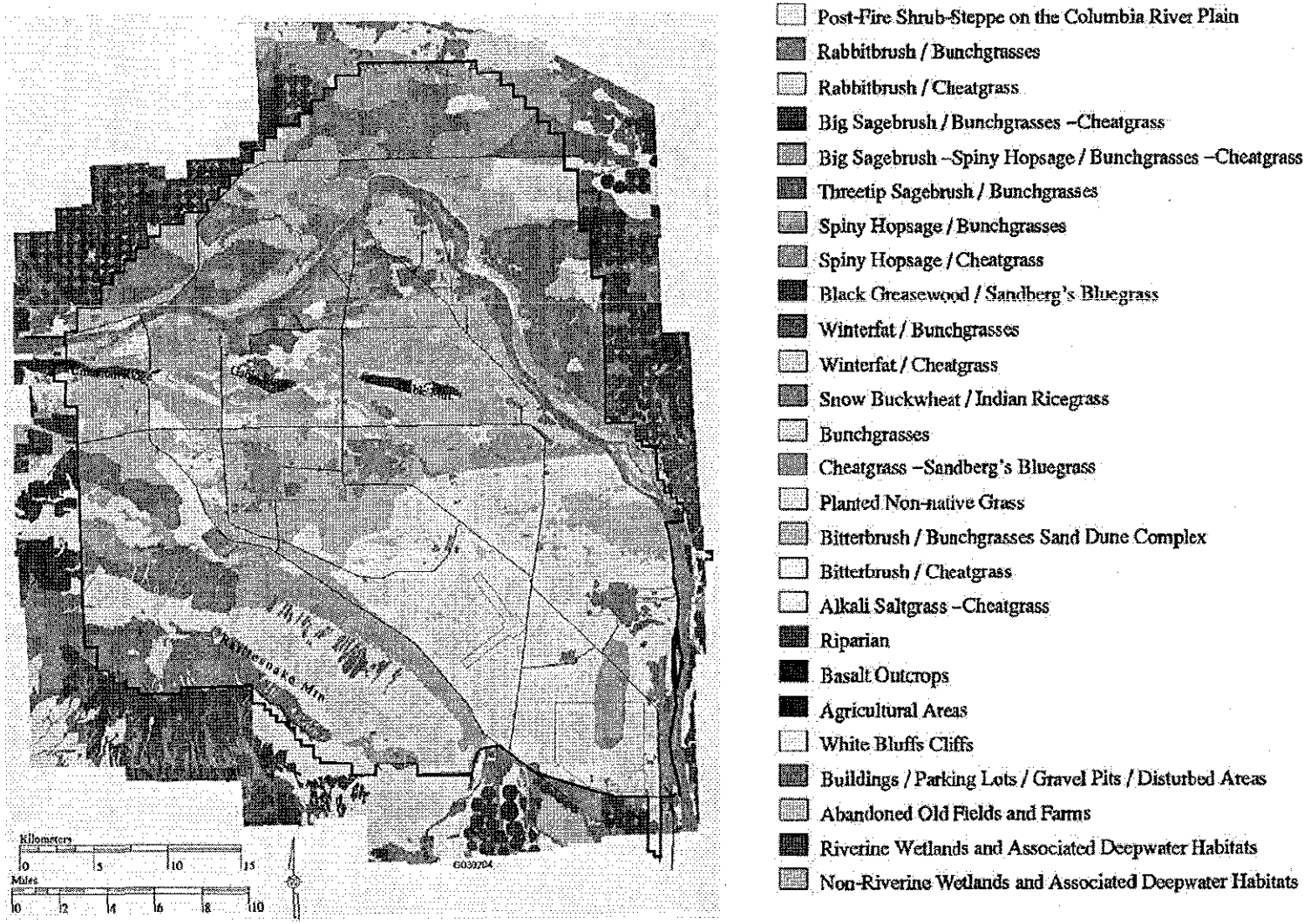


Figure 8-3 Vegetation Types of the Hanford Site



B11:rpp 04/22/96 clup/brmap d02.aml Database: 07-DEC-1998

Figure 8-4 Selected Raptor Nesting and Perching Locations on the Hanford Site

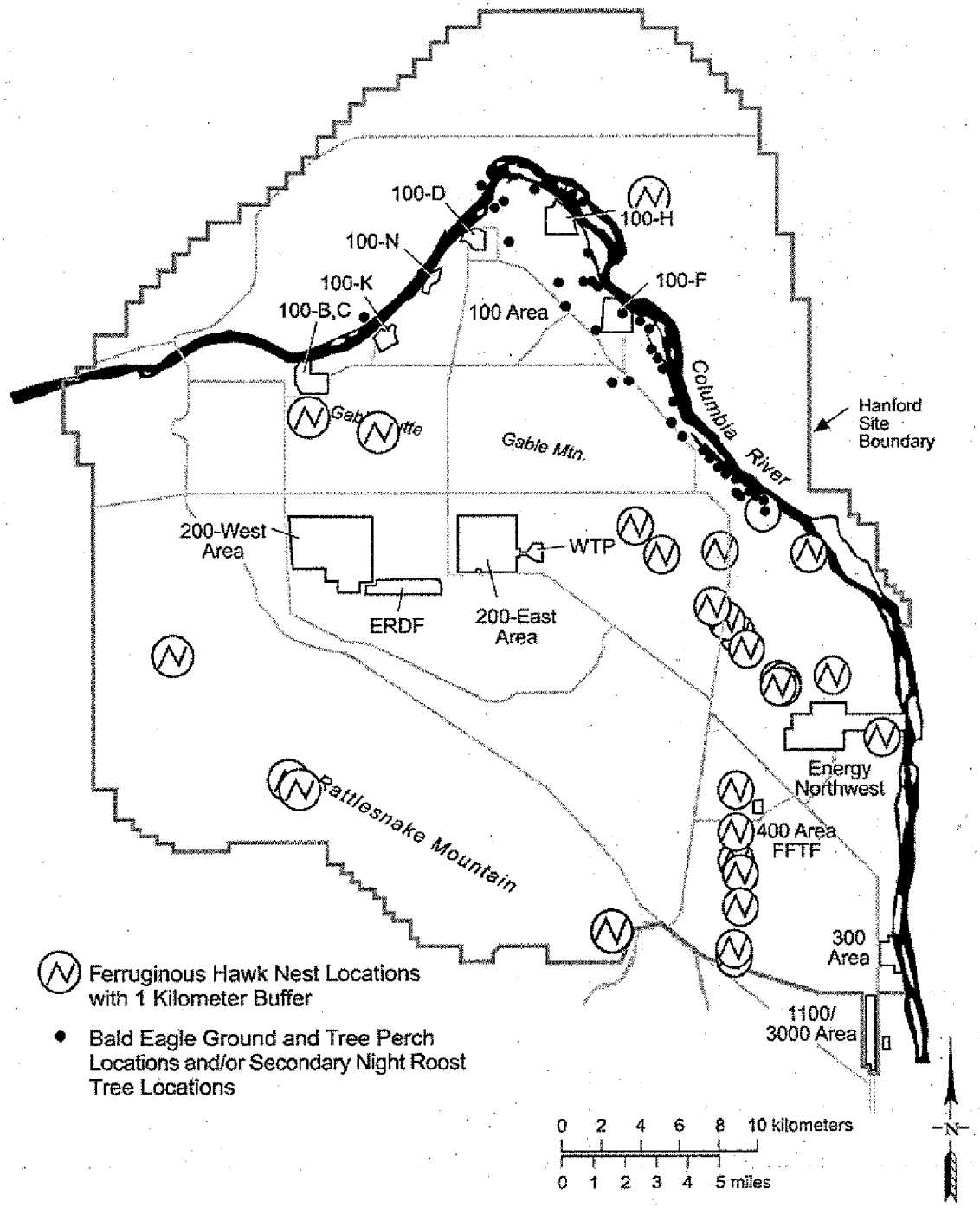


Figure 8-5 WTP Areas Vegetation Types (Simplified)

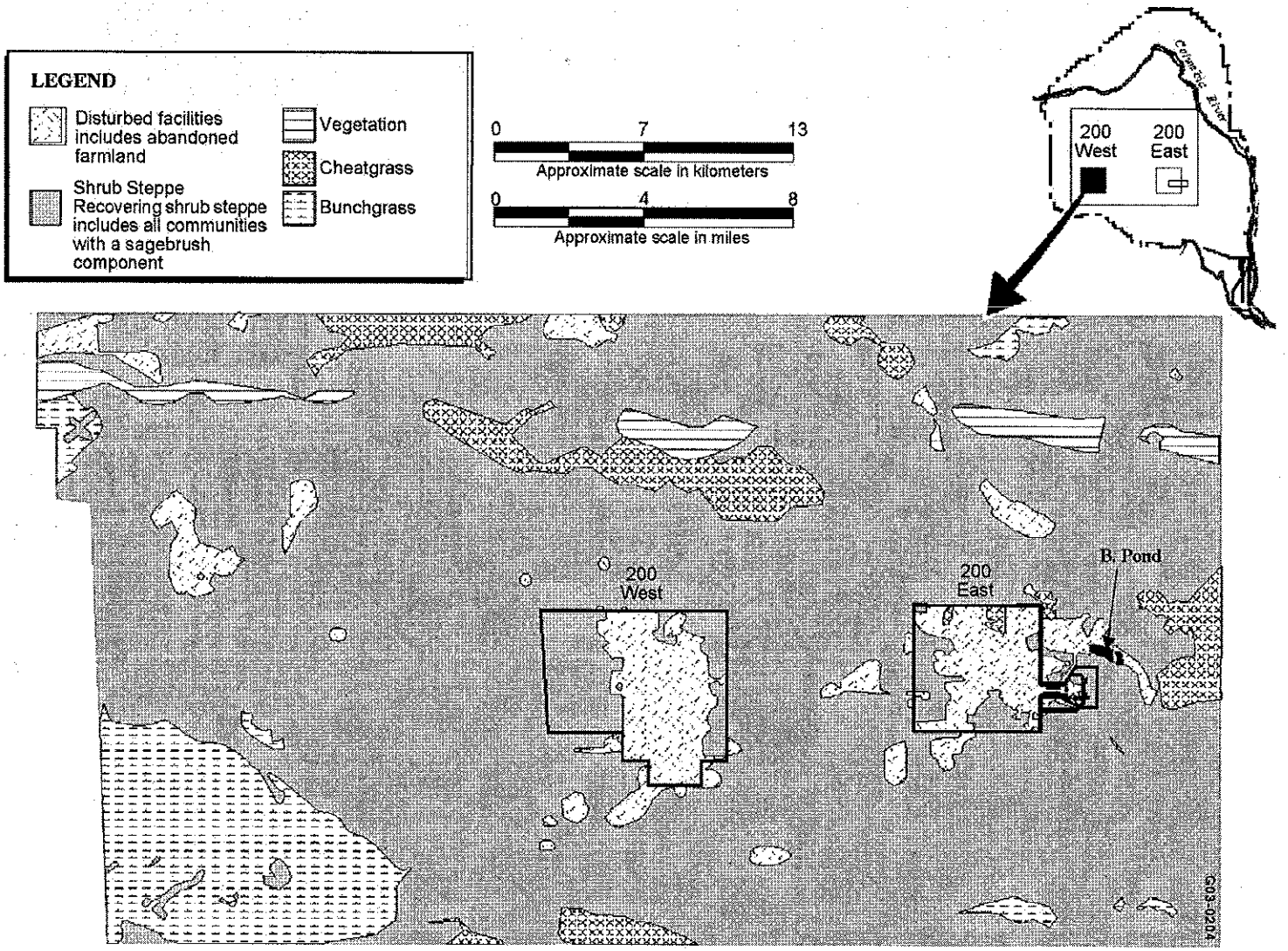


Figure 8-6 Fall Chinook Salmon Spawning Areas Along the Columbia River

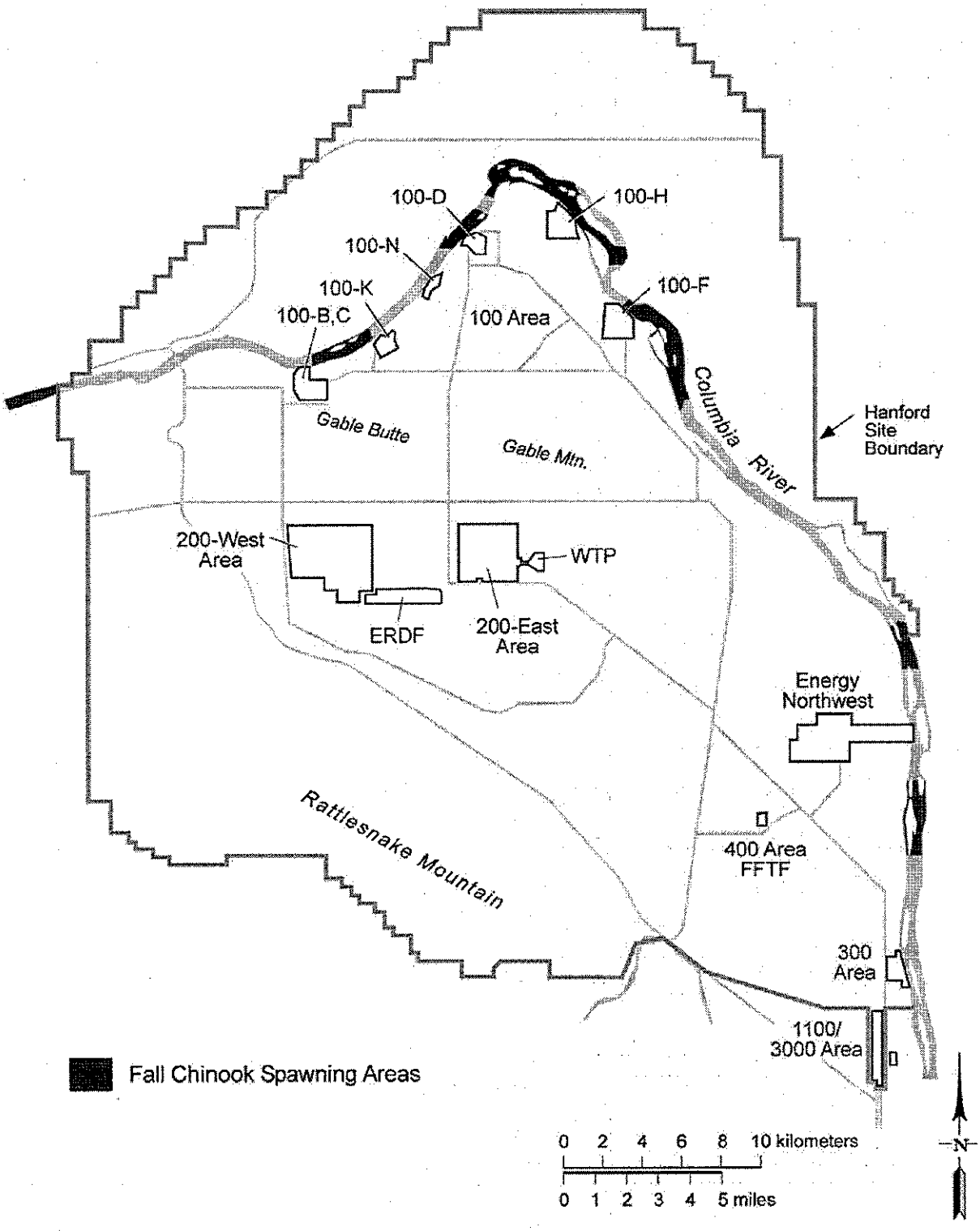


Figure 8-7 Trophic Levels and Receptor Species Considered in the 200 Area and Vicinity Terrestrial Conceptual Exposure Model

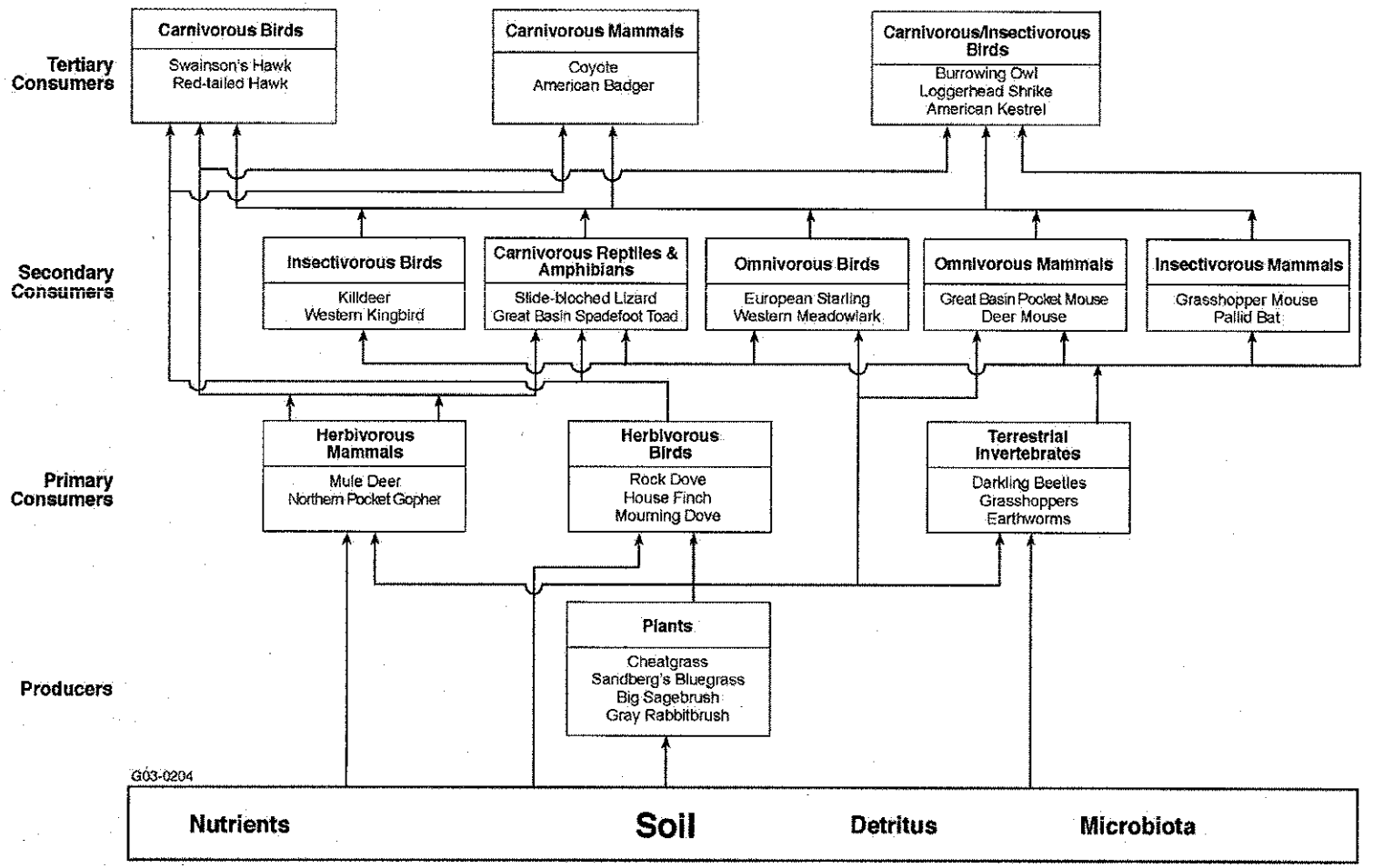


Figure 8-8 Trophic Levels and Receptor Species in the Columbia River Aquatic Conceptual Exposure Model

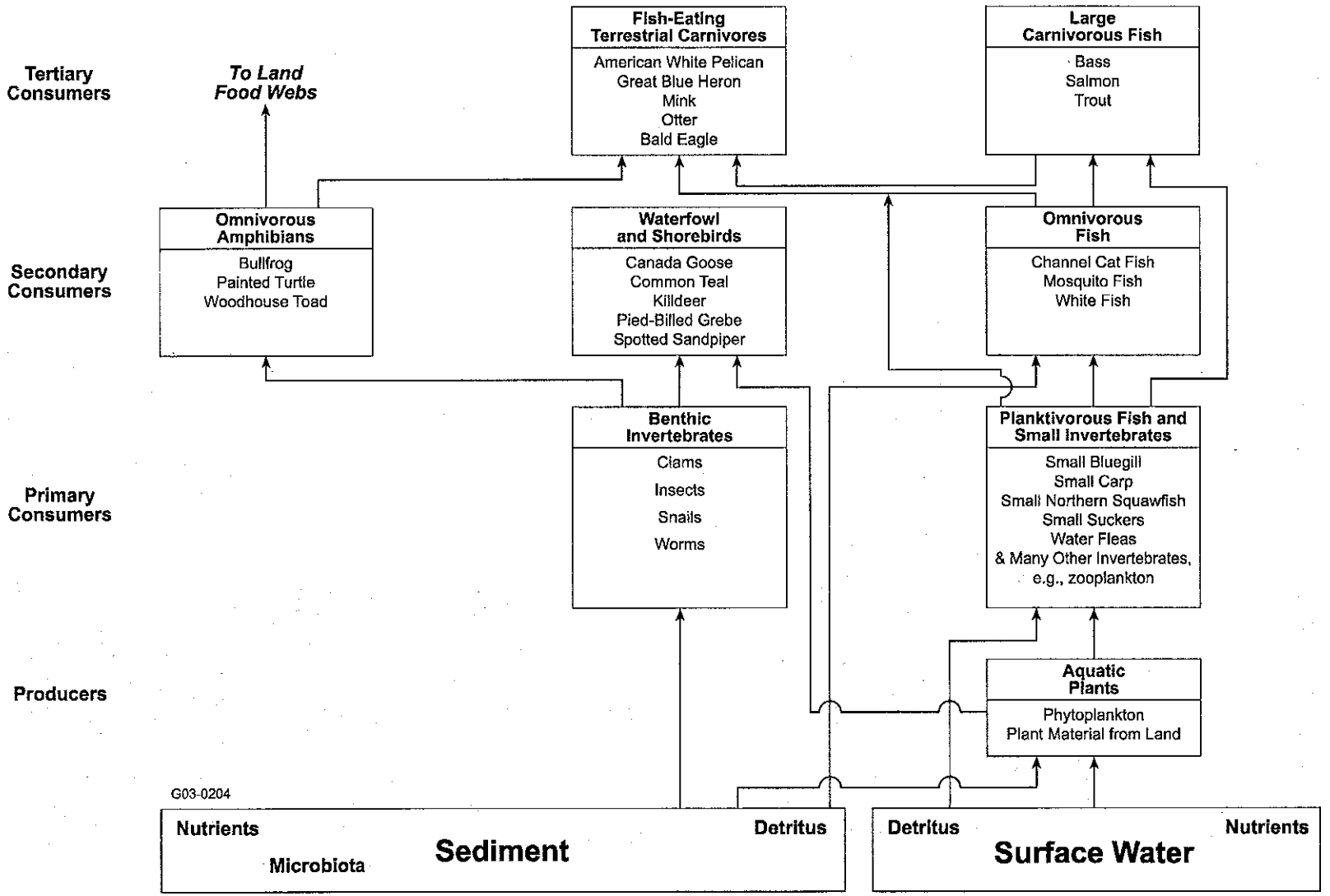


Figure 8-9 Trophic Levels and Selected Receptor Species (names in bold) Considered in the 200 Area and Vicinity Terrestrial Conceptual Exposure Model

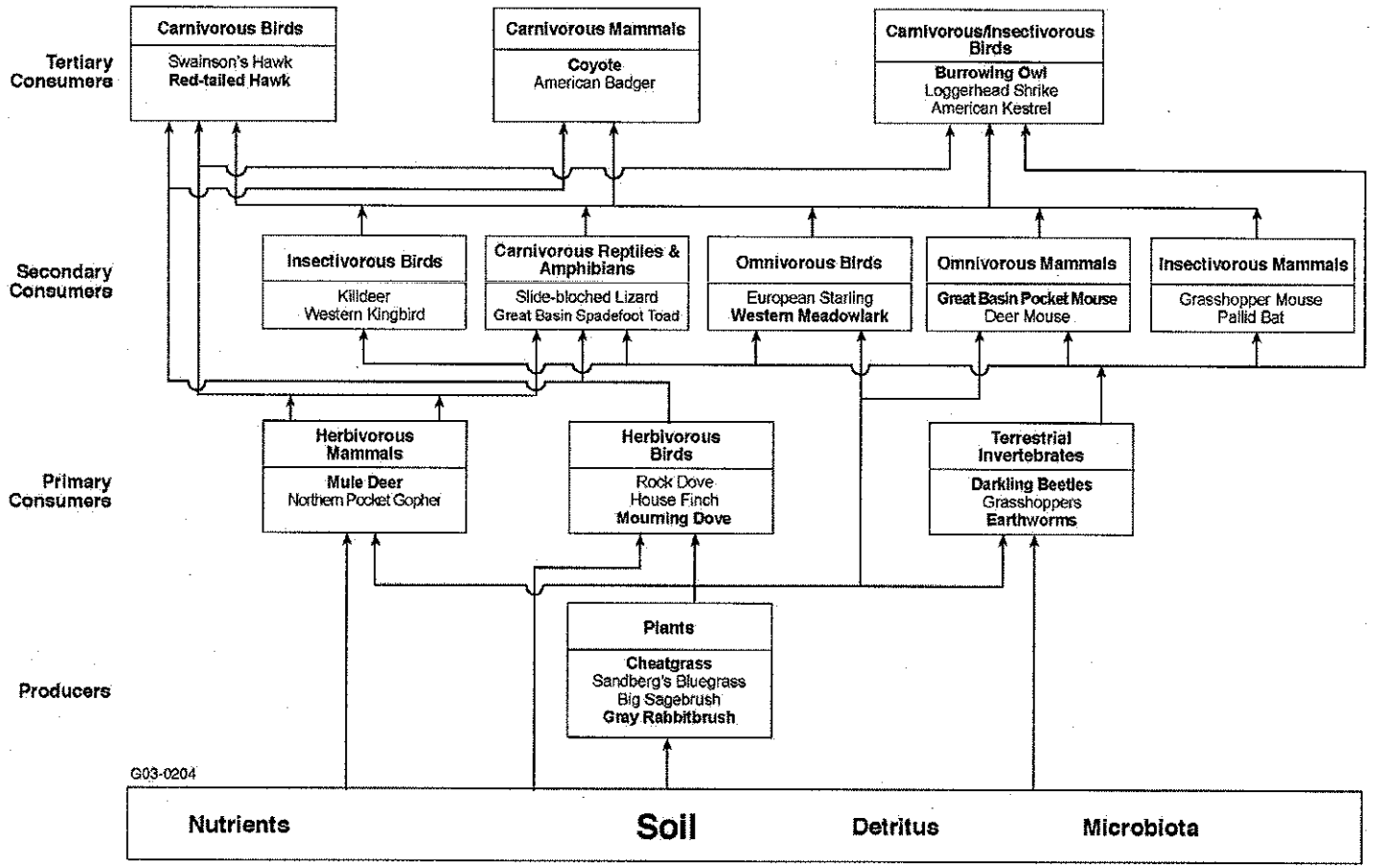


Figure 8-10 Trophic Levels and Selected Receptor Species (names in bold) in the Columbia River Aquatic Conceptual Exposure Model

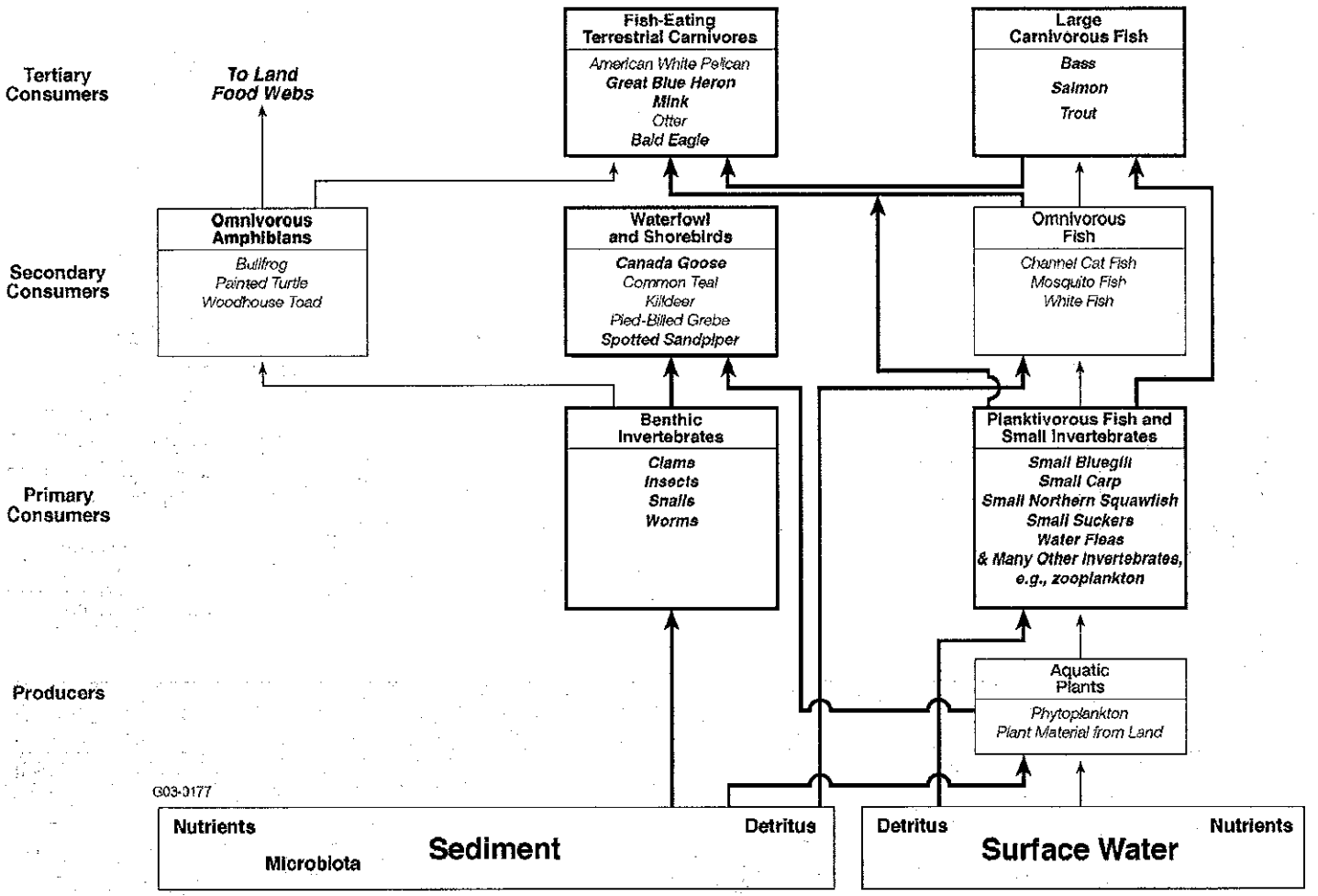


Figure 8-11 Relationship Between Sources and Biotransfer Factors for Calculating Terrestrial Exposures

(endpoint receptors shown in bold font)

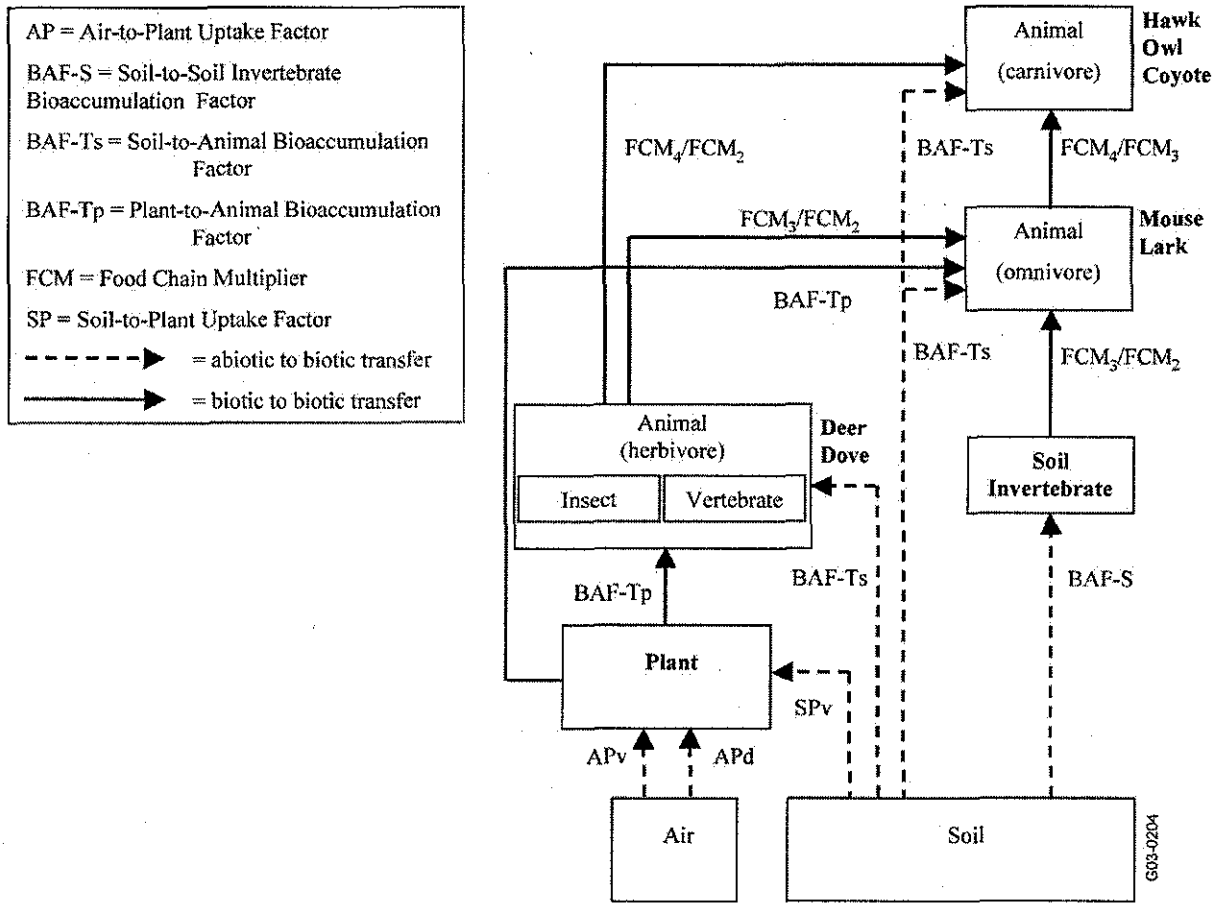


Figure 8-12 Relationship Between Sources and Biotransfer Factors for Calculating Aquatic Exposures

(endpoint receptor species shown in bold font)

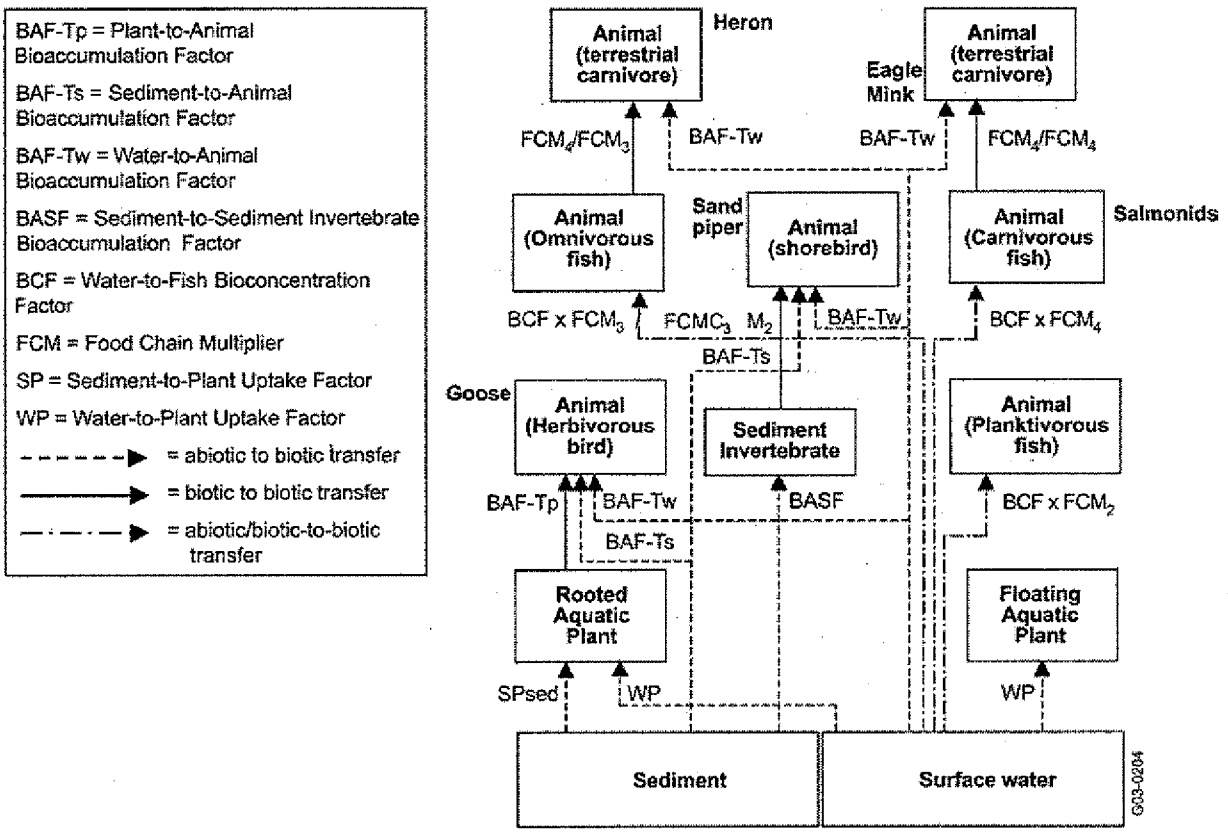


Figure 8-13 Exclusive Diets for Omnivores

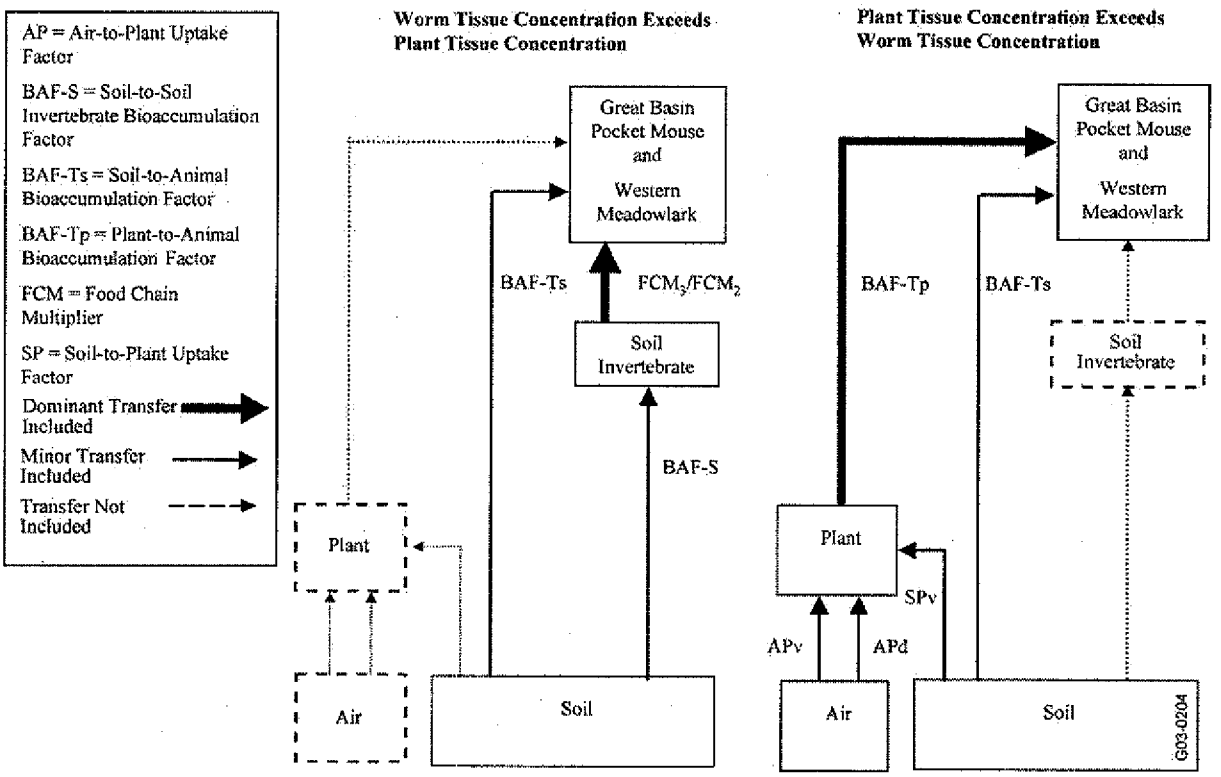


Figure 8-14 Exclusive Diets for Carnivores

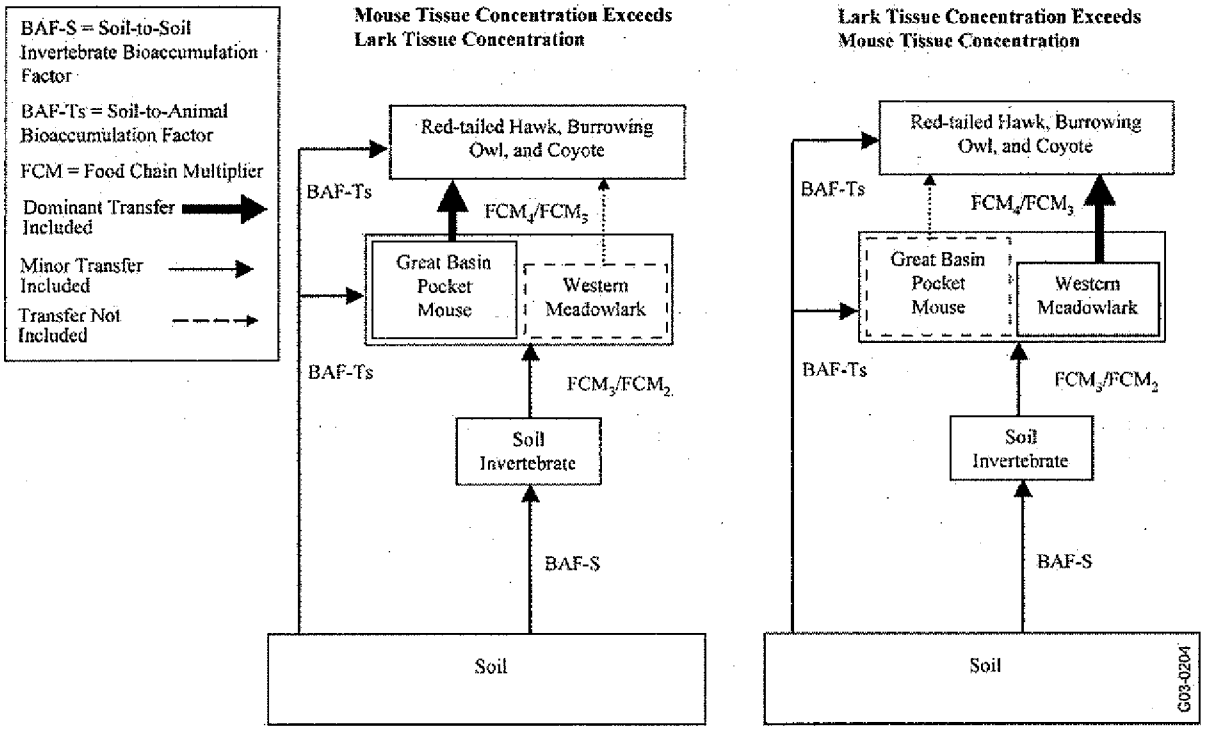


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Table 9-1 Overview of Risk Thresholds for COPCs and ROPCs in the PRA for the WTP 9-4

9 Relationship of Risk Assessment to WTP

The intent of the screening-level risk assessment (SLRA) is to ensure that airborne emissions from the Hanford Tank Waste Treatment and Immobilization Plant (WTP) are safe to people who live near or work on or near the Hanford Site, to Native Americans who use resources on or near the Hanford Site, and to plants and animals on or near the Hanford Site. It is important that people and the environment are not harmed because potential exposures are overlooked or underestimated. It is also important to maximize the ability of the WTP to treat and immobilize tank wastes and, in doing so, minimize potential release of tank contents into the environment through leaks or spills. A balance of these goals will result through the iterative process of reviewing the environmental risk assessment work plan (RAWP), reviewing and updating environmental parameters for the SLRA and WTP engineering design, and calculating risk-based emission limits, as needed. This iterative process is shown on Figure 2-1.

During the pre-demonstration test risk assessment (PRA) and final risk assessment (FRA), any chemicals of potential concern (COPCs) or radionuclides of potential concern (ROPCs) that exceed risk or hazard thresholds will be evaluated further to determine the driving factors behind the risk and the potential uncertainty associated with them. When the uncertainty associated with exposure parameters and toxicity values becomes reduced as much as possible and when there are exceedances of the thresholds, risk-based emission criteria for COPCs will be evaluated. Engineering design specifications, including changes to feed rate, may be revised based on risk-based emission limits. Each major step of the process will include review from regulatory agencies, Native American tribes, and the public.

To better understand this iterative process, it is important to identify the relationship of the PRA and FRA (section 9.1), the sources of potential changes that could affect the risk assessments (section 9.2), and risk-based emission limits (section 9.3). Each is briefly described below.

9.1 Relationship of the PRA and FRA

The PRA will be reviewed by regulatory agencies, by Native American tribes, and by the public. Input from all these reviewers will be included in decisions about succeeding steps in the SLRA process, including refinement of the risk assessment assumptions for the FRA.

The PRA is designed to overestimate exposures to human and ecological receptors, whereas the FRA may refine exposure assumptions and use updated toxicity data to result in a more accurate estimate of risk while continuing to overestimate risk. To help make risk management decisions, predicted risks and hazards are compared to thresholds. There are thresholds for both human and ecological receptors. If the PRA indicates that total human health risks or hazards to plausible receptors are below the thresholds of 1E-05 (excess cancer risk expressed as incremental lifetime cancer risk [ILCR]) or 0.25 (hazard quotient [HQ] and hazard index [HI]), or if ecological HQs and HIs are less than the threshold of 0.25, the process will move on to the FRA following the environmental performance demonstration tests. Additionally, for acute exposure, the human HQ is set at 1.0.

These threshold values are summarized in Table 9-1 and described in sections 7.3.1 and 7.3.2 (human health) and section 8.4.3 (ecological). If the PRA indicates that human risks to plausible receptors are greater than 1E-05 (ILCR), or if human noncancer HQs and HIs are greater than 0.25, or if ecological HQs or HIs are greater than 0.25, or if human acute HQs are greater than 1.0, a number of actions will be

considered. Potential actions will include reevaluation of conservative exposure parameters for the risk assessment and reevaluation of engineering design.

9.2 Sources of Potential Changes in the Risk Assessment

A risk assessment represents the status of receptors, facility, and toxicity knowledge at a point in time. If land use changes or if new site-specific data becomes available to replace default exposure assumptions, the assumptions used in the PRA will change. If there are changes in engineering design of the WTP that result in changes in emissions estimates, exposures will change; if site-specific uptake factors for the food chain become available, exposures will change; if there are revisions to toxicity data for some COPCs or ROPCs, ILCR risks and HQs and HIs for those COPCs and ROPCs will change. If any of these changes occur, the SLRA could be revisited to ensure public welfare and environmental protection.

9.3 Risk-Based Emissions Limits

Risk-based emission limits will be developed if there are exceedances of the risk and hazard thresholds and if modification of overly conservative assumptions do not resolve any exceedances. These emission limits will be established following the FRA. Risk-based emission limits will be provided for plausible exposure scenarios. Risk-based emission limits will be calculated for any COPC that exceeds risk thresholds in the FRA. If no individual COPC risks or hazards exceed these thresholds but the total risk or hazard exceeds thresholds, risk-based emission limits will be calculated for the COPCs having the largest contribution to this total risk or hazard. Additional site-specific information, and the results of the environmental performance demonstration test, will be available for the FRA and considered in development of risk-based emissions limits. Risk thresholds that are exceeded will be addressed to the satisfaction of Ecology and EPA and submitted for public comment prior to approval of the FRA.

9.3.1 Human Health Risk-Based Emission Limits

Risk-based emission limits will be calculated for COPCs with human health risks or hazards to plausible receptors greater than 1E-05 (ILCR) or 0.25 (HQ and HI). If no individual COPC risks or hazards exceed these thresholds but the total risk or hazard exceeds thresholds, risk-based emission limits will be calculated for the COPCs having the largest contribution to this total risk or hazard. Risk-based emission limits will be calculated using the same exposure scenarios, pathways, toxicity values, and equations used to calculate plausible risk estimates. The risk equations will be used to back-calculate acceptable COPC concentrations in various media to result in a total risk or hazard across all media below the threshold values of 1E-05 (ILCR) and 0.25 (HQ and HI) for each plausible receptor. For acute exposure, the HQ threshold is 1.0. Air dispersion modeling results will then be used to convert these media concentrations to risk-based emission limits.

9.3.2 Ecological Risk-Based Emission Limits

Risk-based emission limits will be calculated for COPCs with ecological HQs greater than 0.25, or for driver chemicals if the total HI is greater than 0.25. Risk-based emission limits will be calculated for a given ecological receptor using the same exposure and food-web assumptions, toxicity values, and equations used to calculate plausible ecological risk estimates. The risk equations will be used to back-calculate acceptable COPC concentrations in various media starting with an HQ or HI of 0.25. Air dispersion modeling results will then be used to convert these media concentrations to risk-based emissions limits.

9.4 Summary

In summary, the PRA will be submitted for review by regulatory agencies, Native American tribes, and the public. If the PRA shows risks and hazards below the thresholds, the FRA will be performed and submitted following the environmental performance demonstration tests. If hazards or risks predicted in the PRA are above the thresholds, regulatory authorities will be consulted and the next course of action will be decided. Examples of potential actions are re-evaluating exposure parameters to determine whether the risk assessment was overly conservative and revising the engineering design to reduce emissions. If thresholds are still exceeded in the PRA, then risk-based criteria will be developed. All of these steps will ensure that WTP operations will be conducted in a manner safe to human and ecological receptors on and near the Hanford Site.

Table 9-1 Overview of Risk Thresholds for COPCs and ROPCs in the PRA for the WTP

Receptor	Chronic Exposures			Acute Exposures	
	Carcinogens	Noncarcinogens			
	Incremental Lifetime Cancer Risk (ILCR)	Hazard Quotient (HQ)	Hazard Index (HI)	Acute Hazard Quotient (AHQ)	Acute Hazard Index (AHI)
Chemicals of Potential Concern					
Human	1E-05 or 1 in 100,000	0.25	0.25	1.0	1.0
Plants and Animals	NA	0.25	0.25	NA	NA
Radionuclides of Potential Concern					
Human	1E-05 or 1 in 100,000	0.25	0.25	1.0	1.0
Plants and Animals	NA	0.25	0.25	NA	NA

NA = Not applicable.

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10 Uncertainty Assessment

Uncertainty or technical doubt is introduced into the human health and ecological risk assessments at every step of the process. As noted by EPA (1998a), uncertainty occurs because risk assessment is a complex process, requiring integration of source information, fate and transport in various environments, exposure assessment, and effects assessment. Uncertainty is inherent in the risk assessment process even when the most accurate, up-to-date data and the most sophisticated models are used. Four types of uncertainty are addressed here:

- General (that is, non-effects) parameter uncertainty and variability
- Effects parameter uncertainty and variability
- Model uncertainty
- Decision-rule uncertainty

General parameter uncertainty occurs when variables used in equations cannot be measured precisely or accurately or have not been measured (such as lack of data). Other parameters are measurable and are represented by single fixed values, but actually have variability (such as body weight).

Effects parameter uncertainty and variability are associated with toxicity values (cancer slope factors [SFs] and reference doses [RfDs] for human receptors, and toxicity reference values [TRVs] and benchmarks for ecological receptors), ecological measurement endpoints, and ecological assessment endpoints. Uncertainty occurs as a result of deficiencies in experimental design, extrapolation from experimental conditions to environmental conditions, or complete lack of effects information. Variability occurs as a result of variations in receptor sensitivity due to age, genetics, pre-existing conditions, presence of predators, or other environmental stressors.

Model uncertainty is associated with all models used in all phases of the risk assessments, including air dispersion and other environmental models, animal models used as surrogates for testing human health effects, and dose response models used in extrapolation of laboratory data to human health or ecological effects. All models are simplifications of reality, and therefore exclude some variables to reduce complexity and/or to compensate for missing data. The models identified in this environmental risk assessment work plan (RAWP) were selected on the basis of scientific policy because they provide the information needed to conduct the risk assessments and are considered by Ecology and EPA to be state-of-the-science models.

Decision-rule uncertainty arises out of the need to balance different social concerns when determining an acceptable level of risk. Decision-rule uncertainty is associated with the choice of models used, the selection of constituents to be included in the analysis, the default parameter values used, the dependence on single-point estimates of toxicity (human RfDs and SFs and ecological TRVs), and the selection of risk and hazard thresholds for evaluating the results of the screening-level risk assessment (SLRA).

An overview of the potential sources of uncertainty in the SLRA is provided in section 10.1. A discussion of how uncertainty will be addressed in the pre-demonstration test risk assessment (PRA) is provided in section 10.2.

10.1 Sources of Uncertainty in the SLRA

A brief summary of the sources of uncertainty in each step of the risk assessment is provided below. Additional discussion is provided in sections 4.4, 5.5, 6.7, 7.4, and 8.6 of this RAWP. One or more of the four types of uncertainty described above impact each of these steps.

10.1.1 Identification of Constituents of Potential Concern

The identification of chemicals of potential concern (COPCs) and radionuclides of potential concern (ROPCs) shown in section 4 is uncertain because these constituents are identified before operation of the Hanford Tank Waste Treatment and Immobilization Plant (WTP) and must rely on assumptions regarding what may be in the waste feed and what may be produced as products of incomplete combustion (PICs). Test data collected for the final risk assessment (FRA) during the environmental performance demonstration will reduce, but not eliminate, this uncertainty because this test data will include uncertainty due to tentatively identified compounds (TICs), detection limits, and variations in actual waste feed.

10.1.2 Estimation of Emissions

The primary sources of uncertainty in the emissions estimate are as follows:

- Characterization data that describes the waste feed streams to WTP pretreatment
- Decontamination efficiency of the air pollution control equipment
- Creation of PICs by the WTP
- Potential impact of upset conditions and abated fugitive emissions on the overall emission rates

10.1.3 Environmental Modeling

Uncertainties are associated with each aspect of the environmental modeling (air-dispersion modeling, soil accumulation modeling, surface water accumulation modeling, sediment accumulation modeling, and plant accumulation modeling). Uncertainties are associated with both the models themselves, because models are simplifications of reality, and with the parameters and data used in the models.

10.1.4 Human Health Risk Assessment

Uncertainties associated with the COPC and ROPC selection, emission rates, and environmental modeling all contribute to the uncertainty in the human health risk assessment (HHRA). Sources of uncertainty unique to the HHRA are associated with each step of the HHRA: data evaluation, exposure assessment, toxicity assessment, and risk characterization.

Sources of uncertainty in the data evaluation are described above in sections 10.1.1 and 10.1.2. Sources of uncertainty in the exposure assessment include contaminant concentrations in exposure media, exposure parameter uncertainty and variability in land-use assumptions, and selection of representative receptor populations and exposure parameter values. Sources of uncertainty in the toxicity assessment include effects uncertainty and variability in toxicity values (RfDs and SFs) and cancer weight-of-evidence classifications, toxicity value data gaps, and the use of route-to-route extrapolations and surrogates to fill some toxicity data gaps. The risk characterization combines the results of the exposure assessment and toxicity assessment. Therefore, all of the uncertainty in these two steps, as well

as the steps prior to the exposure assessment (such as environmental modeling), contributes to the uncertainty in the risk characterization. Additional uncertainty in the risk characterization step surrounds the practice of summing risks and hazard results across all chemicals and exposure pathways, regardless of the mode of action. Also, uncertainty is associated with the eventual human health risk and hazard outcomes and their interpretation.

10.1.5 Ecological Risk Assessment

Uncertainties associated with the COPC and ROPC selection, emission rates, and environmental modeling also contribute to the uncertainty in the ecological risk assessment (ERA). Sources of uncertainty unique to the ERA are associated with each of the four inter-related steps of the ERA: problem formulation, exposure assessment, effects assessment, and risk characterization.

Sources of uncertainty in the problem formulation include identification of representative receptor populations and exposure media. Sources of uncertainty in the exposure assessment include exposure parameter uncertainty and variability included in selection of representative exposure parameter values and contaminant concentrations in exposure media. Sources of uncertainty in the effects assessment include effects uncertainty and variability in toxicity values (TRVs and benchmark values) and toxicity value data gaps. The risk characterization combines the results of the exposure assessment and effects assessment. Therefore, all of the uncertainty in these two steps, as well as the steps prior to the exposure assessment (such as environmental modeling) contributes to the uncertainty in the ecological risk characterization. Additional uncertainty in the risk characterization step surrounds the practice of summing hazard results across all chemicals regardless of the mode of action. Also, uncertainty is associated with the eventual ecological risk outcomes and their interpretation.

10.2 Uncertainty Assessment in the PRA

The purpose of the uncertainty assessment is to identify and discuss uncertainty associated with the quantitative estimates of human health and ecological risk for the WTP. This discussion serves to place the risk estimates in proper perspective to allow fully informed risk management decisions.

(3A (1998a) nRWVWaW"7he Vcience Rf UVk aWeVWP enWVevRQing; wheUe WWe Vcience Eave iVincRP SQW and unceUWinWWe VexiWVcience SRQcy aWWP SWRnVP uWWe P ade." 7heUefRUe, iWVVP SRUWnWRUUVk assessments of treatment facilities such as the WTP to identify uncertainties in the assessment. To meet this obligation, the PRA report will provide an uncertainty analysis that will include:

- Tables listing the general assumptions in each step of the assessments, the rationale for these assumptions, their potential effect on estimates of risk, and the direction and approximate magnitude of the effect
- An analysis of the key assumptions impacting the COPCs and ROPCs, receptors, and exposure pathways that are risk drivers (such as result in risks above or slightly below the established threshold values)
- An evaluation of several other specific sources of uncertainty associated with gaps in our scientific knowledge, or scientific debates over the most appropriate approaches

Each of these items is addressed in more detail below.

10.2.1 Uncertainty Tables

Tables listing the general assumptions in each step of the assessments, the rationale for these assumptions and their potential effect on estimates of risk (overestimation or underestimation), and the approximate magnitude of the effect (minor or major) will be included in the uncertainty assessment. These tables will focus on categories of assumptions rather than specific assumptions. For example, residential exposure parameters may be included, whereas details of each exposure parameter (such as soil ingestion rate or body weight) will not be included. Examples of the planned table formats and contents are provided as tables 10-1 through 10-5.

10.2.2 Uncertainty Analysis of Key Assumptions

In addition to the tables described above, a more detailed analysis of the key assumptions impacting the COPCs and ROPCs, human and ecological receptors, and exposure pathways that are risk drivers (such as a result in risks above or slightly below the established threshold values) will be included in the PRA. Examples of possible scenarios resulting in an analysis of key assumptions for the HHRA and ERA are provided below.

- If the total estimated incremental lifetime cancer risk to a resident at the Hanford offsite maximum is 9E-06 (that is, 9 excess cancers in 1,000,000 people) and slightly below the risk threshold of 1E-05 (that is, 10 excess cancers in 1,000,000 people), the uncertainty analysis will focus on the specific constituents and exposure pathways that result in this risk and any assumptions that could result in the actual risk being higher or lower. For example, if the risk due to ingestion of one COPC in homegrown produce is 8E-06 and the total risk from all other COPCs and pathways is 1E-06, the uncertainty analysis would focus on the models and assumptions used to estimate the concentration of that chemical in plants, the residential produce ingestion assumptions, and the toxicity data for the one chemical of interest. This analysis will serve to evaluate whether this risk estimate is likely to be an overestimate or underestimate of reality, and if so, to what extent.
- If the total estimated hazard index (HI) to a Great Basin pocket mouse at the onsite ground maximum is 0.35 (slightly above the hazard threshold of 0.25), the uncertainty analysis will focus on the specific chemicals and specific exposure pathways that result in this hazard and any assumptions that could result in the actual hazard being higher or lower. For example, if the hazard due to ingestion of one COPC in soil invertebrates is 0.20 and the hazard due to ingestion of another COPC in soil invertebrates is 0.10, the uncertainty analysis will focus on whether or not it is appropriate to add the hazard quotients (HQs) for these two chemicals, the models and assumptions used to estimate the concentrations of these two chemicals in soil invertebrates, the assumption that the mouse has an exclusive diet of soil invertebrates, and the toxicity data for these two chemicals. This analysis will serve to evaluate whether this hazard estimate is likely to be an over- or underestimate of reality, and if so, to what extent.

These are just two examples of the type of specific uncertainty assessment that may be triggered by the findings of the PRA.

10.2.3 Other Specific Uncertainty Issues

Several sources of uncertainty associated with gaps in our scientific knowledge or scientific debates over the most appropriate approaches to use are identified throughout this RAWP. These issues, as detailed below, will be discussed in the PRA uncertainty assessment.

- Nursing infant assessment - Potential risks to nursing infants from dioxin-like compounds will be evaluated by comparing the estimated infant dose of dioxins and coplanar polychlorinated biphenyls (PCBs) from the WTP to the background infant dose of these chemicals throughout the United States. The background infant dose referenced in this RAWP may overestimate current exposures because dioxin exposures in the United States have been decreasing for many years. The source of this value and potential range of background infant doses will be discussed further in the uncertainty assessment of the PRA report. There is currently no consensus regarding the most appropriate single approach to quantitatively evaluate potential risks associated with exposure to dioxin-like compounds by nursing infants. Alternative approaches to the two preferred methods to be used in the PRA (that is, comparison to background and lifetime risk) include calculating infant risks using (1) the estimated infant average daily dose (ADD) calculated with a 1-year exposure duration and a 1-year averaging time, and (2) the estimated infant lifetime average daily dose (LADD) calculated with a 1-year exposure duration and a 70-year averaging time. These alternative methods will be presented in the uncertainty assessment of the PRA report.
- Human inhalation rates - An inhalation rate of 30 m^3/day will be used for the Native American subsistence resident adult, per Stuart Harris of the Confederated Tribes of the Umatilla Indian Reservation (CCN 064333). The assignment of inhalation rate is uncertain; several alternative default inhalation rates will be evaluated as part of the uncertainty assessment in the PRA.
- Partial exclusion of dermal pathway from the HHRA - Dermal exposure pathways (to soil, surface water, or air) will not be included in the PRA, with the exception of the Native American sweat lodge scenario, because dermal exposure pathways have been identified as insignificant contributors to risk in numerous risk assessments prepared or reviewed by EPA for airborne emissions from thermal treatment facilities. If initial PRA results indicate that the soil or surface water ingestion or inhalation pathways result in risks that are borderline (that is, close to the risk or hazard threshold) for any plausible receptor, then dermal exposure to that medium may be included in the PRA. A discussion of the potential impact associated with exclusion of this minor pathway from the quantitative risk assessment will be included in the uncertainty assessment of the PRA.
- Evaluation of PAHs - Potential human cancer risks associated with 7 polycyclic aromatic hydrocarbons (PAHs) considered to be carcinogenic by EPA (1993a) will be evaluated using a relative potency factor (RPF) approach. RPFs for an additional 15 PAHs are available from the California (Cal EPA 1999). If the total estimated risk from PAHs is near 1E-05, these additional 15 PAHs will be considered in the uncertainty analysis.
- Dioxin slope factor - Potential human cancer risks associated with dioxins and coplanar PCBs will be evaluated using the cancer SF of 1.0E+06 $(mg/kg\text{-}day)^{-1}$ proposed in the *Exposure and Human Health Reassessment of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds* (EPA 2000e), and as suggested by Ecology and EPA Region 10 (CCN 063809). While this proposed SF has not yet been approved by EPA, it is more conservative than the current SF published in the Health Effects Assessment Summary Table (HEAST) (EPA 1997b). A discussion of comparative risk results will appear in the uncertainty section of the PRA.
- Toxicity data gaps - COPCs without toxicity values (RfDs, SFs, TRVs, ecological benchmarks) cannot be included in the quantitative risk assessments. The potential impact of these COPCs on the risk results will be discussed in the uncertainty assessment.
- Radiation benchmarks - The whole-organism radiation benchmarks for ecological receptors identified in this RAWP have uncertainty associated with them, because they do not take into account effects on sensitive tissues, critical organ effects, relative biological effectiveness, and microdosimetry issues.

These issues are currently being investigated by the scientific community and will be mentioned in the uncertainty assessment.

- Microdosimetry of radionuclides - Possible synergistic effects of multiple radionuclides and microdosimetry to root hairs, eggs, embryos, and so forth for ecological receptors are currently being investigated and developed by researchers. The current status of this research will be mentioned in the uncertainty discussion in the PRA.
- Exclusion of external alpha radiation - The possible effects of external alpha radiation on ecological receptors will be included in the uncertainty assessment of the PRA because external alpha radiation should add only insignificantly to the whole-body dose for organisms (Blaylock and others 1993). The potential impact of omitting alpha radiation will be identified in the uncertainty assessment.
- 6up p atiRns Rf risks– 7he 35 A will include sup p ations of the total Cl PC and Rl PC risks and hazards as listed below.
  - Total cancer risk to human receptors from all Cl PCs
  - Total cancer risk to human receptors from all Rl PCs
  - Total e f for human receptors from all Cl PCs
  - Total e f for ecological receptors from all Cl PCs
  - Total e f for ecological receptors from all Rl PCs

These total risk and hazard calculations will be based on the assumption that the effects of all Cl PCs or Rl PCs to a given receptor are summed. ff risk or hazard thresholds are exceeded, a segregation of the constituents by toxicological mode of action and endpoint will be considered. ff segregation by toxicological mode of action or endpoint is used, chemical groupings by endpoint will be assigned with approval by Ecology and EPA.

These issues, associated with gaps in our scientific knowledge or with scientific debates over the most appropriate approaches, and any other issues identified while conducting the PRA, will be included in the PRA uncertainty assessment.

10.3 Summary of Uncertainty Assessment

r ncertainty is inherent in every step of the risk assessment process. An uncertainty assessment will be included in the PRA to (1) identify sources of uncertainty associated with the quantitative estimates of human health and ecological risk from the t TP, (2) estimate the potential magnitude of key uncertainties that could influence the results of the PRA, and (3) show other analyses associated with data gaps and scientific discussion. The uncertainty assessment will be used to place the risk estimates in proper perspective to allow fully informed risk management decisions.

Table 10-1 Example[a] of Sources of Uncertainty in Identification of COPCs and ROPCs

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estimation	Not defined	Under-estimation
Tank characterization data	Constituents identified in tank waste are included as COPCs and ROPCs.			
Nondetected constituents	Constituents not detected in tank waste but which may have been used at Hanford are included as COPCs and ROPCs.			
PICs identified in bench-scale testing	Constituents identified in bench-scale testing are included as COPCs and ROPCs.			
PICs identified at hazardous waste combustion facilities	Constituents identified in emissions from hazardous waste combustion facilities are included as COPCs and ROPCs.			

[a]This is an example of the information to be included in the uncertainty table in the PRA report and is not intended to be inclusive of all sources of uncertainty.

[b]These columns will indicate whether the assumption used to compensate for the uncertainty is likely to overestimate or underestimate the actual risk, or whether the direction cannot be identified. The potential magnitude of this impact will be identified as minor (+, o, -) or major (++, oo, --).

Table 10-2 Example[a] of Sources of Uncertainty in Emissions Estimate

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Starting concentration of constituents in tank waste	Identified organics are multiplied by a scaling factor to adjust for unidentified organics.			
	Tanks assumed to have highest organic concentration were used for analysis.			
Throughput of treatment system	System is assumed to run at full capacity for 40 years.			
Efficacy of pollution control equipment	Removal is based on engineering design and assumptions rather than measured values			
Assignment of phase	Each COPC and ROPC is assumed to be present as either vapor, particulate, or particulate-bound. Some constituents may be present as a combination of phases.			
Default upset factors for vapor-phase emissions	Default upset factors are based on recorded operating conditions at hazardous waste combustion units.			

[a]This is an example of the information to be included in the uncertainty table in the PRA report and is not intended to be inclusive of all sources of uncertainty.

[b]These columns will indicate whether the assumption used to compensate for the uncertainty is likely to overestimate or underestimate the actual risk, or whether the direction cannot be identified. The potential magnitude of this impact will be identified as minor (+, o, -) or major (++, oo, --).

Table 10-3 Example[a] of Sources of Uncertainty in Environmental Modeling

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Air Dispersion Modeling				
COPC and ROPC lists	All COPCs and ROPCs are modeled; therefore, uncertainty in this list will be carried into the air dispersion modeling.			
Emission Rates of COPCs and ROPCs	Estimated emission rates are the starting point for predicting airborne dispersion; therefore, uncertainty in these estimates will be carried into the air dispersion modeling.			
Use of CALPUFF air dispersion model	Simulation of the atmospheric dispersion of emissions is limited by data limitations and simplifications inherent in the model.			
Surface meteorological data for 01 August 2000 through 31 July 2001	This represents the most complete year of data and is considered representative of long-term conditions.			
Particle size distribution	Particle size influences deposition. A single particle size of 1 μm is assumed.			
Land use and terrain data	Data represents land uses at a point in time, with terrain resolution that varies from 70 m to 90 m, with an absolute accuracy of 130 m in the horizontal and 30 m in the vertical.			
Soil Accumulation Modeling				
COPC and ROPC list	All COPCs and ROPCs are modeled; therefore, uncertainty in this list will be carried into the soil accumulation modeling.			
Emission rates of COPCs and ROPCs	Estimated emission rates are the starting point for predicting airborne dispersion and air dispersion is the starting point for predicting soil concentrations; therefore, uncertainty in these estimates will be carried into the soil accumulation modeling.			
Constituent deposition rates	Air dispersion is the starting point for predicting soil concentrations; therefore, uncertainty in these estimates will be carried into the soil accumulation modeling.			

Table 10-3 Example[a] of Sources of Uncertainty in Environmental Modeling

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Descriptive soil parameters	Parameters such as mixing depth, bulk density, and volumetric water content, which are assigned a single value, may vary widely over a relatively small area.			
Soil loss p echnisp s – degradation	Cl PCs in soil are subject to loss due to biotic and abiotic degradation; however, transformation and subsequent increase of secondary Cl PCs are not considered in the assessment.			
	Degradation rates, which are assigned a single value, generally from laboratory testing, may vary widely under environmental conditions.			
Surface Water and Sediment Accumulation Modeling				
Cl PC and o1 PC list	All Cl PCs and o1 PCs are modeled; therefore, uncertainty in this list will be carried into the surface water and sediment modeling.			
Emission rates of Cl PCs and o1 PCs	Estimated emission rates are the starting point for predicting airborne dispersion and air dispersion is the starting point for predicting surface water concentrations; therefore, uncertainty in these estimates will be carried into the surface water and sediment modeling.			
Constituent deposition rates	Air dispersion is the starting point for predicting surface water concentrations; therefore, uncertainty in these estimates will be carried into the surface water and sediment modeling.			
Surface water and sediment model	Equations used to model the fate of Cl PCs and o1 PCs deposited into the water body greatly simplify the mechanisms occurring within such a dynamic system.			
Deposition area	The maximum deposition of Cl PCs and o1 PCs is assumed over the entire depositional area of the water body.			
Descriptive surface water and sediment parameters	Parameters such as depth of water column and depth of upper benthic sediment layer, which are assigned a single value, may vary widely.			

Table 10-3 Example[a] of Sources of Uncertainty in Environmental Modeling

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Plant Accumulation Modeling				
COPC and ROPC list	All COPCs and ROPCs are modeled; therefore, uncertainty in this list will be carried into the plant modeling.			
Emission rates of COPCs and ROPCs	Estimated emission rates are the starting point for predicting environmental concentrations; therefore, uncertainty in these estimates will be carried into the plant modeling.			
Air dispersion modeling	Airborne concentrations are the starting point for predicting direct uptake from air; therefore, uncertainty in these estimates will be carried into the plant modeling.			
Constituent deposition rates	Deposition is the starting point for predicting plant concentrations from direct deposition; therefore, uncertainty in these estimates will be carried into the plant modeling.			
Soil accumulation modeling	Soil concentration is the starting point for predicting uptake into plants; therefore, uncertainty in these estimates will be carried into the plant modeling.			
Plant uptake factors	Air-to-plant and soil-to-plant uptake factors, which are assigned a single value, generally from laboratory testing of a limited number of chemicals, may vary widely depending on constituent, plant species, and environmental conditions.			
Descriptive plant parameters	Parameters such as length of growing season and yield, which are assigned a single value, may vary widely among plant species and agricultural practices.			

[a]This is an example of the information to be included in the uncertainty table in the PRA report and is not intended to be inclusive of all sources of uncertainty.

[b]These columns will indicate whether the assumption used to compensate for the uncertainty is likely to overestimate or underestimate the actual risk, or whether the direction cannot be identified. The potential magnitude of this impact will be identified as minor (+, o, -) or major (++, oo, --).

Table 10-4 Example[a] of Sources of Uncertainty in Human Health Risk Assessment

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Exposure Assessment				
COPC and ROPC list	All COPCs and ROPCs are modeled; therefore, uncertainty in this list will be carried into the HHRA.			
Emission Rates of COPCs and ROPCs	Estimated emission rates are the starting point for predicting environmental concentrations; therefore, uncertainty in these estimates will be carried into the HHRA.			
Air dispersion modeling	Airborne concentrations are the starting point for predicting inhalation exposures; therefore, uncertainty in these estimates will be carried into the HHRA			
Soil accumulation modeling	Soil concentration is the starting point for predicting soil ingestion exposures and uptake into foodstuffs; therefore, uncertainty in these estimates will be carried into the HHRA.			
Surface water accumulation modeling	Surface water concentration is the starting point for predicting drinking water, fish ingestion, and sweat lodge exposures; therefore, uncertainty in these estimates will be carried into the HHRA.			
Plant accumulation modeling	Plant concentration is the starting point for predicting produce ingestion exposures and concentrations in animal products; therefore, uncertainty in these estimates will be carried into the HHRA.			
Evaluation of current residential receptors[c] at Hanford offsite maximum	There are presently no residential receptors at the Hanford offsite maximum.			
Evaluation of future residential receptors[c] at onsite ground maximum	Residential development is not likely to occur at the onsite ground maximum.			
Exposure parameters	Exposure parameters are a combination of average (such as body weight) and upper-bound (such as soil ingestion) point estimates of parameters that vary widely among individuals.			

Table 10-4 Example[a] of Sources of Uncertainty in Human Health Risk Assessment

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Toxicity Assessment				
Cancer slope factors (SFs) for COPCs	SFs are a plausible upper-bound estimate of the probability of a cancer, per unit intake of a chemical, over a lifetime. Most chemical SFs are based on animal data.			
Cancer slope factors for ROPCs	SFs are central estimates of the age-averaged, lifetime radiation cancer incidence risk and are based on human data.			
Risk Characterization				
Exposure assessment	All uncertainties in the exposure assessment are carried into the risk characterization.			
Toxicity assessment	All uncertainties in the toxicity assessment are carried into the risk characterization.			
Additivity of COPC cancer risk	The assumption of additivity of COPC cancer risk assumes intakes of individual chemicals are small, and there is no interaction among chemicals.			
Additivity of ROPC cancer risk	The assumption of additivity of ROPC cancer risk is much less uncertain than for COPCs because the mode of action is the same for all radionuclides.			
Additivity of COPC hazard quotients	The assumption of additivity is likely to overestimate risk since many chemicals act on different target organs.			

[a]This is an example of the information to be included in the uncertainty table in the PRA report and is not intended to be inclusive of all sources of uncertainty.

[b]These columns will indicate whether the assumption used to compensate for the uncertainty is likely to overestimate or underestimate the actual risk, or whether the direction cannot be identified. The potential magnitude of this impact will be identified as minor (+, o, -) or major (++, oo, --).

[c]In this context, residential receptors include resident (adult and child), resident subsistence farmer (adult and child), resident fisher (adult and child), Native American subsistence resident (adult and child), and the residential portion of the Hanford Site industrial worker exposure.

Table 10-5 Example[a] of Sources of Uncertainty in Ecological Risk Assessment

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estimation	Not defined	Under-estimation
Problem Formulation				
Identification of ecological receptors	Receptors are identified to represent various feeding guilds and trophic levels.			
Choice of assessment endpoints	Endpoints are chosen to represent key species in the Hanford Site ecosystem.			
Choice of measurement endpoints	Endpoints are chosen to represent significant deleterious effects to ecological receptors.			
Exposure Assessment				
COPC and ROPC list	All COPCs and ROPCs are modeled; therefore, uncertainty in this list will be carried into the ERA.			
Emission Rates of COPCs and ROPCs	Estimated emission rates are the starting point for predicting environmental concentrations; therefore, uncertainty in these estimates will be carried into the ERA.			
CALPUFF air dispersion modeling	Airborne concentrations are used to predict environmental concentrations; therefore, uncertainty in these estimates will be carried into the ERA.			
Soil accumulation modeling	Soil concentration is the starting point for predicting soil ingestion exposures and uptake into food; therefore, uncertainty in these estimates will be carried into the ERA.			
Surface water and sediment accumulation modeling	Surface water and sediment concentrations are the starting point for predicting exposure to aquatic biota; therefore, uncertainty in these estimates will be carried into the ERA.			
Plant accumulation modeling	Plant concentration is the starting point for predicting plant ingestion exposures and concentrations in higher trophic levels; therefore, uncertainty in these estimates will be carried into the ERA.			
Food chain multiplier (FCM) approach for aquatic receptors	The challenge of extrapolating from one aquatic species to another will be identified.			
FCM approach for terrestrial receptors	The challenge of extrapolating from aquatic species (which make up the database for FCMs) to terrestrial food chains will be identified.			

Table 10-5 Example[a] of Sources of Uncertainty in Ecological Risk Assessment

Examples of Sources of Uncertainty	Description	Potential Direction and Magnitude of Risk[b]		
		Over-estima-tion	Not defined	Under-estima-tion
Exclusive diets	Exclusive diets mathematically make the animal too dependant on one food source (whether plants or animals). This represents a large departure from realistic real diets for desert omnivores.			
Exposure parameters	Exposure parameters are a combination of average and upper-bound point estimates of parameters that vary widely among individuals.			
Effects Assessment				
Toxicity reference values for terrestrial receptors	Toxicity thresholds are based on concentrations reported to have no, or little, effect on the test organism or are estimated conservatively from published toxicity data.			
Toxicity reference values for aquatic receptors	Toxicity thresholds are based on concentrations reported to have no, or little, effect on the test organism or are estimated conservatively from published toxicity data.			
Risk Characterization				
Exposure assessment	All uncertainties in the exposure assessment are carried into the risk characterization.			
Effects assessment	All uncertainties in the effects assessment are carried into the risk characterization.			
Additivity of COPC hazard quotients	The assumption of additivity is likely to overestimate risk since many chemicals act on different target organs.			

[a]This is an example of the information to be included in the uncertainty table in the PRA report and is not intended to be inclusive of all sources of uncertainty.

[b]These columns will indicate whether the assumption used to compensate for the uncertainty is likely to overestimate or underestimate the actual risk, or whether the direction cannot be identified. The potential magnitude of this impact will be identified as minor (+, o, -) or major (++, oo, --).

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Appendix A

Constituents of Potential Concern

Appendix A
Constituents of Potential Concern

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None

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None

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Table A-1 Organic Constituents of Potential Concern Retained by the Regulatory Data Quality Objective Process

Constituent of Potential Concern	CAS Registry Number	Constituent of Potential Concern	CAS Registry Number
1,1,1-Trichloroethane	71-55-6	Chloroform	67-66-3
1,1,2,2-Tetrachloroethane	79-34-5	Chloromethane	74-87-3
1,1,2,2-Tetrachloroethene	127-18-4	Cyclohexane	110-82-7
1,1,2-Trichloroethane	79-00-5	Cyclohexanone	108-94-1
1,1,2-Trichloroethylene	79-01-6	Cyclohexene	110-83-8
1,1'-Biphenyl	92-52-4	Cyclopentane	287-92-3
1,1-Dichloroethane	75-34-3	Dibenz[a,h]anthracene	53-70-3
1,1-Dichloroethene	75-35-4	Dichlorodifluoromethane	75-71-8
1,1-Dimethylhydrazine	57-14-7	Dichlorofluoromethane	75-43-4
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	Dichloromethane	75-09-2
1,2,4-Trichlorobenzene	120-82-1	Dieldrin	60-57-1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	Endrin	72-20-8
1,2-Dichlorobenzene	95-50-1	Ethyl alcohol	64-17-5
1,2-Dichloroethane	107-06-2	Ethyl benzene	100-41-4
1,2-Dichloropropane	78-87-5	Ethylene dibromide	106-93-4
1,3-Butadiene	106-99-0	Formic acid	64-18-6
1,3-Dichlorobenzene	541-73-1	gamma-BHC (Lindane)	58-89-9
cis-1,3-Dichloropropene	10061-01-5	Heptachlor	76-44-8
trans-1,3-Dichloropropene	10061-02-6	Hexachlorobenzene	118-74-1
1,4-Dichlorobenzene	106-46-7	Hexachlorobutadiene	87-68-3
1,4-Dinitrobenzene	100-25-4	Hexachloronaphthalene	1335-87-1
1,4-Dioxane	123-91-1	Hexafluoroacetone	684-16-2
1-Chloroethene	75-01-4	Isodrin	465-73-6
1-Methylpropyl alcohol	78-92-2	Methyl alcohol	67-56-1
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	Methylcyclohexane	108-87-2
2-Butanone	78-93-3	Methylhydrazine	60-34-4
2-Butenaldehyde (2-Butenal)	4170-30-3	Methyl isocyanate	624-83-9
2-Heptanone	110-43-0	N,N-Diphenylamine	122-39-4
2-Hexanone	591-78-6	n-Butyl alcohol	71-36-3
2-Methyl-2-propanol	75-65-0	n-Heptane	142-82-5
2-Methyl-2-propenenitrile	126-98-7	n-Hexane	110-54-3
2-Pentanone	107-87-9	Nitric acid, propyl ester	627-13-4
2-Propanone (Acetone)	67-64-1	Nitrobenzene	98-95-3
2-Propenoic acid	79-10-7	p-Nitrochlorobenzene	100-00-5
2-Propyl alcohol	67-63-0	N-Nitroso-N,N-dimethylamine	62-75-9
2-sec-Butyl-4,6-dinitrophenol	88-85-7	n-Nonane	111-84-2
3-Chloropropene (Allyl chloride)	107-05-1	n-Octane	111-65-9
3-Heptanone	106-35-4	n-Pentane	109-66-0
3-Methyl-2-butanone	563-80-4	n-Propionaldehyde	123-38-6
3-Pentanone	96-22-0	n-Propyl alcohol	71-23-8
4-Heptanone	123-19-3	Octachloronaphthalene	2234-13-1
4-Methyl-2-pentanone	108-10-1	Oxalic acid	144-62-7
5-Methyl-2-hexanone	110-12-3	Oxirane	75-21-8

Table A-1 Organic Constituents of Potential Concern Retained by the Regulatory Data Quality Objective Process

Constituent of Potential Concern	CAS Registry Number	Constituent of Potential Concern	CAS Registry Number
Acetic acid	64-19-7	Pentachloronaphthalene	1321-64-8
Acetic acid ethyl ester	141-78-6	Pentachloronitrobenzene	82-68-8
Acetic acid n-butyl ester	123-86-4	Pentachlorophenol	87-86-5
Acetonitrile	75-05-8	Phenol	108-95-2
Acetophenone	98-86-2	Picric acid	88-89-1
Acrolein	107-02-8	Polychlorinated biphenyls (PCBs)	1336-36-3
Acrylonitrile	107-13-1	Propionitrile	107-12-0
Aldrin	309-00-2	Pyridine	110-86-1
Ammonium perfluorooctanoate	3825-26-1	Styrene	100-42-5
Benzene	71-43-2	Tetrachloronaphthalene	1335-88-2
Benzo[a]pyrene	50-32-8	Tetrahydrofuran	109-99-9
alpha-BHC	319-84-6	Toluene	108-88-3
beta-BHC	319-85-7	Toxaphene	8001-35-2
Bromomethane	74-83-9	Tributyl phosphate	126-73-8
Butane	106-97-8	Trichlorofluoromethane	75-69-4
Carbon disulfide	75-15-0	Triethylamine	121-44-8
Carbon tetrachloride	56-23-5	m-Xylene	108-38-3
Chlorobenzene	108-90-7	o-Xylene	95-47-6
Chlorodifluoromethane	75-45-6	p-Xylene	106-42-3
Chloroethane	75-00-3		
Coplanar PCBs			
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	2,3,4,4',5-Pentachlorobiphenyl	74472-37-0
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	2',3,4,4',5-Pentachlorobiphenyl	65510-44-3
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	2,3',4,4',5-Pentachlorobiphenyl	31508-00-6
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	3,3',4,4',5-Pentachlorobiphenyl	57465-28-8
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	3,3',4,4'-Tetrachlorobiphenyl	32598-13-3
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	3,4,4',5-Tetrachlorobiphenyl	70362-50-4

CAS = Chemical Abstracts Service.

Table A-2 Inorganic Constituents of Potential Concern Retained by the Regulatory Data Quality Objective Process

Constituent of Potential Concern	CAS Registry Number	Constituent of Potential Concern	CAS Registry Number
Aluminum	7429-90-5	Molybdenum	7439-98-7
Ammonia/Ammonium	7664-41-7	Nickel	7440-02-0
Antimony	7440-36-0	Nitrate	14797-55-8
Arsenic	7440-38-2	Nitrite	14797-65-0
Barium	7440-39-3	Phosphate	14265-44-2
Beryllium	7440-41-7	Phosphorus	7723-14-0
Bismuth	7440-69-9	Potassium	7440-09-7
Boron	7440-42-8	Rhodium	7440-16-6
Bromide	24959-67-9	Selenium	7782-49-2
Cadmium	7440-43-9	Silicon	7440-21-3
Calcium	7440-70-2	Silver	7440-22-4
Chloride	16887-00-6	Sodium	7440-23-5
Chromium	18540-29-9	Strontium	7440-24-6
Cobalt	7440-48-4	Sulfate	14808-79-8
Copper	7440-50-8	Tantalum	7440-25-7
Cyanide	57-12-5	Thallium	7440-28-0
Fluoride	16984-48-8	Tin	7440-31-5
Hydroxide	14280-30-9	Total sulfur	63705-05-5
Iodine	7553-56-2	Tungsten	7440-33-7
Iron	7439-89-6	Uranium	7440-61-1
Lead	7439-92-1	Vanadium	7440-62-2
Lithium	7439-93-2	Yttrium	7440-65-5
Magnesium	7439-95-4	Zinc	7440-66-6
Manganese	7439-96-5	Zirconium	7440-67-7
Mercury	7439-97-6		

CAS = Chemical Abstracts Service.

Table A-3 Constituents of Potential Concern from the Environmental Protection Agency's Recommended Products of Incomplete Combustion (PIC) List

Constituent of Potential Concern	CAS Registry Number	Constituent of Potential Concern	CAS Registry Number
1,1,1,2-Tetrachloroethane	630-20-6	Butylbenzyl phthalate	85-68-7
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	Captan	133-06-2
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	Chlordane	57-74-9
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	p-Chloroaniline	106-47-8
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	Chlorobenzilate	510-15-6
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	Chlorocyclopentadiene	41851-50-7
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	Chlorodibromomethane	124-48-1
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	Chrysene	218-01-9
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	m-Cresol	108-39-4
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	o-Cresol	95-48-7
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	p-Cresol	106-44-5
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	Cumene	98-82-8
1,2,3-Trichloropropane	96-18-4	Cyanogen	460-19-5
1,2,4,5-Tetrachlorobenzene	95-94-3	Cyanogen bromide	506-68-3
1,2-Dibromo-3-chloropropane	96-12-8	Cyanogen chloride	506-77-4
trans-1,2-Dichloroethylene	156-60-5	Dibenzo[a,e]fluoranthene	5385-75-1
1,2-Dimethylhydrazine	540-73-8	Dibenzo[a,h]fluoranthene	No CAS #
1,2-Diphenylhydrazine	122-66-7	Dibenzofuran	132-64-9
1,3,5-Trimethyl benzene	108-67-8	Dibutyl phthalate	84-74-2
1,3,5-Trinitrobenzene	99-35-4	Dichloroisopropyl ether	108-60-1
1,3-Dichloropropene	542-75-6	Dichloromethyl ether	542-88-1
1,3-Dinitrobenzene	99-65-0	Dichloropentadiene	61626-71-9
1,3-Propane sultone	1120-71-4	Diethyl phthalate	84-66-2
1,4-Dichloro-2-butene	764-41-0	Dimethyl aminoazobenzene	60-11-7
2,2,4-Trimethylpentane	540-84-1	Dimethyl phthalate	131-11-3
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	Dimethyl sulfate	77-78-1
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	o-Dinitrobenzene	528-29-0
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	di-n-Propylnitrosamine	621-64-7
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	Endothall	145-73-3
2,4,5-Trichlorophenol	95-95-4	Epichlorohydrin	106-89-8
2,4,6-Trichlorophenol	88-06-2	Ethyl carbamate (Urethane)	51-79-6
2,4-D and esters	94-75-7	Ethyl methacrylate	97-63-2
2,4-Dichlorophenol	120-83-2	Ethyl methanesulfonate	62-50-0
2,4-Dimethylphenol	105-67-9	Ethylene glycol	107-21-1
2,4-Dinitrophenol	51-28-5	Ethylene glycol monobutyl ether	111-76-2
2,4-Dinitrotoluene	121-14-2	Ethylene glycol monoethyl ether acetate	111-15-9
2,4-Toluene diisocyanate	584-84-9	Ethylene thiourea	96-45-7
2,6-Dinitrotoluene	606-20-2	Fluoranthene	206-44-0
2-Chloroacetophenone	532-27-4	Formaldehyde	50-00-0
2-Chloronaphthalene	91-58-7	Furfural	98-01-1
2-Chlorophenol	95-57-8	Glycidylaldehyde	765-34-4
2-Chloropropane	75-29-6	Hexachlorocyclopentadiene	77-47-4
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	Hexachloroethane	67-72-1
2-Ethoxyethanol	110-80-5	Hexachlorophene	70-30-4
2-Methoxyethanol	109-86-4	Hexamethylene-1,5-diisocyanate	822-06-0

Table A-3 Constituents of Potential Concern from the Environmental Protection Agency's Recommended Products of Incomplete Combustion (PIC) List

Constituent of Potential Concern	CAS Registry Number	Constituent of Potential Concern	CAS Registry Number
2-Nitrophenol	88-75-5	Indeno[1,2,3-cd]pyrene	193-39-5
3,3'-Dichlorobenzidine	91-94-1	Maleic hydrazide	123-33-1
3,3'-Dimethoxybenzidine	119-90-4	Malononitrile	109-77-3
4,4'-DDE	72-55-9	Methoxychlor	72-43-5
4,4'-Methylenedianiline	101-77-9	Methyl styrene (mixed isomers)	25013-15-4
4,6-Dinitro-o-cresol	534-52-1	Methyl tert-butyl ether	1634-04-4
4-Nitrophenol	100-02-7	Methylene bromide	74-95-3
Acetaldehyde	75-07-0	Naphthalene	91-20-3
Aniline	62-53-3	n-Dioctyl phthalate	117-84-0
o-Anisidine	90-04-0	o-Nitroaniline	88-74-4
Anthracene	120-12-7	N-Nitrosodi-n-butylamine	924-16-3
Azobenzene	103-33-3	Octachlorodibenzo(p)dioxin	3268-87-9
Benzaldehyde	100-52-7	Octachlorodibenzofuran	39001-02-0
Benzo[a]anthracene	56-55-3	Pentachlorobenzene	608-93-5
Benzo[b]fluoranthene	205-99-2	Pentachloroethane	76-01-7
Benzo[e]pyrene	192-97-2	Phosgene	75-44-5
Benzo[g,h,i]perylene	191-24-2	Phthalic anhydride	85-44-9
Benzo[j]fluoranthene	205-82-3	Pronamide	23950-58-5
Benzo[k]fluoranthene	207-08-9	Propargyl alcohol	107-19-7
Benzoic acid	65-85-0	Propylene glycol monomethyl ether	107-98-2
Benzotrichloride	98-07-7	Pyrene	129-00-0
Benzyl chloride	100-44-7	Quinoline	91-22-5
Bis(2-chloroethoxy)methane	111-91-1	Quinone	106-51-4
Bis(2-chloroethyl) ether	111-44-4	Safrole	94-59-7
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Strychnine	57-24-9
Bromochloromethane	74-97-5	Toluene-2,6-diamine	823-40-5
Bromodichloromethane	75-27-4	o-Toluidine	95-53-4
Bromoethene	593-60-2	p-Toluidine	106-49-0
Bromoform	75-25-2	Vinyl acetate	108-05-4

CAS = Chemical Abstracts Service.

Table A-4 Constituents of Potential Concern Identified as PICs During Bench-Scale Melter Testing

Constituent of Potential Concern	CAS Registry Number
1,2,3-Trichlorobenzene	87-61-6
1,2,4-Trimethyl benzene	95-63-6
cis-1,2-Dichloroethene	156-59-2
2-Chlorotoluene	95-49-8
2-Methyl naphthalene	91-57-6
4-Chlorotoluene	106-43-4
Benzyl alcohol	100-51-6
Bromobenzene	108-86-1
sec-Butyl benzene	135-98-8
tert-Butyl benzene	98-06-6
p-Cymene	99-87-6
Iodomethane	74-88-4
Methyl methacrylate	80-62-6
n-Butyl benzene	104-51-8
n-Propyl benzene	103-65-1
Phenanthrene	85-01-8

CAS = Chemical Abstracts Service.
PIC = Product of incomplete combustion.

Table A-5 Constituents of Potential Concern Eliminated by Regulatory DQO Process and Added Back to COPC List

Constituent of Potential Concern	CAS Registry Number	Constituent of Potential Concern	CAS Registry Number
Detected Chemicals Eliminated from DQO		**Non-Detected Chemicals Eliminated from DQO**	
1,2-Epoxybutane	106-88-7	1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9
1-Nitropropane	108-03-2	1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0
2-Methylaziridine	75-55-8	1,2-Dichloroethylene	540-59-0
2-Methylpropyl alcohol	78-83-1	2,2-Dichloropropionic acid	75-99-0
2-Propene-1-ol	107-18-6	2,3,4,6-Tetrachlorophenol	58-90-2
3-Methyl-1-butanol	123-51-3	2,4,5-T	93-76-5
4-Chloro-3-methylphenol	59-50-7	2-Nitrotoluene	88-72-2
4-Methyl-3-penten-2-one	141-79-7	3-Methylcholanthrene	56-49-5
Acenaphthene	83-32-9	4,4'-DDD	72-54-8
Acetamide	60-35-5	4,4'-DDT	50-29-3
alpha-Methylstyrene	98-83-9	4-Bromophenylphenyl ether	101-55-3
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	4-Nitrobiphenyl	92-93-3
		5-Methylchrysene	3697-24-3
Bis(isopropyl)ether	108-20-3	5-Nitroacenaphthene	602-87-9
Cyclohexanol	108-93-0	Acenaphthylene	208-96-8
Diphenyl ether	101-84-8	Benzo[a,i]pyrene	191-30-0
Fluorene	86-73-7	BHC	319-86-8
Formamide	75-12-7	Butyltoluene	98-51-1
Formic acid, methyl ester	107-31-3	Chloropentafluoroethane	76-15-3
Methyl acetate	79-20-9	Dibenz[a,h]acridine	226-36-8
Methylacetylene	74-99-7	Dibenz[a,j]acridine	224-42-0
N,N-Dimethylacetamide	127-19-5	Dibenzo[a,e]pyrene	192-65-4
Nitromethane	75-52-5	Dibenzo[a,h]pyrene	189-64-0
N-Nitrosomorpholine	59-89-2	Dibenzo[a,i]pyrene	189-55-9
n-Valeraldehyde	110-62-3	Dibutylphosphate	107-66-4
Propionic acid	79-09-4	Difluorodibromomethane	75-61-6
Trimethylamine	75-50-3	Dimethylaniline	121-69-7
		Ethyl ether	60-29-7
		Indene	95-13-6
		Mirex	2385-85-5
		Nitrofen	1836-75-5
		Phthalic acid	100-21-0
		Silvex (2,4,5-TP)	93-72-1
		Terphenyls	26140-60-3
		Trichloroacetic acid	76-03-9
		Trichlorofluoroethane	27154-33-2
		Trichloronaphthalene	1321-65-9
		Trifluorobromomethane	75-63-8
		Trifluralin	1582-09-8
		Trimethyl benzene	25551-13-7
		Triphenylamine	603-34-9

CAS = Chemical Abstracts Service.
DQO = Data Quality Objectives.

Table A-6 Constituents of Potential Concern: Radionuclides

Constituent of Potential Concern	CAS Registry Number	Estimated Contribution to Total Activity of Waste[a]	
		% Total Activity	Cumulative % Total Activity
Strontium-90	10098-97-2	30.39	30.30
Yttrium-90	10098-91-6	30.39	60.78
Cesium-137	10045-97-3	19.75	80.53
Barium-137	13981-97-0	18.73	99.26
Samarium-151	15715-94-3	0.35	99.61
Niobium-93	7440-03-1[b]	0.15	99.76
Americium-241	1596-10-2	0.06	99.82
Plutonium-241	14119-32-5	0.04	99.86
Europium-155	14391-16-3	0.03	99.89
Europium-154	15585-10-1	0.03	99.92
Antimony-125	14234-35-6	0.02	99.94
Technetium-99	14133-79-7	0.02	99.96
Cadmium-113	14336-66-4	0.01	99.97
Cesium-134	13967-70-9	0.01	99.98
Plutonium-239	15117-48-3	0.01	99.99
Tritium	10028-17-8	0.01	100.00
Actinium-227	14952-40-0	0	100.00
Americium-243	14993-75-0	0	100.00
Carbon-14	14762-75-5	0	100.00
Cobalt-60	10198-40-0	0	100.00
Curium-242	15510-73-3	0	100.00
Curium-243	15757-87-6	0	100.00
Curium-244	13981-15-2	0	100.00
Europium-152	14683-23-9	0	100.00
Iodine-129	15046-84-1	0	100.00
Neptunium-237	13994-20-2	0	100.00
Nickel-59	14336-70-0	0	100.00
Nickel-63	13981-37-8	0	100.00
Plutonium-238	13981-16-3	0	100.00
Plutonium-240	14119-33-6	0	100.00
Plutonium-242	13982-10-0	0	100.00
Protactinium-231	14331-85-2	0	100.00
Radium-226	13982-63-3	0	100.00
Radium-228	15262-20-1	0	100.00
Ruthenium-106	13967-48-1	0	100.00
Selenium-79	15758-45-9	0	100.00
Thorium-229	15594-54-4	0	100.00
Thorium-232	7440-29-1	0	100.00
Tin-126	15832-50-5	0	100.00
Uranium-232	14158-29-3	0	100.00
Uranium-233	13968-55-3	0	100.00
Uranium-234	13966-29-5	0	100.00
Uranium-235	15117-96-1	0	100.00
Uranium-236	13982-70-2	0	100.00
Uranium-238	7440-61-1	0	100.00
Zirconium-93	15751-77-6	0	100.00

CAS = Chemical Abstracts Service.

[a] From *Predominant Radionuclides in Hanford Site Waste Tanks* (Boothe 1996) and *Draft Environmental Impact Statement for the Tank Waste Remediation System* DOE 1996 as reported in *Standard Inventories of Chemicals and Radionuclides in Hanford Site Tank Wastes* (Kupfer 1997).

[b] CAS Registry Number for niobium metal.

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
Organic Compounds							
Aromatic Halogenated Hydrocarbons							
2,3,4,6-Tetrachlorophenol	58-90-2	--	--	X	--	--	X
4-Chloro-3-methylphenol	59-50-7	--	--	--	--	--	--
Aromatic Nonhalogenated Hydrocarbons							
2-Nitrotoluene	88-72-2	--	--	X	--	--	X
4-Nitrobiphenyl	92-93-3	--	--	--	--	--	--
Benzaldehyde	100-52-7	--	--	X	--	--	X
Benzene	71-43-2	X	--	X	X	--	X
Benzyl alcohol	100-51-6	--	--	X	--	--	X
Ethyl benzene	100-41-4	X	--	X	X	--	X
m-Xylene	108-38-3	X	--	X	X	--	X
o-Xylene	95-47-6	X	--	X	X	--	X
p-Xylene	106-42-3	X	--	X	X	--	X
Styrene	100-42-5	X	--	X	X	--	X
Toluene	108-88-3	X	--	X	X	--	X
Non-aromatic Nonhalogenated Hydrocarbons							
1,2-Epoxybutane	106-88-7	X	--	--	X	--	--
1,3-Butadiene	106-99-0	X	--	--	X	--	--
1,4-Dioxane	123-91-1	X	--	X	X	--	X
1-Methylpropyl alcohol	78-92-2	X	--	--	X	--	--
1-Nitropropane	108-03-2	X	--	--	X	--	--
2,2,4-Trimethylpentane	540-84-1	X	--	--	X	--	--
2-Butanone	78-93-3	X	--	X	X	--	X
2-Butenaldehyde (2-Butenal)	4170-30-3	X	--	--	X	--	--
2-Ethoxyethanol	110-80-5	X	--	X	X	--	X
2-Heptanone	110-43-0	X	--	--	X	--	--
2-Hexanone	591-78-6	X	--	X	X	--	X
2-Methoxyethanol	109-86-4	X	--	X	X	--	X
2-Methyl-2-propanol	75-65-0	X	--	--	X	--	--
2-Methyl-2-propenenitrile	126-98-7	X	--	X	X	--	X
2-Methylaziridine	75-55-8	X	--	--	X	--	--
2-Methylpropyl alcohol	78-83-1	X	--	X	X	--	X
2-Pentanone	107-87-9	X	--	--	X	--	--
2-Propanone (Acetone)	67-64-1	X	--	X	X	--	X
2-Propene-1-ol	107-18-6	X	--	X	X	--	X
2-Propyl alcohol	67-63-0	X	--	--	X	--	--
3-Heptanone	106-35-4	X	--	--	X	--	--
3-Methyl-1-butanol	123-51-3	X	--	--	X	--	--
3-Methyl-2-butanone	563-80-4	X	--	--	X	--	--
3-Pentanone	96-22-0	X	--	--	X	--	--
4-Heptanone	123-19-3	X	--	--	X	--	--
4-Methyl-2-pentanone	108-10-1	X	--	X	X	--	X
4-Methyl-3-penten-2-one	141-79-7	X	--	--	X	--	--
5-Methyl-2-hexanone	110-12-3	X	--	--	X	--	--
Acetaldehyde	75-07-0	X	--	--	X	--	--
Acetamide	60-35-5	X	--	--	X	--	--
Acetic acid	64-19-7	X	--	--	X	--	--
Acetic acid ethyl ester	141-78-6	X	--	X	X	--	X
Acetic acid n-butyl ester	123-86-4	X	--	--	X	--	--
Acetonitrile	75-05-8	X	--	--	X	--	--
Acrolein	107-02-8	X	--	X	X	--	X
Acrylonitrile	107-13-1	X	--	X	X	--	X
Bis(isopropyl)ether	108-20-3	X	--	--	X	--	--
Butane	106-97-8	X	--	--	X	--	--
Carbon disulfide	75-15-0	X	--	X	X	--	X
Cyanogen	460-19-5	X	--	X	X	--	X
Cyclohexane	110-82-7	X	--	X	X	--	X
Cyclohexanone	108-94-1	X	--	X	X	--	X
Cyclohexene	110-83-8	X	--	--	X	--	--
Cyclopentane	287-92-3	X	--	--	X	--	--
Ethyl alcohol	64-17-5	X	--	--	X	--	--
Ethyl ether	60-29-7	X	--	X	X	--	X

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
Ethyl methacrylate	97-63-2	X	–	X	X	–	X
Formaldehyde	50-00-0	X	–	X	X	–	X
Formamide	75-12-7	X	–	–	X	–	–
Formic acid	64-18-6	X	–	X	X	–	X
Formic acid, methyl ester	107-31-3	X	–	–	X	–	–
Glycidylaldehyde	765-34-4	X	–	X	X	–	X
Methyl acetate	79-20-9	X	–	X	X	–	X
Methyl alcohol	67-56-1	X	–	X	X	–	X
Methyl isocyanate	624-83-9	X	–	–	X	–	–
Methyl methacrylate	80-62-6	X	–	X	X	–	X
Methyl tert-butyl ether	1634-04-4	X	–	–	X	–	–
Methylacetylene	74-99-7	X	–	–	X	–	–
Methylcyclohexane	108-87-2	X	–	–	X	–	–
N,N-Dimethylacetamide	127-19-5	X	–	–	X	–	–
n-Butyl alcohol	71-36-3	X	–	X	X	–	X
n-Heptane	142-82-5	X	–	–	X	–	–
n-Hexane	110-54-3	X	–	X	X	–	X
Nitromethane	75-52-5	X	–	–	X	–	–
n-Nonane	111-84-2	X	–	–	X	–	–
n-Octane	111-65-9	X	–	–	X	–	–
n-Pentane	109-66-0	X	–	–	X	–	–
n-Propionaldehyde	123-38-6	X	–	–	X	–	–
n-Propyl alcohol	71-23-8	X	–	–	X	–	–
n-Valeraldehyde	110-62-3	X	–	–	X	–	–
Oxirane	75-21-8	X	–	X	X	–	X
p-Cymene	99-87-6	X	–	–	X	–	–
Phosgene	75-44-5	X	–	–	X	–	–
Propargyl alcohol	107-19-7	X	–	X	X	–	X
Propionic acid	79-09-4	X	–	–	X	–	–
Propionitrile	107-12-0	X	–	–	X	–	–
Propylene glycol monomethyl ether	107-98-2	X	–	X	X	–	X
p-tert-Butyltoluene	98-51-1	X	–	–	X	–	–
Triethylamine	121-44-8	X	–	–	X	–	–
Trimethylamine	75-50-3	X	–	–	X	–	–
Vinyl acetate	108-05-4	X	–	X	X	–	X
Non-aromatic Halogenated Hydrocarbons							
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	–	–	–	–	–	–
1,1,1,2-Tetrachloroethane	630-20-6	X	–	X	X	–	X
1,1,1-Trichloroethane	71-55-6	X	–	X	X	–	X
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	–	–	–	–	–	–
1,1,2,2-Tetrachloroethane	79-34-5	X	–	X	X	–	X
1,1,2,2-Tetrachloroethene	127-18-4	X	–	X	X	–	X
1,1,2-Trichloroethane	79-00-5	X	–	X	X	–	X
1,1,2-Trichloroethylene	79-01-6	X	–	X	X	–	X
1,1-Dichloroethane	75-34-3	X	–	X	X	–	X
1,1-Dichloroethene	75-35-4	X	–	X	X	–	X
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	X	–	X	X	–	X
1,2,3-Trichloropropane	96-18-4	–	–	X	–	–	X
1,2-Dibromo-3-chloropropane	96-12-8	X	–	X	X	–	X
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	–	–	–	–	–	–
1,2-Dichloroethane	107-06-2	X	–	X	X	–	X
1,2-Dichloroethylene	540-59-0	–	–	X	–	–	X
1,2-Dichloropropane	78-87-5	X	–	X	X	–	X
1,3-Dichloropropene	542-75-6	X	–	X	X	–	X
1,4-Dichloro-2-butene	764-41-0	X	–	–	X	–	–
1-Chloroethene	75-01-4	X	–	X	X	–	X
2,2-Dichloropropionic acid	75-99-0	–	–	X	–	–	X
2-Chloropropane	75-29-6	X	–	–	X	–	–
3-Chloropropene (Allyl chloride)	107-05-1	X	–	–	X	–	–
Bromochloromethane	74-97-5	–	–	–	–	–	–
Bromodichloromethane	75-27-4	–	–	X	–	–	X
Bromoethene	593-60-2	X	–	–	X	–	–
Bromoform	75-25-2	X	–	X	X	–	X

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
Bromomethane	74-83-9	X	--	X	X	--	X
Carbon tetrachloride	56-23-5	X	--	X	X	--	X
Chlorodibromomethane	124-48-1	--	--	X	--	--	X
Chlorodifluoromethane	75-45-6	X	--	--	X	--	--
Chloroethane	75-00-3	X	--	--	X	--	--
Chloroform	67-66-3	X	--	X	X	--	X
Chloromethane	74-87-3	X	--	--	X	--	--
Chloropentafluoroethane	76-15-3	--	--	--	--	--	--
cis-1,2-Dichloroethene	156-59-2	--	--	X	--	--	X
cis-1,3-Dichloropropene	10061-01-5	--	--	--	--	--	--
Cyanogen bromide	506-68-3	--	--	X	--	--	X
Cyanogen chloride	506-77-4	--	--	X	--	--	X
Dichlorodifluoromethane	75-71-8	X	--	X	X	--	X
Dichlorofluoromethane	75-43-4	--	--	--	--	--	--
Dichloromethane	75-09-2	X	--	X	X	--	X
Difluorodibromomethane	75-61-6	--	--	--	--	--	--
Hexafluoroacetone	684-16-2	--	--	--	--	--	--
Iodomethane	74-88-4	--	--	--	--	--	--
Methylene bromide	74-95-3	--	--	X	--	--	X
Pentachloroethane	76-01-7	--	--	--	--	--	--
trans-1,2-Dichloroethylene	156-60-5	--	--	X	--	--	X
trans-1,3-Dichloropropene	10061-02-6	--	--	--	--	--	--
Trichloroacetic acid	76-03-9	--	--	--	--	--	--
Trichlorofluoroethane	27154-33-2	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	X	--	X	X	--	X
Trifluorobromomethane	75-63-8	--	--	--	--	--	--
Dioxin and Furan Compounds (PCDDs/PCDFs)							
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	X	--	X	X	--	X
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	X	--	X	X	--	X
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	X	--	X	X	--	X
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	X	--	X	X	--	X
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	X	--	X	X	--	X
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	X	--	X	X	--	X
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X	--	X	X	--	X
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	X	--	X	X	--	X
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	X	--	X	X	--	X
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	X	--	X	X	--	X
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X	--	X	X	--	X
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	X	--	X	X	--	X
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X	--	X	X	--	X
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X	--	X	X	--	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	X	--	X	X	--	X
Dibenzofuran	132-64-9	--	--	X	--	--	X
Octachlorodibenzo(p)dioxin	3268-87-9	X	--	X	X	--	X
Octachlorodibenzofuran	39001-02-0	X	--	X	X	--	X
Polychlorinated Biphenyls (PCBs)							
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--	--	--	--	--	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--	--	--	--	--	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	X	--	X	X	--	X
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	X	--	X	X	--	X
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	X	--	X	X	--	X
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	X	--	X	X	--	X
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	X	--	X	X	--	X
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	X	--	X	X	--	X
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	X	--	X	X	--	X
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	X	--	X	X	--	X
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	X	--	X	X	--	X
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	X	--	X	X	--	X
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	X	--	X	X	--	X
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	X	--	X	X	--	X
Polychlorinated biphenyls (PCBs)	1336-36-3	X	--	X	X	--	X
Phthalates							
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	--	--	X	--	--	X

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
Butylbenzyl phthalate	85-68-7	--	--	X	--	--	X
Dibutyl phthalate	84-74-2	--	--	X	--	--	X
Diethyl phthalate	84-66-2	--	--	X	--	--	X
Dimethyl phthalate	131-11-3	--	--	--	--	--	--
n-Dioctyl phthalate	117-84-0	--	--	X	--	--	X
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)							
2-Chloronaphthalene	91-58-7	--	--	X	--	--	X
2-Methyl naphthalene	91-57-6	X	--	X	X	--	X
5-Nitroacenaphthene	602-87-9	--	--	--	--	--	--
Acenaphthene	83-32-9	--	--	X	--	--	X
Acenaphthylene	208-96-8	--	--	--	--	--	--
Anthracene	120-12-7	--	--	X	--	--	X
Fluorene	86-73-7	--	--	X	--	--	X
Indene	95-13-6	--	--	--	--	--	--
Naphthalene	91-20-3	X	--	X	X	--	X
Phenanthrene	85-01-8	--	--	--	--	--	--
Pyrene	129-00-0	--	--	X	--	--	X
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)							
3-Methylcholanthrene	56-49-5	--	--	--	--	--	--
5-Methylchrysene	3697-24-3	--	--	--	--	--	--
Benzo[a]anthracene	56-55-3	X	--	X	X	--	X
Benzo[a]pyrene	50-32-8	X	--	X	X	--	X
Benzo[a,i]pyrene	191-30-0	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	X	--	X	X	--	X
Benzo[e]pyrene	192-97-2	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	X	--	X	X	--	X
Chrysene	218-01-9	X	--	X	X	--	X
Dibenz[a,h]acridine	226-36-8	--	--	--	--	--	--
Dibenz[a,h]anthracene	53-70-3	X	--	X	X	--	X
Dibenz[a,j]acridine	224-42-0	--	--	--	--	--	--
Dibenzo[a,e]fluoranthene	5385-75-1	--	--	--	--	--	--
Dibenzo[a,e]pyrene	192-65-4	--	--	--	--	--	--
Dibenzo[a,h]fluoranthene	No CAS #	--	--	--	--	--	--
Dibenzo[a,h]pyrene	189-64-0	--	--	--	--	--	--
Dibenzo[a,i]pyrene	189-55-9	--	--	--	--	--	--
Fluoranthene	206-44-0	--	--	X	--	--	X
Hexachloronaphthalene	1335-87-1	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	X	--	X	X	--	X
Octachloronaphthalene	2234-13-1	--	--	--	--	--	--
Pentachloronaphthalene	1321-64-8	--	--	--	--	--	--
Tetrachloronaphthalene	1335-88-2	--	--	--	--	--	--
Trichloronaphthalene	1321-65-9	--	--	--	--	--	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)							
1,2,3-Trichlorobenzene	87-61-6	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	X	--	X	X	--	X
1,2,4-Trimethyl benzene	95-63-6	X	--	X	X	--	X
1,2-Dichlorobenzene	95-50-1	X	--	X	X	--	X
1,3,5-Trimethyl benzene	108-67-8	X	--	X	X	--	X
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	--	--	X	--	--	X
1,4-Dichlorobenzene	106-46-7	X	--	X	X	--	X
1,4-Dinitrobenzene	100-25-4	--	--	X	--	--	X
2,4,5-Trichlorophenol	95-95-4	--	--	X	--	--	X
2,4,6-Trichlorophenol	88-06-2	X	--	X	X	--	X
2,4-Dichlorophenol	120-83-2	--	--	X	--	--	X
2,4-Dimethylphenol	105-67-9	--	--	X	--	--	X
2,4-Dinitrophenol	51-28-5	--	--	X	--	--	X
2,4-Dinitrotoluene	121-14-2	--	--	X	--	--	X
2,6-Dinitrotoluene	606-20-2	--	--	X	--	--	X
2-Chlorophenol	95-57-8	--	--	X	--	--	X
2-Chlorotoluene	95-49-8	--	--	X	--	--	X

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
2-Nitrophenol	88-75-5	--	--	--	--	--	--
4,6-Dinitro-o-cresol	534-52-1	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	--	--	--	--	--	--
4-Nitrophenol	100-02-7	--	--	--	--	--	--
alpha-Methylstyrene	98-83-9	--	--	X	--	--	X
Aniline	62-53-3	X	--	X	X	--	X
Benzotrichloride	98-07-7	--	--	X	--	--	X
Benzyl chloride	100-44-7	--	--	X	--	--	X
Bromobenzene	108-86-1	--	--	--	--	--	--
Chlorobenzene	108-90-7	X	--	X	X	--	X
Cumene	98-82-8	X	--	X	X	--	X
m-Cresol	108-39-4	--	--	X	--	--	X
n-Butyl benzene	104-51-8	--	--	--	--	--	--
Nitrobenzene	98-95-3	X	--	X	X	--	X
n-Propyl benzene	103-65-1	--	--	--	--	--	--
o-Cresol	95-48-7	--	--	X	--	--	X
o-Dinitrobenzene	528-29-0	--	--	X	--	--	X
o-Nitroaniline	88-74-4	X	--	--	X	--	--
o-Toluidine	95-53-4	--	--	X	--	--	X
p-Chloroaniline	106-47-8	--	--	X	--	--	X
p-Cresol	106-44-5	--	--	X	--	--	X
Phenol	108-95-2	--	--	X	--	--	X
p-Nitrochlorobenzene	100-00-5	--	--	--	--	--	--
p-Toluidine	106-49-0	--	--	X	--	--	X
sec-Butyl benzene	135-98-8	--	--	--	--	--	--
tert-Butyl benzene	98-06-6	--	--	--	--	--	--
Toluene-2,6-diamine	823-40-5	--	--	X	--	--	X
Trimethyl benzene	25551-13-7	--	--	--	--	--	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)							
1,1'-Biphenyl	92-52-4	--	--	X	--	--	X
1,1-Dimethylhydrazine	57-14-7	X	--	X	X	--	X
1,2-Dimethylhydrazine	540-73-8	X	--	X	X	--	X
1,2-Diphenylhydrazine	122-66-7	X	--	X	X	--	X
1,3-Propane sultone	1120-71-4	--	--	--	--	--	--
2,4-Toluene diisocyanate	584-84-9	--	--	--	--	--	--
2-Chloroacetophenone	532-27-4	X	--	--	X	--	--
2-Propenoic acid	79-10-7	X	--	X	X	--	X
4,4'-Methylenedianiline	101-77-9	--	--	--	--	--	--
Acetophenone	98-86-2	--	--	X	--	--	X
Benzoic acid	65-85-0	--	--	X	--	--	X
Bis(2-chloroethoxy)methane	111-91-1	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	X	--	X	X	--	X
Chlorocyclopentadiene	41851-50-7	--	--	--	--	--	--
Cyclohexanol	108-93-0	--	--	--	--	--	--
Dichloroisopropyl ether	108-60-1	X	--	X	X	--	X
Dichloromethyl ether	542-88-1	X	--	X	X	--	X
Dichloropentadiene	61626-71-9	--	--	--	--	--	--
Dimethyl sulfate	77-78-1	--	--	--	--	--	--
Dimethylaniline	121-69-7	--	--	X	--	--	X
di-n-Propylnitrosamine	621-64-7	--	--	X	--	--	X
Diphenyl ether	101-84-8	--	--	--	--	--	--
Epichlorohydrin	106-89-8	X	--	X	X	--	X
Ethyl carbamate (Urethane)	51-79-6	--	--	--	--	--	--
Ethyl methanesulfonate	62-50-0	--	--	--	--	--	--
Ethylene dibromide	106-93-4	X	--	X	X	--	X
Ethylene glycol	107-21-1	--	--	X	--	--	X
Ethylene glycol monobutyl ether	111-76-2	X	--	X	X	--	X
Ethylene glycol monoethyl ether acetate	111-15-9	--	--	X	--	--	X
Ethylene thiourea	96-45-7	--	--	X	--	--	X
Furfural	98-01-1	X	--	X	X	--	X
Maleic hydrazide	123-33-1	--	--	X	--	--	X
Malononitrile	109-77-3	--	--	X	--	--	X
Methyl styrene (mixed isomers)	25013-15-4	X	--	X	X	--	X

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
Methylhydrazine	60-34-4	X	–	X	X	–	X
N,N-Diphenylamine	122-39-4	–	–	X	–	–	X
Nitric acid, propyl ester	627-13-4	–	–	–	–	–	–
N-Nitrosodi-n-butylamine	924-16-3	X	–	X	X	–	X
N-Nitrosomorpholine	59-89-2	–	–	–	–	–	–
N-Nitroso-N,N-dimethylamine	62-75-9	X	–	X	X	–	X
o-Anisidine	90-04-0	–	–	–	–	–	–
Oxalic acid	144-62-7	–	–	–	–	–	–
Phthalic anhydride	85-44-9	X	–	X	X	–	X
p-Phthalic acid	100-21-0	–	–	X	–	–	X
Pyridine	110-86-1	–	–	X	–	–	X
Quinoline	91-22-5	–	–	X	–	–	X
Quinone	106-51-4	–	–	–	–	–	–
Safrole	94-59-7	–	–	–	–	–	–
Tetrahydrofuran	109-99-9	–	–	–	–	–	–
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)							
1,2,4,5-Tetrachlorobenzene	95-94-3	–	–	X	–	–	X
1,3,5-Trinitrobenzene	99-35-4	–	–	X	–	–	X
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	–	–	–	–	–	–
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	–	–	X	–	–	X
2-sec-Butyl-4,6-dinitrophenol	88-85-7	–	–	X	–	–	X
3,3'-Dichlorobenzidine	91-94-1	–	–	X	–	–	X
3,3'-Dimethoxybenzidine	119-90-4	–	–	X	–	–	X
4-Bromophenylphenyl ether	101-55-3	–	–	–	–	–	–
Ammonium perfluorooctanoate	3825-26-1	–	–	–	–	–	–
Azobenzene	103-33-3	X	–	X	X	–	X
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	–	–	–	–	–	–
Captan	133-06-2	–	–	X	–	–	X
Chlorobenzilate	510-15-6	X	–	X	X	–	X
Dibutylphosphate	107-66-4	–	–	–	–	–	–
Dimethyl aminoazobenzene	60-11-7	–	–	–	–	–	–
Hexachlorobenzene	118-74-1	X	–	X	X	–	X
Hexachlorobutadiene	87-68-3	X	–	X	X	–	X
Hexachlorocyclopentadiene	77-47-4	X	–	X	X	–	X
Hexachloroethane	67-72-1	X	–	X	X	–	X
Hexachlorophene	70-30-4	–	–	X	–	–	X
Hexamethylene-1,5-diisocyanate	822-06-0	X	–	–	X	–	–
Mirex	2385-85-5	X	–	X	X	–	X
Nitrofen	1836-75-5	–	–	–	–	–	–
Pentachlorobenzene	608-93-5	–	–	X	–	–	X
Pentachloronitrobenzene	82-68-8	–	–	X	–	–	X
Pentachlorophenol	87-86-5	–	–	X	–	–	X
Picric acid	88-89-1	–	–	–	–	–	–
Pronamide	23950-58-5	–	–	X	–	–	X
Strychnine	57-24-9	–	–	X	–	–	X
Terphenyls	26140-60-3	–	–	–	–	–	–
Tributyl phosphate	126-73-8	–	–	–	–	–	–
Trifluralin	1582-09-8	–	–	X	–	–	X
Triphenylamine	603-34-9	–	–	–	–	–	–
Herbicides and Organochlorinated Pesticides							
2,4,5-T	93-76-5	–	–	X	–	–	X
2,4-D and esters	94-75-7	–	–	X	–	–	X
4,4'-DDD	72-54-8	–	–	X	–	–	X
4,4'-DDE	72-55-9	–	–	X	–	–	X
4,4'-DDT	50-29-3	X	–	X	X	–	X
Aldrin	309-00-2	X	–	X	X	–	X
alpha-BHC	319-84-6	X	–	X	X	–	X
beta-BHC	319-85-7	X	–	X	X	–	X
Chlordane	57-74-9	X	–	X	X	–	X
delta-BHC	319-86-8	–	–	–	–	–	–
Dieldrin	60-57-1	X	–	X	X	–	X
Endothall	145-73-3	–	–	X	–	–	X
Endrin	72-20-8	–	–	X	–	–	X

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
gamma-BHC (Lindane)	58-89-9	--	--	X	--	--	X
Heptachlor	76-44-8	X	--	X	X	--	X
Isodrin	465-73-6	--	--	--	--	--	--
Methoxychlor	72-43-5	--	--	X	--	--	X
Silvex (2,4,5-TP)	93-72-1	--	--	X	--	--	X
Toxaphene	8001-35-2	X	--	X	X	--	X
Inorganic Chemicals and Compounds							
Metals							
Aluminum	7429-90-5	--	--	--	--	--	--
Antimony	7440-36-0	--	--	X	--	--	X
Arsenic	7440-38-2	X	--	X	X	--	X
Barium	7440-39-3	X	--	X	X	--	X
Beryllium	7440-41-7	X	--	X	X	--	X
Bismuth	7440-69-9	--	--	--	--	--	--
Boron	7440-42-8	X	--	X	X	--	X
Cadmium	7440-43-9	X	--	X	X	--	X
Calcium	7440-70-2	--	--	--	--	--	--
Chromium	18540-29-9	X	--	X	X	--	X
Cobalt	7440-48-4	--	--	--	--	--	--
Copper	7440-50-8	--	--	--	--	--	--
Iron	7439-89-6	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--
Lithium	7439-93-2	--	--	--	--	--	--
Magnesium	7439-95-4	--	--	--	--	--	--
Manganese	7439-96-5	X	--	X	X	--	X
Mercury	7439-97-6	X	--	--	--	--	--
Mercury - Hg+2	7487-94-7	--	--	X	--	--	X
Methylmercury	22967-92-6	--	--	X	--	--	X
Molybdenum	7439-98-7	--	--	X	--	--	X
Nickel	7440-02-0	X	--	X	X	--	X
Potassium	7440-09-7	--	--	--	--	--	--
Rhodium	7440-16-6	--	--	--	--	--	--
Selenium	7782-49-2	--	--	X	--	--	X
Silicon	7440-21-3	--	--	--	--	--	--
Silver	7440-22-4	--	--	X	--	--	X
Sodium	7440-23-5	--	--	--	--	--	--
Strontium	7440-24-6	--	--	X	--	--	X
Tantalum	7440-25-7	--	--	--	--	--	--
Thallium	7440-28-0	--	--	X	--	--	X
Tin	7440-31-5	--	--	X	--	--	X
Tungsten	7440-33-7	--	--	--	--	--	--
Uranium	7440-61-1	--	--	X	--	--	X
Vanadium	7440-62-2	--	--	X	--	--	X
Yttrium	7440-65-5	--	--	--	--	--	--
Zinc	7440-66-6	--	--	X	--	--	X
Zirconium	7440-67-7	--	--	--	--	--	--
Non-metals and Anions							
Ammonia/Ammonium	7664-41-7	X	--	--	X	--	--
Bromide	24959-67-9	--	--	--	--	--	--
Chloride	16887-00-6	--	--	--	--	--	--
Cyanide	57-12-5	--	--	X	--	--	X
Fluoride	16984-48-8	--	--	X	--	--	X
Hydroxide	14280-30-9	--	--	--	--	--	--
Iodine	7553-56-2	--	--	--	--	--	--
Nitrate	14797-55-8	--	--	X	--	--	X
Nitrite	14797-65-0	--	--	X	--	--	X
Phosphate	14265-44-2	--	--	--	--	--	--
Phosphorus	7723-14-0	--	--	--	--	--	--
Sulfate	14808-79-8	--	--	--	--	--	--
Total sulfur	63705-05-5	--	--	--	--	--	--
Criteria Pollutants							
Carbon monoxide	630-08-0	--	--	--	--	--	--

Table A-7 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Hanford Site Industrial Worker[a]

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway					
		Direct Air Exposure		Direct Soil Exposure			Surface Water
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Ingestion
Nitrogen dioxide	10102-44-0	--	--	--	--	--	--
Ozone	10028-15-6	--	--	--	--	--	--
Particulate matter	No CAS #	--	--	--	--	--	--
Sulfur dioxide	7446-09-5	--	--	--	--	--	--
Radionuclides							
Actinium-227	14952-40-0	X	X	X	X	X	X
Americium-241	14596-10-2	X	X	X	X	X	X
Americium-243	14993-75-0	X	X	X	X	X	X
Antimony-125	14234-35-6	X	X	X	X	X	X
Cadmium-113m	14336-66-4	X	X	X	X	X	X
Carbon-14	14762-75-5	X	X	X	X	X	X
Cesium-134	13967-70-9	X	X	X	X	X	X
Cesium-137	10045-97-3	X	X	X	X	X	X
Barium-137m	13981-97-0	Risks from Barium-137 are included in slope factor for Cesium-137+D[b]					
Cobalt-60	10198-40-0	X	X	X	X	X	X
Curium-242	15510-73-3	X	X	X	X	X	X
Curium-243	15757-87-6	X	X	X	X	X	X
Curium-244	13981-15-2	X	X	X	X	X	X
Europium-152	14683-23-9	X	X	X	X	X	X
Europium-154	15585-10-1	X	X	X	X	X	X
Europium-155	14391-16-3	X	X	X	X	X	X
Iodine-129	15046-84-1	X	X	X	X	X	X
Neptunium-237	13994-20-2	X	X	X	X	X	X
Nickel-59	14336-70-0	X	X	X	X	X	X
Nickel-63	13981-37-8	X	X	X	X	X	X
Niobium-93m	7440-03-1	X	X	X	X	X	X
Plutonium-238	13981-16-3	X	X	X	X	X	X
Plutonium-239	15117-48-3	X	X	X	X	X	X
Plutonium-240	14119-33-6	X	X	X	X	X	X
Plutonium-241	14119-32-5	X	X	X	X	X	X
Plutonium-242	13982-10-0	X	X	X	X	X	X
Protactinium-231	14331-85-2	X	X	X	X	X	X
Radium-226	13982-63-3	X	X	X	X	X	X
Radium-228	15262-20-1	X	X	X	X	X	X
Ruthenium-106	13967-48-1	X	X	X	X	X	X
Samarium-151	15715-94-3	X	X	X	X	X	X
Selenium-79	15758-45-9	X	X	X	X	X	X
Strontium-90	10098-97-2	X	X	X	X	X	X
Yttrium-90	10098-91-6	Risks from Yttrium-90 are included in slope factor for Strontium-90+D[b]					
Technetium-99	14133-76-7	X	X	X	X	X	X
Thorium-229	15594-54-4	X	X	X	X	X	X
Thorium-232	7440-29-1	X	X	X	X	X	X
Tin-126	15832-50-5	X	X	X	X	X	X
Tritium	10028-17-8	X	X	X	X	X	X
Uranium-232	14158-29-3	X	X	X	X	X	X
Uranium-233	13968-55-3	X	X	X	X	X	X
Uranium-234	13966-29-5	X	X	X	X	X	X
Uranium-235	15117-96-1	X	X	X	X	X	X
Uranium-236	13982-70-2	X	X	X	X	X	X
Uranium-238	7440-61-1	X	X	X	X	X	X
Zirconium-93	15751-77-6	X	X	X	X	X	X

CAS = Chemical Abstracts Service.
PCDD = polychlorinated dibenzo-p-dioxin.
PCDF = polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for this exposure medium and pathway.
-- = Constituent is qualitatively evaluated for this exposure medium and pathway.

[a]Worker exposure pathways apply to time spent at work. Worker is also an offsite resident; exposure pathways for residential portion of worker exposure are the same as those listed in Table A-8.

[b]+D slope factors include contributions from short-lived daughter products.

Table A-8 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Resident Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Organic Compounds														
Aromatic Halogenated Hydrocarbons														
2,3,4,6-Tetrachlorophenol	58-90-2	--	--	X	--	--	X	X	X	X	X	X	X	X
4-Chloro-3-methylphenol	59-50-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Aromatic Nonhalogenated Hydrocarbons														
2-Nitrotoluene	88-72-2	--	--	X	--	--	X	X	X	X	X	X	X	X
4-Nitrobiphenyl	92-93-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	100-52-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Benzene	71-43-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzyl alcohol	100-51-6	--	--	X	--	--	X	X	X	X	X	X	X	X
Ethyl benzene	100-41-4	X	--	X	X	--	X	X	X	X	X	X	X	X
m-Xylene	108-38-3	X	--	X	X	--	X	X	X	X	X	X	X	X
o-Xylene	95-47-6	X	--	X	X	--	X	X	X	X	X	X	X	X
p-Xylene	106-42-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Styrene	100-42-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Toluene	108-88-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Non-aromatic Nonhalogenated Hydrocarbons														
1,2-Epoxybutane	106-88-7	X	--	--	X	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	X	--	--	X	--	--	--	--	--	--	--	--	--
1,4-Dioxane	123-91-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1-Methylpropyl alcohol	78-92-2	X	--	--	X	--	--	--	--	--	--	--	--	--
1-Nitropropane	108-03-2	X	--	--	X	--	--	--	--	--	--	--	--	--
2,2,4-Trimethylpentane	540-84-1	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Butenaldehyde (2-Butenal)	4170-30-3	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Ethoxyethanol	110-80-5	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Heptanone	110-43-0	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Hexanone	591-78-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Methoxyethanol	109-86-4	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Methyl-2-propanol	75-65-0	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Methyl-2-propenenitrile	126-98-7	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Methylaziridine	75-55-8	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Methylpropyl alcohol	78-83-1	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Pentanone	107-87-9	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Propanone (Acetone)	67-64-1	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Propene-1-ol	107-18-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Propyl alcohol	67-63-0	X	--	--	X	--	--	--	--	--	--	--	--	--
3-Heptanone	106-35-4	X	--	--	X	--	--	--	--	--	--	--	--	--
3-Methyl-1-butanol	123-51-3	X	--	--	X	--	--	--	--	--	--	--	--	--
3-Methyl-2-butanone	563-80-4	X	--	--	X	--	--	--	--	--	--	--	--	--
3-Pentanone	96-22-0	X	--	--	X	--	--	--	--	--	--	--	--	--
4-Heptanone	123-19-3	X	--	--	X	--	--	--	--	--	--	--	--	--

Table A-8 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Resident Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
4-Methyl-2-pentanone	108-10-1	X	--	X	X	--	X	X	X	X	X	X	X	X
4-Methyl-3-penten-2-one	141-79-7	X	--	--	X	--	--	--	--	--	--	--	--	--
5-Methyl-2-hexanone	110-12-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	X	--	--	X	--	--	--	--	--	--	--	--	--
Acetamide	60-35-5	X	--	--	X	--	--	--	--	--	--	--	--	--
Acetic acid	64-19-7	X	--	--	X	--	--	--	--	--	--	--	--	--
Acetic acid ethyl ester	141-78-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Acetic acid n-butyl ester	123-86-4	X	--	--	X	--	--	--	--	--	--	--	--	--
Acetonitrile	75-05-8	X	--	--	X	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Acrylonitrile	107-13-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Bis(isopropyl)ether	108-20-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Butane	106-97-8	X	--	--	X	--	--	--	--	--	--	--	--	--
Carbon disulfide	75-15-0	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyanogen	460-19-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyclohexane	110-82-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyclohexanone	108-94-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyclohexene	110-83-8	X	--	--	X	--	--	--	--	--	--	--	--	--
Cyclopentane	287-92-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Ethyl alcohol	64-17-5	X	--	--	X	--	--	--	--	--	--	--	--	--
Ethyl ether	60-29-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethyl methacrylate	97-63-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Formaldehyde	50-00-0	X	--	X	X	--	X	X	X	X	X	X	X	X
Formamide	75-12-7	X	--	--	X	--	--	--	--	--	--	--	--	--
Formic acid	64-18-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Formic acid, methyl ester	107-31-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Glycidylaldehyde	765-34-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl acetate	79-20-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl alcohol	67-56-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl isocyanate	624-83-9	X	--	--	X	--	--	--	--	--	--	--	--	--
Methyl methacrylate	80-62-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl tert-butyl ether	1634-04-4	X	--	--	X	--	--	--	--	--	--	--	--	--
Methylacetylene	74-99-7	X	--	--	X	--	--	--	--	--	--	--	--	--
Methylcyclohexane	108-87-2	X	--	--	X	--	--	--	--	--	--	--	--	--
N,N-Dimethylacetamide	127-19-5	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Butyl alcohol	71-36-3	X	--	X	X	--	X	X	X	X	X	X	X	X
n-Heptane	142-82-5	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Hexane	110-54-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Nitromethane	75-52-5	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Nonane	111-84-2	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Octane	111-65-9	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Pentane	109-66-0	X	--	--	X	--	--	--	--	--	--	--	--	--

Table A-8 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Resident Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
n-Propionaldehyde	123-38-6	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Propyl alcohol	71-23-8	X	--	--	X	--	--	--	--	--	--	--	--	--
n-Valeraldehyde	110-62-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Oxirane	75-21-8	X	--	X	X	--	X	X	X	X	X	X	X	X
p-Cymene	99-87-6	X	--	--	X	--	--	--	--	--	--	--	--	--
Phosgene	75-44-5	X	--	--	X	--	--	--	--	--	--	--	--	--
Propargyl alcohol	107-19-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Propionic acid	79-09-4	X	--	--	X	--	--	--	--	--	--	--	--	--
Propionitrile	107-12-0	X	--	--	X	--	--	--	--	--	--	--	--	--
Propylene glycol monomethyl ether	107-98-2	X	--	X	X	--	X	X	X	X	X	X	X	X
p-tert-Butyltoluene	98-51-1	X	--	--	X	--	--	--	--	--	--	--	--	--
Triethylamine	121-44-8	X	--	--	X	--	--	--	--	--	--	--	--	--
Trimethylamine	75-50-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Non-aromatic Halogenated Hydrocarbons														
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	630-20-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,1-Trichloroethane	71-55-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2,2-Tetrachloroethene	127-18-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2-Trichloroethane	79-00-5	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2-Trichloroethylene	79-01-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1-Dichloroethane	75-34-3	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1-Dichloroethene	75-35-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3-Trichloropropane	96-18-4	--	--	X	--	--	X	X	X	X	X	X	X	X
1,2-Dibromo-3-chloropropane	96-12-8	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	107-06-2	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dichloroethylene	540-59-0	--	--	X	--	--	X	X	X	X	X	X	X	X
1,2-Dichloropropane	78-87-5	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3-Dichloropropene	542-75-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,4-Dichloro-2-butene	764-41-0	X	--	--	X	--	--	--	--	--	--	--	--	--
1-Chloroethene	75-01-4	X	--	X	X	--	X	X	X	X	X	X	X	X
2,2-Dichloropropionic acid	75-99-0	--	--	X	--	--	X	X	X	X	X	X	X	X
2-Chloropropane	75-29-6	X	--	--	X	--	--	--	--	--	--	--	--	--
3-Chloropropene (Allyl chloride)	107-05-1	X	--	--	X	--	--	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	--	--	X	--	--	X	X	X	X	X	X	X	X
Bromoethene	593-60-2	X	--	--	X	--	--	--	--	--	--	--	--	--
Bromoform	75-25-2	X	--	X	X	--	X	X	X	X	X	X	X	X

Table A-8 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Resident Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Bromomethane	74-83-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Carbon tetrachloride	56-23-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Chlorodibromomethane	124-48-1	--	--	X	--	--	X	X	X	X	X	X	X	X
Chlorodifluoromethane	75-45-6	X	--	--	X	--	--	--	--	--	--	--	--	--
Chloroethane	75-00-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Chloromethane	74-87-3	X	--	--	X	--	--	--	--	--	--	--	--	--
Chloropentafluoroethane	76-15-3	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	156-59-2	--	--	X	--	--	X	X	X	X	X	X	X	X
cis-1,3-Dichloropropene	10061-01-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanogen bromide	506-68-3	--	--	X	--	--	X	X	X	X	X	X	X	X
Cyanogen chloride	506-77-4	--	--	X	--	--	X	X	X	X	X	X	X	X
Dichlorodifluoromethane	75-71-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Dichlorofluoromethane	75-43-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	75-09-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Difluorodibromomethane	75-61-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexafluoroacetone	684-16-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Iodomethane	74-88-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene bromide	74-95-3	--	--	X	--	--	X	X	X	X	X	X	X	X
Pentachloroethane	76-01-7	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethylene	156-60-5	--	--	X	--	--	X	X	X	X	X	X	X	X
trans-1,3-Dichloropropene	10061-02-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroacetic acid	76-03-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoroethane	27154-33-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Trifluorobromomethane	75-63-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin and Furan Compounds (PCDDs/PCDFs)														
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	X	--	X	X	--	X	--	--	X	X	X	X	X
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	X	--	X	X	--	X	X	X	X	X	X	X	X

Table A-8 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Resident Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Dibenzofuran	132-64-9	--	--	X	--	--	X	X	X	X	X	X	X	X
Octachlorodibenzo(p)dioxin	3268-87-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Octachlorodibenzofuran	39001-02-0	X	--	X	X	--	X	X	X	X	X	X	X	X
Polychlorinated Biphenyls (PCBs)														
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	X	--	X	X	--	X	--	--	--	--	--	X	--
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	X	--	X	X	--	X	--	--	--	--	--	X	--
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	X	--	X	X	--	X	--	--	--	--	--	X	--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	X	--	X	X	--	X	--	--	--	--	--	X	--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	X	--	X	X	--	X	--	--	--	--	--	X	--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	X	--	X	X	--	X	--	--	--	--	--	X	--
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	X	--	X	X	--	X	--	--	--	--	--	X	--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	X	--	X	X	--	X	X	X	X	X	X	X	X
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	X	--	X	X	--	X	X	X	X	X	X	X	X
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	X	--	X	X	--	X	--	--	--	--	--	X	--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	X	--	X	X	--	X	--	--	--	--	--	X	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	X	--	X	X	--	X	--	--	--	--	--	X	--
Polychlorinated biphenyls (PCBs)	1336-36-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Phthalates														
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Butylbenzyl phthalate	85-68-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Dibutyl phthalate	84-74-2	--	--	X	--	--	X	X	X	X	X	X	X	X
Diethyl phthalate	84-66-2	--	--	X	--	--	X	X	X	X	X	X	X	X
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Dioctyl phthalate	117-84-0	--	--	X	--	--	X	X	X	X	X	X	X	X
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)														
2-Chloronaphthalene	91-58-7	--	--	X	--	--	X	X	X	X	X	X	X	X
2-Methyl naphthalene	91-57-6	X	--	X	X	--	X	X	X	X	X	X	X	X
5-Nitroacenaphthene	602-87-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	--	--	X	--	--	X	X	X	X	X	X	X	X
Acenaphthylene	208-96-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Fluorene	86-73-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Indene	95-13-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Phenanthrene	85-01-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	--	--	X	--	--	X	X	X	X	X	X	X	X
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)														
3-Methylcholanthrene	56-49-5	--	--	--	--	--	--	--	--	--	--	--	--	--
5-Methylchrysene	3697-24-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	56-55-3	X	--	X	X	--	X	X	X	X	X	X	X	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Benzo[a]pyrene	50-32-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzo[a,i]pyrene	191-30-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzo[e]pyrene	192-97-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Chrysene	218-01-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Dibenz[a,h]acridine	226-36-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	53-70-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Dibenz[a,j]acridine	224-42-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,e]fluoranthene	5385-75-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,e]pyrene	192-65-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,h]fluoranthene	No CAS #	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,h]pyrene	189-64-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,i]pyrene	189-55-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	--	--	X	--	--	X	X	X	X	X	X	X	X
Hexachloronaphthalene	1335-87-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Octachloronaphthalene	2234-13-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachloronaphthalene	1321-64-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloronaphthalene	1335-88-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloronaphthalene	1321-65-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)														
1,2,3-Trichlorobenzene	87-61-6	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,4-Trimethyl benzene	95-63-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dichlorobenzene	95-50-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3,5-Trimethyl benzene	108-67-8	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	--	--	X	--	--	X	X	X	X	X	X	X	X
1,4-Dichlorobenzene	106-46-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,4-Dinitrobenzene	100-25-4	--	--	X	--	--	X	X	X	X	X	X	X	X
2,4,5-Trichlorophenol	95-95-4	--	--	X	--	--	X	X	X	X	X	X	X	X
2,4,6-Trichlorophenol	88-06-2	X	--	X	X	--	X	X	X	X	X	X	X	X
2,4-Dichlorophenol	120-83-2	--	--	X	--	--	X	X	X	X	X	X	X	X
2,4-Dimethylphenol	105-67-9	--	--	X	--	--	X	X	X	X	X	X	X	X
2,4-Dinitrophenol	51-28-5	--	--	X	--	--	X	X	X	X	X	X	X	X
2,4-Dinitrotoluene	121-14-2	--	--	X	--	--	X	X	X	X	X	X	X	X
2,6-Dinitrotoluene	606-20-2	--	--	X	--	--	X	X	X	X	X	X	X	X
2-Chlorophenol	95-57-8	--	--	X	--	--	X	X	X	X	X	X	X	X
2-Chlorotoluene	95-49-8	--	--	X	--	--	X	X	X	X	X	X	X	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
2-Nitrophenol	88-75-5	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol	534-52-1	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Methylstyrene	98-83-9	--	--	X	--	--	X	X	X	X	X	X	X	X
Aniline	62-53-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzotrichloride	98-07-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Benzyl chloride	100-44-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Bromobenzene	108-86-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Cumene	98-82-8	X	--	X	X	--	X	X	X	X	X	X	X	X
m-Cresol	108-39-4	--	--	X	--	--	X	X	X	X	X	X	X	X
n-Butyl benzene	104-51-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	X	--	X	X	--	X	X	X	X	X	X	X	X
n-Propyl benzene	103-65-1	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Cresol	95-48-7	--	--	X	--	--	X	X	X	X	X	X	X	X
o-Dinitrobenzene	528-29-0	--	--	X	--	--	X	X	X	X	X	X	X	X
o-Nitroaniline	88-74-4	X	--	--	X	--	--	--	--	--	--	--	--	--
o-Toluidine	95-53-4	--	--	X	--	--	X	X	X	X	X	X	X	X
p-Chloroaniline	106-47-8	--	--	X	--	--	X	X	X	X	X	X	X	X
p-Cresol	106-44-5	--	--	X	--	--	X	X	X	X	X	X	X	X
Phenol	108-95-2	--	--	X	--	--	X	X	X	X	X	X	X	X
p-Nitrochlorobenzene	100-00-5	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Toluidine	106-49-0	--	--	X	--	--	X	X	X	X	X	X	X	X
sec-Butyl benzene	135-98-8	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butyl benzene	98-06-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene-2,6-diamine	823-40-5	--	--	X	--	--	X	X	X	X	X	X	X	X
Trimethyl benzene	25551-13-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)														
1,1'-Biphenyl	92-52-4	--	--	X	--	--	X	X	X	X	X	X	X	X
1,1-Dimethylhydrazine	57-14-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dimethylhydrazine	540-73-8	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Diphenylhydrazine	122-66-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3-Propane sultone	1120-71-4	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Toluene diisocyanate	584-84-9	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroacetophenone	532-27-4	X	--	--	X	--	--	--	--	--	--	--	--	--
2-Propenoic acid	79-10-7	X	--	X	X	--	X	X	X	X	X	X	X	X
4,4'-Methylenedianiline	101-77-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	98-86-2	--	--	X	--	--	X	X	X	X	X	X	X	X
Benzoic acid	65-85-0	--	--	X	--	--	X	X	X	X	X	X	X	X
Bis(2-chloroethoxy)methane	111-91-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	X	--	X	X	--	X	X	X	X	X	X	X	X

Table A-8 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Resident Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Chlorocyclopentadiene	41851-50-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexanol	108-93-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloroisopropyl ether	108-60-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Dichloromethyl ether	542-88-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Dichloropentadiene	61626-71-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl sulfate	77-78-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethylaniline	121-69-7	--	--	X	--	--	X	X	X	X	X	X	X	X
di-n-Propylnitrosamine	621-64-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Diphenyl ether	101-84-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Epichlorohydrin	106-89-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethyl carbamate (Urethane)	51-79-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl methanesulfonate	62-50-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dibromide	106-93-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethylene glycol	107-21-1	--	--	X	--	--	X	X	X	X	X	X	X	X
Ethylene glycol monobutyl ether	111-76-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethylene glycol monoethyl ether acetate	111-15-9	--	--	X	--	--	X	X	X	X	X	X	X	X
Ethylene thiourea	96-45-7	--	--	X	--	--	X	X	X	X	X	X	X	X
Furfural	98-01-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Maleic hydrazide	123-33-1	--	--	X	--	--	X	X	X	X	X	X	X	X
Malononitrile	109-77-3	--	--	X	--	--	X	X	X	X	X	X	X	X
Methyl styrene (mixed isomers)	25013-15-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Methylhydrazine	60-34-4	X	--	X	X	--	X	X	X	X	X	X	X	X
N,N-Diphenylamine	122-39-4	--	--	X	--	--	X	X	X	X	X	X	X	X
Nitric acid, propyl ester	627-13-4	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-butylamine	924-16-3	X	--	X	X	--	X	X	X	X	X	X	X	X
N-Nitrosomorpholine	59-89-2	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-N,N-dimethylamine	62-75-9	X	--	X	X	--	X	X	X	X	X	X	X	X
o-Anisidine	90-04-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Oxalic acid	144-62-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalic anhydride	85-44-9	X	--	X	X	--	X	X	X	X	X	X	X	X
p-Phthalic acid	100-21-0	--	--	X	--	--	X	X	X	X	X	X	X	X
Pyridine	110-86-1	--	--	X	--	--	X	X	X	X	X	X	X	X
Quinoline	91-22-5	--	--	X	--	--	X	X	X	X	X	X	X	X
Quinone	106-51-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Safrole	94-59-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrahydrofuran	109-99-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)														
1,2,4,5-Tetrachlorobenzene	95-94-3	--	--	X	--	--	X	X	X	X	X	X	X	X
1,3,5-Trinitrobenzene	99-35-4	--	--	X	--	--	X	X	X	X	X	X	X	X
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	--	--	X	--	--	X	X	X	X	X	X	X	X
2-sec-Butyl-4,6-dinitrophenol	88-85-7	--	--	X	--	--	X	X	X	X	X	X	X	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
3,3'-Dichlorobenzidine	91-94-1	--	--	X	--	--	X	X	X	X	X	X	X	X
3,3'-Dimethoxybenzidine	119-90-4	--	--	X	--	--	X	X	X	X	X	X	X	X
4-Bromophenylphenyl ether	101-55-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonium perfluorooctanoate	3825-26-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene	103-33-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Captan	133-06-2	--	--	X	--	--	X	X	X	X	X	X	X	X
Chlorobenzilate	510-15-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Dibutylphosphate	107-66-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl aminoazobenzene	60-11-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	118-74-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachlorobutadiene	87-68-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachlorocyclopentadiene	77-47-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachloroethane	67-72-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachlorophene	70-30-4	--	--	X	--	--	X	X	X	X	X	X	X	X
Hexamethylene-1,5-diisocyanate	822-06-0	X	--	--	X	--	--	--	--	--	--	--	--	--
Mirex	2385-85-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Nitrofen	1836-75-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorobenzene	608-93-5	--	--	X	--	--	X	X	X	X	X	X	X	X
Pentachloronitrobenzene	82-68-8	--	--	X	--	--	X	X	X	X	X	X	X	X
Pentachlorophenol	87-86-5	--	--	X	--	--	X	X	X	X	X	X	X	X
Picric acid	88-89-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Pronamide	23950-58-5	--	--	X	--	--	X	X	X	X	X	X	X	X
Strychnine	57-24-9	--	--	X	--	--	X	X	X	X	X	X	X	X
Terphenyls	26140-60-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyl phosphate	126-73-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Trifluralin	1582-09-8	--	--	X	--	--	X	X	X	X	X	X	X	X
Triphenylamine	603-34-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Herbicides and Organochlorinated Pesticides														
2,4,5-T	93-76-5	--	--	X	--	--	X	X	X	X	X	X	X	X
2,4-D and esters	94-75-7	--	--	X	--	--	X	X	X	X	X	X	X	X
4,4'-DDD	72-54-8	--	--	X	--	--	X	X	X	X	X	X	X	X
4,4'-DDE	72-55-9	--	--	X	--	--	X	X	X	X	X	X	X	X
4,4'-DDT	50-29-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Aldrin	309-00-2	X	--	X	X	--	X	X	X	X	X	X	X	X
alpha-BHC	319-84-6	X	--	X	X	--	X	X	X	X	X	X	X	X
beta-BHC	319-85-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Chlordane	57-74-9	X	--	X	X	--	X	X	X	X	X	X	X	X
delta-BHC	319-86-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	60-57-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Endothall	145-73-3	--	--	X	--	--	X	X	X	X	X	X	X	X
Endrin	72-20-8	--	--	X	--	--	X	X	X	X	X	X	X	X

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		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs						Surface Water	
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
gamma-BHC (Lindane)	58-89-9	–	–	X	–	–	X	X	X	X	X	X	X	X
Heptachlor	76-44-8	X	–	X	X	–	X	X	X	X	X	X	X	X
Isodrin	465-73-6	–	–	–	–	–	–	–	–	–	–	–	–	–
Methoxychlor	72-43-5	–	–	X	–	–	X	X	X	X	X	X	X	X
Silvex (2,4,5-TP)	93-72-1	–	–	X	–	–	X	X	X	X	X	X	X	X
Toxaphene	8001-35-2	X	–	X	X	–	X	X	X	X	X	X	X	X
Inorganic Chemicals and Compounds														
Metals														
Aluminum	7429-90-5	–	–	–	–	–	–	–	–	–	–	–	–	–
Antimony	7440-36-0	–	–	X	–	–	X	–	–	–	X	X	X	X
Arsenic	7440-38-2	X	–	X	X	–	X	–	–	–	X	X	X	X
Barium	7440-39-3	X	–	X	X	–	X	X	X	–	X	X	X	X
Beryllium	7440-41-7	X	–	X	X	–	X	–	–	–	X	X	X	X
Bismuth	7440-69-9	–	–	–	–	–	–	–	–	–	–	–	–	–
Boron	7440-42-8	X	–	X	X	–	X	–	–	–	X	X	X	–
Cadmium	7440-43-9	X	–	X	X	–	X	X	X	X	X	X	X	X
Calcium	7440-70-2	–	–	–	–	–	–	–	–	–	–	–	–	–
Chromium	18540-29-9	X	–	X	X	–	X	–	–	–	X	X	X	X
Cobalt	7440-48-4	–	–	–	–	–	–	–	–	–	–	–	–	–
Copper	7440-50-8	–	–	–	–	–	–	–	–	–	–	–	–	–
Iron	7439-89-6	–	–	–	–	–	–	–	–	–	–	–	–	–
Lead	7439-92-1	–	–	–	–	–	–	–	–	–	–	–	–	–
Lithium	7439-93-2	–	–	–	–	–	–	–	–	–	–	–	–	–
Magnesium	7439-95-4	–	–	–	–	–	–	–	–	–	–	–	–	–
Manganese	7439-96-5	X	–	X	X	–	X	X	X	X	X	X	X	–
Mercury	7439-97-6	X	–	–	–	–	–	–	–	–	–	–	–	–
Mercury - Hg+2	7487-94-7	–	–	X	–	–	X	X	X	X	X	X	X	–
Methylmercury	22967-92-6	–	–	X	–	–	X	X	X	X	X	X	X	X
Molybdenum	7439-98-7	–	–	X	–	–	X	X	X	–	X	X	X	–
Nickel	7440-02-0	X	–	X	X	–	X	–	–	–	X	X	X	X
Potassium	7440-09-7	–	–	–	–	–	–	–	–	–	–	–	–	–
Rhodium	7440-16-6	–	–	–	–	–	–	–	–	–	–	–	–	–
Selenium	7782-49-2	–	–	X	–	–	X	X	X	X	X	X	X	X
Silicon	7440-21-3	–	–	–	–	–	–	–	–	–	–	–	–	–
Silver	7440-22-4	–	–	X	–	–	X	–	–	–	X	X	X	X
Sodium	7440-23-5	–	–	–	–	–	–	–	–	–	–	–	–	–
Strontium	7440-24-6	–	–	X	–	–	X	–	–	–	X	X	X	X
Tantalum	7440-25-7	–	–	–	–	–	–	–	–	–	–	–	–	–
Thallium	7440-28-0	–	–	X	–	–	X	–	–	–	X	X	X	X
Tin	7440-31-5	–	–	X	–	–	X	–	–	–	X	X	X	–

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		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Tungsten	7440-33-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Uranium	7440-61-1	--	--	X	--	--	X	X	X	X	X	X	X	--
Vanadium	7440-62-2	--	--	X	--	--	X	--	--	--	X	X	X	--
Yttrium	7440-65-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	--	--	X	--	--	X	X	X	X	X	X	X	X
Zirconium	7440-67-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Non-metals and Anions														
Ammonia/Ammonium	7664-41-7	X	--	--	X	--	--	--	--	--	--	--	--	--
Bromide	24959-67-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	16887-00-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide	57-12-5	--	--	X	--	--	--	--	--	--	X	X	X	X
Fluoride	16984-48-8	--	--	X	--	--	X	--	--	--	--	--	X	--
Hydroxide	14280-30-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Iodine	7553-56-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate	14797-55-8	--	--	X	--	--	X	--	--	--	--	--	X	--
Nitrite	14797-65-0	--	--	X	--	--	--	--	--	--	--	--	X	--
Phosphate	14265-44-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus	7723-14-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	14808-79-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Total sulfur	63705-05-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Criteria Pollutants														
Carbon monoxide	630-08-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen dioxide	10102-44-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Ozone	10028-15-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Particulate matter	No CAS #	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfur dioxide	7446-09-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Radionuclides														
Actinium-227	14952-40-0	X	X	X	X	X	X	--	--	--	X	X	X	X
Americium-241	14596-10-2	X	X	X	X	X	X	--	--	--	X	X	X	X
Americium-243	14993-75-0	X	X	X	X	X	X	--	--	--	X	X	X	X
Antimony-125	14234-35-6	X	X	X	X	X	X	--	--	--	X	X	X	X
Cadmium-113m	14336-66-4	X	X	X	X	X	X	--	--	--	X	X	X	X
Carbon-14	14762-75-5	X	X	X	X	X	X	--	--	--	--	--	X	X
Cesium-134	13967-70-9	X	X	X	X	X	X	--	--	--	X	X	X	X
Cesium-137	10045-97-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Barium-137m	13981-97-0	Risks from Barium-137 are included in slope factor for Cesium-137+D[a]												
Cobalt-60	10198-40-0	X	X	X	X	X	X	--	--	--	X	X	X	X
Curium-242	15510-73-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Curium-243	15757-87-6	X	X	X	X	X	X	--	--	--	X	X	X	X
Curium-244	13981-15-2	X	X	X	X	X	X	--	--	--	X	X	X	X

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		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Produce	Poultry	Eggs	Pork	Beef	Dairy	Ingestion	Fish Ingestion
Europium-152	14683-23-9	X	X	X	X	X	X	--	--	--	X	X	X	X
Europium-154	15585-10-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Europium-155	14391-16-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Iodine-129	15046-84-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Neptunium-237	13994-20-2	X	X	X	X	X	X	--	--	--	X	X	X	X
Nickel-59	14336-70-0	X	X	X	X	X	X	--	--	--	X	X	X	X
Nickel-63	13981-37-8	X	X	X	X	X	X	--	--	--	X	X	X	X
Niobium-93m	7440-03-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Plutonium-238	13981-16-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Plutonium-239	15117-48-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Plutonium-240	14119-33-6	X	X	X	X	X	X	--	--	--	X	X	X	X
Plutonium-241	14119-32-5	X	X	X	X	X	X	--	--	--	X	X	X	X
Plutonium-242	13982-10-0	X	X	X	X	X	X	--	--	--	X	X	X	X
Protactinium-231	14331-85-2	X	X	X	X	X	X	--	--	--	X	X	X	X
Radium-226	13982-63-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Radium-228	15262-20-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Ruthenium-106	13967-48-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Samarium-151	15715-94-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Selenium-79	15758-45-9	X	X	X	X	X	X	--	--	--	X	X	X	X
Strontium-90	10098-97-2	X	X	X	X	X	X	--	--	--	X	X	X	X
Yttrium-90	10098-91-6	Risks from Yttrium-90 are included in slope factor for Strontium-90+D[a]												
Technetium-99	14133-76-7	X	X	X	X	X	X	--	--	--	X	X	X	X
Thorium-229	15594-54-4	X	X	X	X	X	X	--	--	--	X	X	X	X
Thorium-232	7440-29-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Tin-126	15832-50-5	X	X	X	X	X	X	--	--	--	X	X	X	X
Tritium	10028-17-8	X	X	X	X	X	X	--	--	--	--	X	X	X
Uranium-232	14158-29-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Uranium-233	13968-55-3	X	X	X	X	X	X	--	--	--	X	X	X	X
Uranium-234	13966-29-5	X	X	X	X	X	X	--	--	--	X	X	X	X
Uranium-235	15117-96-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Uranium-236	13982-70-2	X	X	X	X	X	X	--	--	--	X	X	X	X
Uranium-238	7440-61-1	X	X	X	X	X	X	--	--	--	X	X	X	X
Zirconium-93	15751-77-6	X	X	X	X	X	X	--	--	--	X	X	X	X

CAS = Chemical Abstracts Service.
PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for this exposure medium and pathway.
-- = Constituent is qualitatively evaluated for this exposure medium and pathway.
[a] +D slope factors include contributions from short-lived daughter products.

Table A-9 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Native American Subsistence Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Organic Compounds														
Aromatic Halogenated Hydrocarbons														
2,3,4,6-Tetrachlorophenol	58-90-2	--	--	X	--	--	X	X	X	X	X	X	--	X
4-Chloro-3-methylphenol	59-50-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Aromatic Nonhalogenated Hydrocarbons														
2-Nitrotoluene	88-72-2	--	--	X	--	--	X	X	X	X	X	X	--	X
4-Nitrobiphenyl	92-93-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	100-52-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Benzene	71-43-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzyl alcohol	100-51-6	--	--	X	--	--	X	X	X	X	X	X	--	X
Ethyl benzene	100-41-4	X	--	X	X	--	X	X	X	X	X	X	X	X
m-Xylene	108-38-3	X	--	X	X	--	X	X	X	X	X	X	X	X
o-Xylene	95-47-6	X	--	X	X	--	X	X	X	X	X	X	X	X
p-Xylene	106-42-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Styrene	100-42-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Toluene	108-88-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Non-aromatic Nonhalogenated Hydrocarbons														
1,2-Epoxybutane	106-88-7	X	--	--	X	--	--	--	--	--	--	--	X	--
1,3-Butadiene	106-99-0	X	--	--	X	--	--	--	--	--	--	--	X	--
1,4-Dioxane	123-91-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1-Methylpropyl alcohol	78-92-2	X	--	--	X	--	--	--	--	--	--	--	X	--
1-Nitropropane	108-03-2	X	--	--	X	--	--	--	--	--	--	--	X	--
2,2,4-Trimethylpentane	540-84-1	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Butanone	78-93-3	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Butenaldehyde (2-Butenal)	4170-30-3	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Ethoxyethanol	110-80-5	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Heptanone	110-43-0	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Hexanone	591-78-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Methoxyethanol	109-86-4	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Methyl-2-propanol	75-65-0	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Methyl-2-propenenitrile	126-98-7	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Methylaziridine	75-55-8	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Methylpropyl alcohol	78-83-1	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Pentanone	107-87-9	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Propanone (Acetone)	67-64-1	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Propene-1-ol	107-18-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2-Propyl alcohol	67-63-0	X	--	--	X	--	--	--	--	--	--	--	X	--
3-Heptanone	106-35-4	X	--	--	X	--	--	--	--	--	--	--	X	--
3-Methyl-1-butanol	123-51-3	X	--	--	X	--	--	--	--	--	--	--	X	--
3-Methyl-2-butanone	563-80-4	X	--	--	X	--	--	--	--	--	--	--	X	--
3-Pentanone	96-22-0	X	--	--	X	--	--	--	--	--	--	--	X	--
4-Heptanone	123-19-3	X	--	--	X	--	--	--	--	--	--	--	X	--

Table A-9 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Native American Subsistence Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs					Surface Water		
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
4-Methyl-2-pentanone	108-10-1	X	--	X	X	--	X	X	X	X	X	X	X	X
4-Methyl-3-penten-2-one	141-79-7	X	--	--	X	--	--	--	--	--	--	--	X	--
5-Methyl-2-hexanone	110-12-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Acetaldehyde	75-07-0	X	--	--	X	--	--	--	--	--	--	--	X	--
Acetamide	60-35-5	X	--	--	X	--	--	--	--	--	--	--	X	--
Acetic acid	64-19-7	X	--	--	X	--	--	--	--	--	--	--	X	--
Acetic acid ethyl ester	141-78-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Acetic acid n-butyl ester	123-86-4	X	--	--	X	--	--	--	--	--	--	--	X	--
Acetonitrile	75-05-8	X	--	--	X	--	--	--	--	--	--	--	X	--
Acrolein	107-02-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Acrylonitrile	107-13-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Bis(isopropyl)ether	108-20-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Butane	106-97-8	X	--	--	X	--	--	--	--	--	--	--	X	--
Carbon disulfide	75-15-0	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyanogen	460-19-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyclohexane	110-82-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyclohexanone	108-94-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Cyclohexene	110-83-8	X	--	--	X	--	--	--	--	--	--	--	X	--
Cyclopentane	287-92-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Ethyl alcohol	64-17-5	X	--	--	X	--	--	--	--	--	--	--	X	--
Ethyl ether	60-29-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethyl methacrylate	97-63-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Formaldehyde	50-00-0	X	--	X	X	--	X	X	X	X	X	X	X	X
Formamide	75-12-7	X	--	--	X	--	--	--	--	--	--	--	X	--
Formic acid	64-18-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Formic acid, methyl ester	107-31-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Glycidylaldehyde	765-34-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl acetate	79-20-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl alcohol	67-56-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl isocyanate	624-83-9	X	--	--	X	--	--	--	--	--	--	--	X	--
Methyl methacrylate	80-62-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Methyl tert-butyl ether	1634-04-4	X	--	--	X	--	--	--	--	--	--	--	X	--
Methylacetylene	74-99-7	X	--	--	X	--	--	--	--	--	--	--	X	--
Methylcyclohexane	108-87-2	X	--	--	X	--	--	--	--	--	--	--	X	--
N,N-Dimethylacetamide	127-19-5	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Butyl alcohol	71-36-3	X	--	X	X	--	X	X	X	X	X	X	X	X
n-Heptane	142-82-5	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Hexane	110-54-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Nitromethane	75-52-5	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Nonane	111-84-2	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Octane	111-65-9	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Pentane	109-66-0	X	--	--	X	--	--	--	--	--	--	--	X	--

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
n-Propionaldehyde	123-38-6	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Propyl alcohol	71-23-8	X	--	--	X	--	--	--	--	--	--	--	X	--
n-Valeraldehyde	110-62-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Oxirane	75-21-8	X	--	X	X	--	X	X	X	X	X	X	X	X
p-Cymene	99-87-6	X	--	--	X	--	--	--	--	--	--	--	X	--
Phosgene	75-44-5	X	--	--	X	--	--	--	--	--	--	--	X	--
Propargyl alcohol	107-19-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Propionic acid	79-09-4	X	--	--	X	--	--	--	--	--	--	--	X	--
Propionitrile	107-12-0	X	--	--	X	--	--	--	--	--	--	--	X	--
Propylene glycol monomethyl ether	107-98-2	X	--	X	X	--	X	X	X	X	X	X	X	X
p-tert-Butyltoluene	98-51-1	X	--	--	X	--	--	--	--	--	--	--	X	--
Triethylamine	121-44-8	X	--	--	X	--	--	--	--	--	--	--	X	--
Trimethylamine	75-50-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Vinyl acetate	108-05-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Non-aromatic Halogenated Hydrocarbons														
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	630-20-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,1-Trichloroethane	71-55-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2,2-Tetrachloroethene	127-18-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2-Trichloroethane	79-00-5	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1,2-Trichloroethylene	79-01-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1-Dichloroethane	75-34-3	X	--	X	X	--	X	X	X	X	X	X	X	X
1,1-Dichloroethene	75-35-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3-Trichloropropane	96-18-4	--	--	X	--	--	X	X	X	X	X	X	--	X
1,2-Dibromo-3-chloropropane	96-12-8	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	107-06-2	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dichloroethylene	540-59-0	--	--	X	--	--	X	X	X	X	X	X	--	X
1,2-Dichloropropane	78-87-5	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3-Dichloropropene	542-75-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,4-Dichloro-2-butene	764-41-0	X	--	--	X	--	--	--	--	--	--	--	X	--
1-Chloroethene	75-01-4	X	--	X	X	--	X	X	X	X	X	X	X	X
2,2-Dichloropropionic acid	75-99-0	--	--	X	--	--	X	X	X	X	X	X	--	X
2-Chloropropane	75-29-6	X	--	--	X	--	--	--	--	--	--	--	X	--
3-Chloropropene (Allyl chloride)	107-05-1	X	--	--	X	--	--	--	--	--	--	--	X	--
Bromochloromethane	74-97-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	--	--	X	--	--	X	X	X	X	X	X	--	X
Bromoethene	593-60-2	X	--	--	X	--	--	--	--	--	--	--	X	--
Bromoform	75-25-2	X	--	X	X	--	X	X	X	X	X	X	X	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Bromomethane	74-83-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Carbon tetrachloride	56-23-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Chlorodibromomethane	124-48-1	--	--	X	--	--	X	X	X	X	X	X	--	X
Chlorodifluoromethane	75-45-6	X	--	--	X	--	--	--	--	--	--	--	X	--
Chloroethane	75-00-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Chloroform	67-66-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Chloromethane	74-87-3	X	--	--	X	--	--	--	--	--	--	--	X	--
Chloropentafluoroethane	76-15-3	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	156-59-2	--	--	X	--	--	X	X	X	X	X	X	--	X
cis-1,3-Dichloropropene	10061-01-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanogen bromide	506-68-3	--	--	X	--	--	X	X	X	X	X	--	--	X
Cyanogen chloride	506-77-4	--	--	X	--	--	X	X	X	X	X	X	--	X
Dichlorodifluoromethane	75-71-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Dichlorofluoromethane	75-43-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane	75-09-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Difluorodibromomethane	75-61-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexafluoroacetone	684-16-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Iodomethane	74-88-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene bromide	74-95-3	--	--	X	--	--	X	X	X	X	X	X	--	X
Pentachloroethane	76-01-7	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethylene	156-60-5	--	--	X	--	--	X	X	X	X	X	X	--	X
trans-1,3-Dichloropropene	10061-02-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroacetic acid	76-03-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoroethane	27154-33-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Trifluorobromomethane	75-63-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Dioxin and Furan Compounds (PCDDs/PCDFs)														
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	X	--	X	X	--	X	X	--	--	X	X	X	X
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X	--	X	X	--	X	X	X	X	X	X	X	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	X	--	X	X	--	X	X	X	X	X	X	X	X

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		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Dibenzofuran	132-64-9	--	--	X	--	--	X	X	X	X	X	X	--	X
Octachlorodibenzo(p)dioxin	3268-87-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Octachlorodibenzofuran	39001-02-0	X	--	X	X	--	X	X	X	X	X	X	X	X
Polychlorinated Biphenyls (PCBs)														
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--	--	--	--	--	--	--	--	--	--	--	--	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	X	--	X	X	--	X	--	--	--	X	--	X	--
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	X	--	X	X	--	X	--	--	--	X	--	X	--
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	X	--	X	X	--	X	--	--	--	X	--	X	--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	X	--	X	X	--	X	--	--	--	X	--	X	--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	X	--	X	X	--	X	--	--	--	X	--	X	--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	X	--	X	X	--	X	--	--	--	X	--	X	--
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	X	--	X	X	--	X	--	--	--	X	--	X	--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	X	--	X	X	--	X	X	X	X	X	X	X	X
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	X	--	X	X	--	X	X	X	X	X	X	X	X
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	X	--	X	X	--	X	--	--	--	X	--	X	--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	X	--	X	X	--	X	--	--	--	X	--	X	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	X	--	X	X	--	X	--	--	--	X	--	X	--
Polychlorinated biphenyls (PCBs)	1336-36-3	X	--	X	X	--	X	X	X	X	X	--	X	X
Phthalates														
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Butylbenzyl phthalate	85-68-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Dibutyl phthalate	84-74-2	--	--	X	--	--	X	X	X	X	X	X	--	X
Diethyl phthalate	84-66-2	--	--	X	--	--	X	X	X	X	X	X	--	X
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	--	--	--	--	--	--	--
n-Dioctyl phthalate	117-84-0	--	--	X	--	--	X	X	X	X	X	X	--	X
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)														
2-Chloronaphthalene	91-58-7	--	--	X	--	--	X	X	X	X	X	X	--	X
2-Methyl naphthalene	91-57-6	X	--	X	X	--	X	X	X	X	X	X	X	X
5-Nitroacenaphthene	602-87-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	--	--	X	--	--	X	X	X	X	X	X	--	X
Acenaphthylene	208-96-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Fluorene	86-73-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Indene	95-13-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Phenanthrene	85-01-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	--	--	X	--	--	X	X	X	X	X	X	--	X
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)														
3-Methylcholanthrene	56-49-5	--	--	--	--	--	--	--	--	--	--	--	--	--
5-Methylchrysene	3697-24-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]anthracene	56-55-3	X	--	X	X	--	X	X	X	X	X	X	X	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Benzo[a]pyrene	50-32-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzo[a,i]pyrene	191-30-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzo[e]pyrene	192-97-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Chrysene	218-01-9	X	--	X	X	--	X	X	X	X	X	X	X	X
Dibenz[a,h]acridine	226-36-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz[a,h]anthracene	53-70-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Dibenz[a,j]acridine	224-42-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,e]fluoranthene	5385-75-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,e]pyrene	192-65-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,h]fluoranthene	No CAS #	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,h]pyrene	189-64-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo[a,i]pyrene	189-55-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	--	--	X	--	--	X	X	X	X	X	X	--	X
Hexachloronaphthalene	1335-87-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Octachloronaphthalene	2234-13-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachloronaphthalene	1321-64-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloronaphthalene	1335-88-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloronaphthalene	1321-65-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)														
1,2,3-Trichlorobenzene	87-61-6	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2,4-Trimethyl benzene	95-63-6	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dichlorobenzene	95-50-1	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3,5-Trimethyl benzene	108-67-8	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	--	--	X	--	--	X	X	X	X	X	X	--	X
1,4-Dichlorobenzene	106-46-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,4-Dinitrobenzene	100-25-4	--	--	X	--	--	X	X	X	X	X	X	--	X
2,4,5-Trichlorophenol	95-95-4	--	--	X	--	--	X	X	X	X	X	X	--	X
2,4,6-Trichlorophenol	88-06-2	X	--	X	X	--	X	X	X	X	X	X	X	X
2,4-Dichlorophenol	120-83-2	--	--	X	--	--	X	X	X	X	X	X	--	X
2,4-Dimethylphenol	105-67-9	--	--	X	--	--	X	X	X	X	X	X	--	X
2,4-Dinitrophenol	51-28-5	--	--	X	--	--	X	X	X	X	X	X	--	X
2,4-Dinitrotoluene	121-14-2	--	--	X	--	--	X	X	X	X	X	X	--	X
2,6-Dinitrotoluene	606-20-2	--	--	X	--	--	X	X	X	X	X	X	--	X
2-Chlorophenol	95-57-8	--	--	X	--	--	X	X	X	X	X	X	--	X
2-Chlorotoluene	95-49-8	--	--	X	--	--	X	X	X	X	X	X	--	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs					Surface Water		
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
2-Nitrophenol	88-75-5	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol	534-52-1	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	--	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Methylstyrene	98-83-9	--	--	X	--	--	X	X	X	X	X	X	--	X
Aniline	62-53-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Benzotrichloride	98-07-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Benzyl chloride	100-44-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Bromobenzene	108-86-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Cumene	98-82-8	X	--	X	X	--	X	X	X	X	X	X	X	X
m-Cresol	108-39-4	--	--	X	--	--	X	X	X	X	X	X	--	X
n-Butyl benzene	104-51-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	X	--	X	X	--	X	X	X	X	X	X	X	X
n-Propyl benzene	103-65-1	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Cresol	95-48-7	--	--	X	--	--	X	X	X	X	X	X	--	X
o-Dinitrobenzene	528-29-0	--	--	X	--	--	X	X	X	X	X	X	--	X
o-Nitroaniline	88-74-4	X	--	--	X	--	--	--	--	--	--	--	X	--
o-Toluidine	95-53-4	--	--	X	--	--	X	X	X	X	X	X	--	X
p-Chloroaniline	106-47-8	--	--	X	--	--	X	X	X	X	X	X	--	X
p-Cresol	106-44-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Phenol	108-95-2	--	--	X	--	--	X	X	X	X	X	X	--	X
p-Nitrochlorobenzene	100-00-5	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Toluidine	106-49-0	--	--	X	--	--	X	X	X	X	X	X	--	X
sec-Butyl benzene	135-98-8	--	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butyl benzene	98-06-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene-2,6-diamine	823-40-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Trimethyl benzene	25551-13-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)														
1,1'-Biphenyl	92-52-4	--	--	X	--	--	X	X	X	X	X	X	--	X
1,1-Dimethylhydrazine	57-14-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Dimethylhydrazine	540-73-8	X	--	X	X	--	X	X	X	X	X	X	X	X
1,2-Diphenylhydrazine	122-66-7	X	--	X	X	--	X	X	X	X	X	X	X	X
1,3-Propane sultone	1120-71-4	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Toluene diisocyanate	584-84-9	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroacetophenone	532-27-4	X	--	--	X	--	--	--	--	--	--	--	X	--
2-Propenoic acid	79-10-7	X	--	X	X	--	X	X	X	X	X	X	X	X
4,4'-Methylenedianiline	101-77-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	98-86-2	--	--	X	--	--	X	X	X	X	X	X	--	X
Benzoic acid	65-85-0	--	--	X	--	--	X	X	X	X	X	X	--	X
Bis(2-chloroethoxy)methane	111-91-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	X	--	X	X	--	X	X	X	X	X	X	X	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Chlorocyclopentadiene	41851-50-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexanol	108-93-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloroisopropyl ether	108-60-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Dichloromethyl ether	542-88-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Dichloropentadiene	61626-71-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl sulfate	77-78-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethylaniline	121-69-7	--	--	X	--	--	X	X	X	X	X	X	--	X
di-n-Propylnitrosamine	621-64-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Diphenyl ether	101-84-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Epichlorohydrin	106-89-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethyl carbamate (Urethane)	51-79-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl methanesulfonate	62-50-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dibromide	106-93-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethylene glycol	107-21-1	--	--	X	--	--	X	X	X	X	X	X	--	X
Ethylene glycol monobutyl ether	111-76-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Ethylene glycol monoethyl ether acetate	111-15-9	--	--	X	--	--	X	X	X	X	X	X	--	X
Ethylene thiourea	96-45-7	--	--	X	--	--	X	X	X	X	X	X	--	X
Furfural	98-01-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Maleic hydrazide	123-33-1	--	--	X	--	--	X	X	X	X	X	X	--	X
Malononitrile	109-77-3	--	--	X	--	--	X	X	X	X	X	X	--	X
Methyl styrene (mixed isomers)	25013-15-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Methylhydrazine	60-34-4	X	--	X	X	--	X	X	X	X	X	X	X	X
N,N-Diphenylamine	122-39-4	--	--	X	--	--	X	X	X	X	X	X	--	X
Nitric acid, propyl ester	627-13-4	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-butylamine	924-16-3	X	--	X	X	--	X	X	X	X	X	X	X	X
N-Nitrosomorpholine	59-89-2	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-N,N-dimethylamine	62-75-9	X	--	X	X	--	X	X	X	X	X	X	X	X
o-Anisidine	90-04-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Oxalic acid	144-62-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Phthalic anhydride	85-44-9	X	--	X	X	--	X	X	X	X	X	X	X	X
p-Phthalic acid	100-21-0	--	--	X	--	--	X	X	X	X	X	X	--	X
Pyridine	110-86-1	--	--	X	--	--	X	X	X	X	X	X	--	X
Quinoline	91-22-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Quinone	106-51-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Safrole	94-59-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrahydrofuran	109-99-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)														
1,2,4,5-Tetrachlorobenzene	95-94-3	--	--	X	--	--	X	X	X	X	X	X	--	X
1,3,5-Trinitrobenzene	99-35-4	--	--	X	--	--	X	X	X	X	X	X	--	X
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	--	--	X	--	--	X	X	X	X	X	X	--	X
2-sec-Butyl-4,6-dinitrophenol	88-85-7	--	--	X	--	--	X	X	X	X	X	X	--	X

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Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
3,3'-Dichlorobenzidine	91-94-1	--	--	X	--	--	X	X	X	X	X	X	--	X
3,3'-Dimethoxybenzidine	119-90-4	--	--	X	--	--	X	X	X	X	X	X	--	X
4-Bromophenylphenyl ether	101-55-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonium perfluorooctanoate	3825-26-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene	103-33-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Captan	133-06-2	--	--	X	--	--	X	X	X	X	X	X	--	X
Chlorobenzilate	510-15-6	X	--	X	X	--	X	X	X	X	X	X	X	X
Dibutylphosphate	107-66-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl aminoazobenzene	60-11-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	118-74-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachlorobutadiene	87-68-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachlorocyclopentadiene	77-47-4	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachloroethane	67-72-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Hexachlorophene	70-30-4	--	--	X	--	--	X	X	X	X	X	X	--	X
Hexamethylene-1,5-diisocyanate	822-06-0	X	--	--	X	--	--	--	--	--	--	--	X	--
Mirex	2385-85-5	X	--	X	X	--	X	X	X	X	X	X	X	X
Nitrofen	1836-75-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorobenzene	608-93-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Pentachloronitrobenzene	82-68-8	--	--	X	--	--	X	X	X	X	X	X	--	X
Pentachlorophenol	87-86-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Picric acid	88-89-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Pronamide	23950-58-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Strychnine	57-24-9	--	--	X	--	--	X	X	X	X	X	X	--	X
Terphenyls	26140-60-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyl phosphate	126-73-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Trifluralin	1582-09-8	--	--	X	--	--	X	X	X	X	X	X	--	X
Triphenylamine	603-34-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Herbicides and Organochlorinated Pesticides														
2,4,5-T	93-76-5	--	--	X	--	--	X	X	X	X	X	X	--	X
2,4-D and esters	94-75-7	--	--	X	--	--	X	X	X	X	X	X	--	X
4,4'-DDD	72-54-8	--	--	X	--	--	X	X	X	X	X	X	--	X
4,4'-DDE	72-55-9	--	--	X	--	--	X	X	X	X	X	X	--	X
4,4'-DDT	50-29-3	X	--	X	X	--	X	X	X	X	X	X	X	X
Aldrin	309-00-2	X	--	X	X	--	X	X	X	X	X	X	X	X
alpha-BHC	319-84-6	X	--	X	X	--	X	X	X	X	X	X	X	X
beta-BHC	319-85-7	X	--	X	X	--	X	X	X	X	X	X	X	X
Chlordane	57-74-9	X	--	X	X	--	X	X	X	X	X	X	X	X
delta-BHC	319-86-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	60-57-1	X	--	X	X	--	X	X	X	X	X	X	X	X
Endothall	145-73-3	--	--	X	--	--	X	X	X	X	X	X	--	X
Endrin	72-20-8	--	--	X	--	--	X	X	X	X	X	X	--	X

Table A-9 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Native American Subsistence Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
gamma-BHC (Lindane)	58-89-9	--	--	X	--	--	X	X	X	X	X	X	--	X
Heptachlor	76-44-8	X	--	X	X	--	X	X	X	X	X	X	X	X
Isodrin	465-73-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	72-43-5	--	--	X	--	--	X	X	X	X	X	X	--	X
Silvex (2,4,5-TP)	93-72-1	--	--	X	--	--	X	X	X	X	X	X	--	X
Toxaphene	8001-35-2	X	--	X	X	--	X	X	X	X	X	X	X	X
Inorganic Chemicals and Compounds														
Metals														
Aluminum	7429-90-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	7440-36-0	--	--	X	--	--	X	X	--	--	X	--	--	X
Arsenic	7440-38-2	X	--	X	X	--	X	X	--	--	X	--	X	X
Barium	7440-39-3	X	--	X	X	--	X	X	X	X	X	--	X	X
Beryllium	7440-41-7	X	--	X	X	--	X	X	--	--	X	--	X	X
Bismuth	7440-69-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Boron	7440-42-8	X	--	X	X	--	X	X	--	--	X	--	X	--
Cadmium	7440-43-9	X	--	X	X	--	X	X	X	X	X	--	X	X
Calcium	7440-70-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	18540-29-9	X	--	X	X	--	X	X	--	--	X	--	X	X
Cobalt	7440-48-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	7440-50-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	7439-89-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	--	--	--	--
Lithium	7439-93-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	7439-95-4	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	7439-96-5	X	--	X	X	--	X	X	X	X	X	--	X	--
Mercury	7439-97-6	X	--	--	--	--	--	--	--	--	--	--	--	--
Mercury - Hg+2	7487-94-7	--	--	X	--	--	X	X	X	X	X	--	--	--
Methylmercury	22967-92-6	--	--	X	--	--	X	X	X	X	X	--	--	X
Molybdenum	7439-98-7	--	--	X	--	--	X	X	X	X	X	--	--	--
Nickel	7440-02-0	X	--	X	X	--	X	X	--	--	X	--	X	X
Potassium	7440-09-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Rhodium	7440-16-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	7782-49-2	--	--	X	--	--	X	X	X	X	X	--	--	X
Silicon	7440-21-3	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	7440-22-4	--	--	X	--	--	X	X	--	--	X	--	--	X
Sodium	7440-23-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Strontium	7440-24-6	--	--	X	--	--	X	X	--	--	X	--	--	X
Tantalum	7440-25-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	7440-28-0	--	--	X	--	--	X	X	--	--	X	--	--	X
Tin	7440-31-5	--	--	X	--	--	X	X	--	--	X	--	--	--
Tungsten	7440-33-7	--	--	--	--	--	--	--	--	--	--	--	--	--

Table A-9 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Native American Subsistence Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Uranium	7440-61-1	--	--	X	--	--	X	X	X	X	X	--	--	--
Vanadium	7440-62-2	--	--	X	--	--	X	X	--	--	X	--	--	--
Yttrium	7440-65-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	--	--	X	--	--	X	X	X	X	X	--	--	X
Zirconium	7440-67-7	--	--	--	--	--	--	--	--	--	--	--	--	--
Non-metals and Anions														
Ammonia/Ammonium	7664-41-7	X	--	--	X	--	--	--	--	--	--	--	X	--
Bromide	24959-67-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	16887-00-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide	57-12-5	--	--	X	--	--	--	X	--	--	X	--	--	X
Fluoride	16984-48-8	--	--	X	--	--	X	--	--	--	X	--	--	--
Hydroxide	14280-30-9	--	--	--	--	--	--	--	--	--	--	--	--	--
Iodine	7553-56-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrate	14797-55-8	--	--	X	--	--	X	--	--	--	X	--	--	--
Nitrite	14797-65-0	--	--	X	--	--	--	--	--	--	X	--	--	--
Phosphate	14265-44-2	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus	7723-14-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	14808-79-8	--	--	--	--	--	--	--	--	--	--	--	--	--
Total sulfur	63705-05-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Criteria Pollutants														
Carbon monoxide	630-08-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrogen dioxide	10102-44-0	--	--	--	--	--	--	--	--	--	--	--	--	--
Ozone	10028-15-6	--	--	--	--	--	--	--	--	--	--	--	--	--
Particulate matter	No CAS #	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfur dioxide	7446-09-5	--	--	--	--	--	--	--	--	--	--	--	--	--
Radionuclides														
Actinium-227	14952-40-0	X	X	X	X	X	X	X	--	--	X	--	X	X
Americium-241	14596-10-2	X	X	X	X	X	X	X	--	--	X	--	X	X
Americium-243	14993-75-0	X	X	X	X	X	X	X	--	--	X	--	X	X
Antimony-125	14234-35-6	X	X	X	X	X	X	X	--	--	X	--	X	X
Cadmium-113m	14336-66-4	X	X	X	X	X	X	X	--	--	X	--	X	X
Carbon-14	14762-75-5	X	X	X	X	X	X	--	--	--	X	--	X	X
Cesium-134	13967-70-9	X	X	X	X	X	X	X	--	--	X	--	X	X
Cesium-137	10045-97-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Barium-137m	13981-97-0	Risks from Barium-137 are included in slope factor for Cesium-137+D[a]												
Cobalt-60	10198-40-0	X	X	X	X	X	X	X	--	--	X	--	X	X
Curium-242	15510-73-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Curium-243	15757-87-6	X	X	X	X	X	X	X	--	--	X	--	X	X
Curium-244	13981-15-2	X	X	X	X	X	X	X	--	--	X	--	X	X
Europium-152	14683-23-9	X	X	X	X	X	X	X	--	--	X	--	X	X
Europium-154	15585-10-1	X	X	X	X	X	X	X	--	--	X	--	X	X

Table A-9 Constituents with Data Available to Estimate Human Cancer Risk and/or Noncancer Hazard: Native American Subsistence Receptors

Constituent of Potential Concern	CAS Registry Number	Exposure Media/Pathway												
		Direct Air Exposure		Direct Soil Exposure			Ingestion of Foodstuffs				Surface Water			
		Inhalation	External Exposure	Ingestion	Inhalation	External Exposure	Wild Plants	Game	Wildfowl	Eggs	Ingestion	Sweat Lodge Dermal	Sweat Lodge Inhalation	Fish Ingestion
Europium-155	14391-16-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Iodine-129	15046-84-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Neptunium-237	13994-20-2	X	X	X	X	X	X	X	--	--	X	--	X	X
Nickel-59	14336-70-0	X	X	X	X	X	X	X	--	--	X	--	X	X
Nickel-63	13981-37-8	X	X	X	X	X	X	X	--	--	X	--	X	X
Niobium-93m	7440-03-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Plutonium-238	13981-16-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Plutonium-239	15117-48-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Plutonium-240	14119-33-6	X	X	X	X	X	X	X	--	--	X	--	X	X
Plutonium-241	14119-32-5	X	X	X	X	X	X	X	--	--	X	--	X	X
Plutonium-242	13982-10-0	X	X	X	X	X	X	X	--	--	X	--	X	X
Protactinium-231	14331-85-2	X	X	X	X	X	X	X	--	--	X	--	X	X
Radium-226	13982-63-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Radium-228	15262-20-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Ruthenium-106	13967-48-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Samarium-151	15715-94-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Selenium-79	15758-45-9	X	X	X	X	X	X	X	--	--	X	--	X	X
Strontium-90	10098-97-2	X	X	X	X	X	X	X	--	--	X	--	X	X
Yttrium-90	10098-91-6	Risks from Yttrium-90 are included in slope factor for Strontium-90+D[a]												
Technetium-99	14133-76-7	X	X	X	X	X	X	X	--	--	X	--	X	X
Thorium-229	15594-54-4	X	X	X	X	X	X	X	--	--	X	--	X	X
Thorium-232	7440-29-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Tin-126	15832-50-5	X	X	X	X	X	X	X	--	--	X	--	X	X
Tritium	10028-17-8	X	X	X	X	X	X	--	--	--	X	--	X	X
Uranium-232	14158-29-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Uranium-233	13968-55-3	X	X	X	X	X	X	X	--	--	X	--	X	X
Uranium-234	13966-29-5	X	X	X	X	X	X	X	--	--	X	--	X	X
Uranium-235	15117-96-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Uranium-236	13982-70-2	X	X	X	X	X	X	X	--	--	X	--	X	X
Uranium-238	7440-61-1	X	X	X	X	X	X	X	--	--	X	--	X	X
Zirconium-93	15751-77-6	X	X	X	X	X	X	X	--	--	X	--	X	X

CAS = Chemical Abstracts Service.
PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for this exposure medium and pathway.
-- = Constituent is qualitatively evaluated for this exposure medium and pathway.
[a] +D slope factors include contributions from short-lived daughter products.

Table A-10 Constituents with Data Available to Quantify Human Infant Ingestion of Breast Milk

Constituent of Potential Concern	CAS Registry Number	Ingestion of Breastmilk
Organic Compounds		
Dioxin and Furan Compounds (PCDDs/PCDFs)		
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	X
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	X
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	X
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	X
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	X
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	X
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	X
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	X
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	X
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	X
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	X
Dibenzofuran	132-64-9	--
Octachlorodibenzo(p)dioxin	3268-87-9	X
Octachlorodibenzofuran	39001-02-0	X
Polychlorinated Biphenyls (PCBs)		
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	X [a]
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	X [a]
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	X
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	X
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	X
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	X
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	X
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	X
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	X
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	X
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	X
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	X
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	X
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	X
Polychlorinated biphenyls (PCBs)	1336-36-3	--
Inorganic Chemicals and Compounds		
No Inorganic Chemicals and Compounds were evaluated for Nursing Infant		
Radionuclides		
Cesium-134	13967-70-9	X
Cesium-137	10045-97-3	X
Iodine-129	15046-84-1	X
Strontium-90	10098-97-2	X

CAS = Chemical Abstracts Service.

PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for the ingestion of breastmilk.
-- = Constituent is qualitatively evaluated for the ingestion of breastmilk.

[a] Infant intakes can be quantified for these congeners, but because toxicity equivalency factors are not available, these congeners are not included in the intake of Total Coplanar PCBs as 2,3,7,8-TCDD equivalents.

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
Organic Compounds		
Aromatic Halogenated Hydrocarbons		
2,3,4,6-Tetrachlorophenol	58-90-2	--
4-Chloro-3-methylphenol	59-50-7	X
Aromatic Nonhalogenated Hydrocarbons		
2-Nitrotoluene	88-72-2	X
4-Nitrobiphenyl	92-93-3	X
Benzaldehyde	100-52-7	X
Benzene	71-43-2	X
Benzyl alcohol	100-51-6	X
Ethyl benzene	100-41-4	X
m-Xylene	108-38-3	X
o-Xylene	95-47-6	X
p-Xylene	106-42-3	X
Styrene	100-42-5	X
Toluene	108-88-3	X
Non-aromatic Nonhalogenated Hydrocarbons		
1,2-Epoxybutane	106-88-7	X
1,3-Butadiene	106-99-0	X
1,4-Dioxane	123-91-1	X
1-Methylpropyl alcohol	78-92-2	X
1-Nitropropane	108-03-2	X
2,2,4-Trimethylpentane	540-84-1	X
2-Butanone	78-93-3	X
2-Butenaldehyde (2-Butenal)	4170-30-3	X
2-Ethoxyethanol	110-80-5	X
2-Heptanone	110-43-0	X
2-Hexanone	591-78-6	X
2-Methoxyethanol	109-86-4	X
2-Methyl-2-propanol	75-65-0	X
2-Methyl-2-propenenitrile	126-98-7	X
2-Methylaziridine	75-55-8	X
2-Methylpropyl alcohol	78-83-1	X
2-Pentanone	107-87-9	X
2-Propanone (Acetone)	67-64-1	X
2-Propene-1-ol	107-18-6	X
2-Propyl alcohol	67-63-0	X
3-Heptanone	106-35-4	X
3-Methyl-1-butanol	123-51-3	X
3-Methyl-2-butanone	563-80-4	X
3-Pentanone	96-22-0	--
4-Heptanone	123-19-3	X
4-Methyl-2-pentanone	108-10-1	X
4-Methyl-3-penten-2-one	141-79-7	X
5-Methyl-2-hexanone	110-12-3	X
Acetaldehyde	75-07-0	X
Acetamide	60-35-5	X
Acetic acid	64-19-7	X
Acetic acid ethyl ester	141-78-6	X
Acetic acid n-butyl ester	123-86-4	X
Acetonitrile	75-05-8	X
Acrolein	107-02-8	X
Acrylonitrile	107-13-1	X
Bis(isopropyl)ether	108-20-3	--
Butane	106-97-8	X
Carbon disulfide	75-15-0	X
Cyanogen	460-19-5	X
Cyclohexane	110-82-7	X
Cyclohexanone	108-94-1	X
Cyclohexene	110-83-8	X
Cyclopentane	287-92-3	X
Ethyl alcohol	64-17-5	X
Ethyl ether	60-29-7	X
Ethyl methacrylate	97-63-2	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
Formaldehyde	50-00-0	X
Formamide	75-12-7	X
Formic acid	64-18-6	X
Formic acid, methyl ester	107-31-3	X
Glycidylaldehyde	765-34-4	X
Methyl acetate	79-20-9	--
Methyl alcohol	67-56-1	X
Methyl isocyanate	624-83-9	X
Methyl methacrylate	80-62-6	X
Methyl tert-butyl ether	1634-04-4	X
Methylacetylene	74-99-7	X
Methylcyclohexane	108-87-2	X
N,N-Dimethylacetamide	127-19-5	X
n-Butyl alcohol	71-36-3	X
n-Heptane	142-82-5	X
n-Hexane	110-54-3	X
Nitromethane	75-52-5	X
n-Nonane	111-84-2	X
n-Octane	111-65-9	X
n-Pentane	109-66-0	X
n-Propionaldehyde	123-38-6	X
n-Propyl alcohol	71-23-8	X
n-Valeraldehyde	110-62-3	--
Oxirane	75-21-8	X
p-Cymene	99-87-6	--
Phosgene	75-44-5	X
Propargyl alcohol	107-19-7	X
Propionic acid	79-09-4	X
Propionitrile	107-12-0	X
Propylene glycol monomethyl ether	107-98-2	X
p-tert-Butyltoluene	98-51-1	--
Triethylamine	121-44-8	X
Trimethylamine	75-50-3	X
Vinyl acetate	108-05-4	X
Non-aromatic Halogenated Hydrocarbons		
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	--
1,1,1,2-Tetrachloroethane	630-20-6	X
1,1,1-Trichloroethane	71-55-6	X
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	--
1,1,2,2-Tetrachloroethane	79-34-5	X
1,1,2,2-Tetrachloroethene	127-18-4	X
1,1,2-Trichloroethane	79-00-5	X
1,1,2-Trichloroethylene	79-01-6	X
1,1-Dichloroethane	75-34-3	X
1,1-Dichloroethene	75-35-4	X
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	X
1,2,3-Trichloropropane	96-18-4	X
1,2-Dibromo-3-chloropropane	96-12-8	X
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	X
1,2-Dichloroethane	107-06-2	X
1,2-Dichloroethylene	540-59-0	X
1,2-Dichloropropane	78-87-5	X
1,3-Dichloropropene	542-75-6	X
1,4-Dichloro-2-butene	764-41-0	X
1-Chloroethene	75-01-4	X
2,2-Dichloropropionic acid	75-99-0	--
2-Chloropropane	75-29-6	X
3-Chloropropene (Allyl chloride)	107-05-1	X
Bromochloromethane	74-97-5	X
Bromodichloromethane	75-27-4	X
Bromoethene	593-60-2	X
Bromoform	75-25-2	X
Bromomethane	74-83-9	X
Carbon tetrachloride	56-23-5	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
Chlorodibromomethane	124-48-1	X
Chlorodifluoromethane	75-45-6	X
Chloroethane	75-00-3	X
Chloroform	67-66-3	X
Chloromethane	74-87-3	X
Chloropentafluoroethane	76-15-3	X
cis-1,2-Dichloroethene	156-59-2	X
cis-1,3-Dichloropropene	10061-01-5	X
Cyanogen bromide	506-68-3	X
Cyanogen chloride	506-77-4	X
Dichlorodifluoromethane	75-71-8	X
Dichlorofluoromethane	75-43-4	X
Dichloromethane	75-09-2	X
Difluorodibromomethane	75-61-6	--
Hexafluoroacetone	684-16-2	X
Iodomethane	74-88-4	X
Methylene bromide	74-95-3	X
Pentachloroethane	76-01-7	X
trans-1,2-Dichloroethylene	156-60-5	X
trans-1,3-Dichloropropene	10061-02-6	X
Trichloroacetic acid	76-03-9	X
Trichlorofluoroethane	27154-33-2	--
Trichlorofluoromethane	75-69-4	X
Trifluorobromomethane	75-63-8	X
Dioxin and Furan Compounds (PCDDs/PCDFs)		
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	X
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	X
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	X
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	X
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	X
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	X
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	X
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	X
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	X
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	X
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	X
Dibenzofuran	132-64-9	X
Octachlorodibenzo(p)dioxin	3268-87-9	X
Octachlorodibenzofuran	39001-02-0	X
Polychlorinated Biphenyls (PCBs)		
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	--
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	--
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	--
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	--
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	--
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	--
Polychlorinated biphenyls (PCBs)	1336-36-3	X
Phthalates		
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	X
Butylbenzyl phthalate	85-68-7	X
Dibutyl phthalate	84-74-2	X
Diethyl phthalate	84-66-2	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
Dimethyl phthalate	131-11-3	X
n-Dioctyl phthalate	117-84-0	X
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)		
2-Chloronaphthalene	91-58-7	X
2-Methyl naphthalene	91-57-6	X
5-Nitroacenaphthene	602-87-9	--
Acenaphthene	83-32-9	X
Acenaphthylene	208-96-8	X
Anthracene	120-12-7	X
Fluorene	86-73-7	X
Indene	95-13-6	X
Naphthalene	91-20-3	X
Phenanthrene	85-01-8	X
Pyrene	129-00-0	X
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)		
3-Methylcholanthrene	56-49-5	X
5-Methylchrysene	3697-24-3	--
Benzo[a]anthracene	56-55-3	X
Benzo[a]pyrene	50-32-8	X
Benzo[a,i]pyrene	191-30-0	--
Benzo[b]fluoranthene	205-99-2	X
Benzo[c]pyrene	192-97-2	--
Benzo[g,h,i]perylene	191-24-2	X
Benzo[j]fluoranthene	205-82-3	--
Benzo[k]fluoranthene	207-08-9	X
Chrysene	218-01-9	X
Dibenz[a,h]acridine	226-36-8	--
Dibenz[a,h]anthracene	53-70-3	X
Dibenz[a,j]acridine	224-42-0	--
Dibenzo[a,e]fluoranthene	5385-75-1	--
Dibenzo[a,e]pyrene	192-65-4	X
Dibenzo[a,h]fluoranthene	No CAS #	--
Dibenzo[a,h]pyrene	189-64-0	--
Dibenzo[a,i]pyrene	189-55-9	--
Fluoranthene	206-44-0	X
Hexachloronaphthalene	1335-87-1	X
Indeno[1,2,3-cd]pyrene	193-39-5	X
Octachloronaphthalene	2234-13-1	X
Pentachloronaphthalene	1321-64-8	--
Tetrachloronaphthalene	1335-88-2	--
Trichloronaphthalene	1321-65-9	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)		
1,2,3-Trichlorobenzene	87-61-6	X
1,2,4-Trichlorobenzene	120-82-1	X
1,2,4-Trimethyl benzene	95-63-6	X
1,2-Dichlorobenzene	95-50-1	X
1,3,5-Trimethyl benzene	108-67-8	X
1,3-Dichlorobenzene	541-73-1	X
1,3-Dinitrobenzene	99-65-0	X
1,4-Dichlorobenzene	106-46-7	X
1,4-Dinitrobenzene	100-25-4	X
2,4,5-Trichlorophenol	95-95-4	X
2,4,6-Trichlorophenol	88-06-2	X
2,4-Dichlorophenol	120-83-2	X
2,4-Dimethylphenol	105-67-9	X
2,4-Dinitrophenol	51-28-5	X
2,4-Dinitrotoluene	121-14-2	X
2,6-Dinitrotoluene	606-20-2	X
2-Chlorophenol	95-57-8	X
2-Chlorotoluene	95-49-8	X
2-Nitrophenol	88-75-5	X
4,6-Dinitro-o-cresol	534-52-1	X
4-Chlorotoluene	106-43-4	X
4-Nitrophenol	100-02-7	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
alpha-Methylstyrene	98-83-9	--
Aniline	62-53-3	X
Benzotrichloride	98-07-7	X
Benzyl chloride	100-44-7	X
Bromobenzene	108-86-1	X
Chlorobenzene	108-90-7	X
Cumene	98-82-8	X
m-Cresol	108-39-4	X
n-Butyl benzene	104-51-8	X
Nitrobenzene	98-95-3	X
n-Propyl benzene	103-65-1	X
o-Cresol	95-48-7	X
o-Dinitrobenzene	528-29-0	X
o-Nitroaniline	88-74-4	X
o-Toluidine	95-53-4	X
p-Chloroaniline	106-47-8	X
p-Cresol	106-44-5	X
Phenol	108-95-2	X
p-Nitrochlorobenzene	100-00-5	X
p-Toluidine	106-49-0	X
sec-Butyl benzene	135-98-8	X
tert-Butyl benzene	98-06-6	X
Toluene-2,6-diamine	823-40-5	X
Trimethyl benzene	25551-13-7	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)		
1,1'-Biphenyl	92-52-4	X
1,1-Dimethylhydrazine	57-14-7	X
1,2-Dimethylhydrazine	540-73-8	X
1,2-Diphenylhydrazine	122-66-7	X
1,3-Propane sultone	1120-71-4	X
2,4-Toluene diisocyanate	584-84-9	X
2-Chloroacetophenone	532-27-4	--
2-Propenoic acid	79-10-7	X
4,4'-Methylenedianiline	101-77-9	X
Acetophenone	98-86-2	X
Benzoic acid	65-85-0	X
Bis(2-chloroethoxy)methane	111-91-1	X
Bis(2-chloroethyl) ether	111-44-4	X
Chlorocyclopentadiene	41851-50-7	--
Cyclohexanol	108-93-0	X
Dichloroisopropyl ether	108-60-1	X
Dichloromethyl ether	542-88-1	X
Dichloropentadiene	61626-71-9	--
Dimethyl sulfate	77-78-1	X
Dimethylaniline	121-69-7	X
di-n-Propylnitrosamine	621-64-7	X
Diphenyl ether	101-84-8	--
Epichlorohydrin	106-89-8	X
Ethyl carbamate (Urethane)	51-79-6	X
Ethyl methanesulfonate	62-50-0	X
Ethylene dibromide	106-93-4	X
Ethylene glycol	107-21-1	X
Ethylene glycol monobutyl ether	111-76-2	X
Ethylene glycol monoethyl ether acetate	111-15-9	X
Ethylene thiourea	96-45-7	X
Furfural	98-01-1	X
Maleic hydrazide	123-33-1	X
Malononitrile	109-77-3	X
Methyl styrene (mixed isomers)	25013-15-4	--
Methylhydrazine	60-34-4	X
N,N-Diphenylamine	122-39-4	X
Nitric acid, propyl ester	627-13-4	X
N-Nitrosodi-n-butylamine	924-16-3	--
N-Nitrosomorpholine	59-89-2	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
N-Nitroso-N,N-dimethylamine	62-75-9	X
o-Anisidine	90-04-0	X
Oxalic acid	144-62-7	X
Phthalic anhydride	85-44-9	X
p-Phthalic acid	100-21-0	--
Pyridine	110-86-1	X
Quinoline	91-22-5	X
Quinone	106-51-4	X
Safrole	94-59-7	X
Tetrahydrofuran	109-99-9	X
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)		
1,2,4,5-Tetrachlorobenzene	95-94-3	X
1,3,5-Trinitrobenzene	99-35-4	X
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	X
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	--
2-sec-Butyl-4,6-dinitrophenol	88-85-7	X
3,3'-Dichlorobenzidine	91-94-1	X
3,3'-Dimethoxybenzidine	119-90-4	X
4-Bromophenylphenyl ether	101-55-3	X
Ammonium perfluorooctanoate	3825-26-1	--
Azobenzene	103-33-3	--
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	X
Captan	133-06-2	X
Chlorobenzilate	510-15-6	X
Dibutylphosphate	107-66-4	X
Dimethyl aminoazobenzene	60-11-7	X
Hexachlorobenzene	118-74-1	X
Hexachlorobutadiene	87-68-3	X
Hexachlorocyclopentadiene	77-47-4	X
Hexachloroethane	67-72-1	X
Hexachlorophene	70-30-4	X
Hexamethylene-1,5-diisocyanate	822-06-0	X
Mirex	2385-85-5	X
Nitrofen	1836-75-5	--
Pentachlorobenzene	608-93-5	X
Pentachloronitrobenzene	82-68-8	X
Pentachlorophenol	87-86-5	X
Picric acid	88-89-1	X
Pronamide	23950-58-5	--
Strychnine	57-24-9	X
Terphenyls	26140-60-3	X
Tributyl phosphate	126-73-8	X
Trifluralin	1582-09-8	X
Triphenylamine	603-34-9	--
Herbicides and Organochlorinated Pesticides		
2,4,5-T	93-76-5	X
2,4-D and esters	94-75-7	X
4,4'-DDD	72-54-8	X
4,4'-DDE	72-55-9	X
4,4'-DDT	50-29-3	X
Aldrin	309-00-2	X
alpha-BHC	319-84-6	X
beta-BHC	319-85-7	X
Chlordane	57-74-9	X
delta-BHC	319-86-8	--
Dieldrin	60-57-1	X
Endothall	145-73-3	--
Endrin	72-20-8	X
gamma-BHC (Lindane)	58-89-9	X
Heptachlor	76-44-8	X
Isodrin	465-73-6	X
Methoxychlor	72-43-5	X
Silvex (2,4,5-TP)	93-72-1	X
Toxaphene	8001-35-2	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
Inorganic Chemicals and Compounds		
Metals		
Aluminum	7429-90-5	X
Antimony	7440-36-0	X
Arsenic	7440-38-2	X
Barium	7440-39-3	X
Beryllium	7440-41-7	X
Bismuth	7440-69-9	X
Boron	7440-42-8	X
Cadmium	7440-43-9	X
Calcium	7440-70-2	X
Chromium	18540-29-9	X
Cobalt	7440-48-4	X
Copper	7440-50-8	X
Iron	7439-89-6	X
Lead	7439-92-1	X
Lithium	7439-93-2	X
Magnesium	7439-95-4	X
Manganese	7439-96-5	X
Mercury	7439-97-6	X
Mercury - Hg+2	7487-94-7	--
Methylmercury	22967-92-6	--
Molybdenum	7439-98-7	X
Nickel	7440-02-0	X
Potassium	7440-09-7	X
Rhodium	7440-16-6	X
Selenium	7782-49-2	X
Silicon	7440-21-3	X
Silver	7440-22-4	X
Sodium	7440-23-5	X
Strontium	7440-24-6	X
Tantalum	7440-25-7	--
Thallium	7440-28-0	X
Tin	7440-31-5	X
Tungsten	7440-33-7	X
Uranium	7440-61-1	X
Vanadium	7440-62-2	X
Yttrium	7440-65-5	X
Zinc	7440-66-6	X
Zirconium	7440-67-7	X
Non-metals and Anions		
Ammonia/Ammonium	7664-41-7	X
Bromide	24959-67-9	--
Chloride	16887-00-6	--
Cyanide	57-12-5	X
Fluoride	16984-48-8	X
Hydroxide	14280-30-9	--
Iodine	7553-56-2	X
Nitrate	14797-55-8	X
Nitrite	14797-65-0	--
Phosphate	14265-44-2	--
Phosphorus	7723-14-0	X
Sulfate	14808-79-8	X
Total sulfur	63705-05-5	X
Criteria Pollutants		
Carbon monoxide	630-08-0	X
Nitrogen dioxide	10102-44-0	X
Ozone	10028-15-6	X
Particulate matter	No CAS #	X
Sulfur dioxide	7446-09-5	X
Radionuclides		
Actinium-227	14952-40-0	X

Table A-11 Constituents with Data Available to Estimate Potential for Acute Human Hazards from Emissions

Constituent of Potential Concern	CAS Registry Number	Acute Exposure
Americium-241	14596-10-2	X
Americium-243	14993-75-0	X
Antimony-125	14234-35-6	X
Cadmium-113m	14336-66-4	X
Carbon-14	14762-75-5	X
Cesium-134	13967-70-9	X
Cesium-137	10045-97-3	X
Barium-137m	13981-97-0	X[a]
Cobalt-60	10198-40-0	X
Curium-242	15510-73-3	X
Curium-243	15757-87-6	X
Curium-244	13981-15-2	X
Europium-152	14683-23-9	X
Europium-154	15585-10-1	X
Europium-155	14391-16-3	X
Iodine-129	15046-84-1	X
Neptunium-237	13994-20-2	X
Nickel-59	14336-70-0	X
Nickel-63	13981-37-8	X
Niobium-93m	7440-03-1	X
Plutonium-238	13981-16-3	X
Plutonium-239	15117-48-3	X
Plutonium-240	14119-33-6	X
Plutonium-241	14119-32-5	X
Plutonium-242	13982-10-0	X
Protactinium-231	14331-85-2	X
Radium-226	13982-63-3	X
Radium-228	15262-20-1	X
Ruthenium-106	13967-48-1	X
Samarium-151	15715-94-3	X
Selenium-79	15758-45-9	X
Strontium-90	10098-97-2	X
Yttrium-90	10098-91-6	X[b]
Technetium-99	14133-76-7	X
Thorium-229	15594-54-4	X
Thorium-232	7440-29-1	X
Tin-126	15832-50-5	X
Tritium	10028-17-8	X
Uranium-232	14158-29-3	X
Uranium-233	13968-55-3	X
Uranium-234	13966-29-5	X
Uranium-235	15117-96-1	X
Uranium-236	13982-70-2	X
Uranium-238	7440-61-1	X
Zirconium-93	15751-77-6	X

CAS = Chemical Abstracts Service.
PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for acute exposure.
-- = Constituent is qualitatively evaluated for acute exposure.

[a] Risks from Barium-137 are included in slope factor for Cesium-137+D
[b] Risks from Yttrium-90 are included in slope factor for Strontium-90+D
+D slope factors include contributions from short-lived daughter products.

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
Organic Compounds			
Aromatic Halogenated Hydrocarbons			
2,3,4,6-Tetrachlorophenol	58-90-2	--	--
4-Chloro-3-methylphenol	59-50-7	--	--
Aromatic Nonhalogenated Hydrocarbons			
2-Nitrotoluene	88-72-2	--	--
4-Nitrobiphenyl	92-93-3	--	--
Benzaldehyde	100-52-7	--	--
Benzene	71-43-2	--	--
Benzyl alcohol	100-51-6	--	--
Ethyl benzene	100-41-4	--	--
m-Xylene	108-38-3	--	--
o-Xylene	95-47-6	--	--
p-Xylene	106-42-3	--	--
Styrene	100-42-5	X	--
Toluene	108-88-3	X	--
Non-aromatic Nonhalogenated Hydrocarbons			
1,2-Epoxybutane	106-88-7	--	--
1,3-Butadiene	106-99-0	--	--
1,4-Dioxane	123-91-1	--	--
1-Methylpropyl alcohol	78-92-2	--	--
1-Nitropropane	108-03-2	--	--
2,2,4-Trimethylpentane	540-84-1	--	--
2-Butanone	78-93-3	--	--
2-Butenaldehyde (2-Butenal)	4170-30-3	--	--
2-Ethoxyethanol	110-80-5	--	--
2-Heptanone	110-43-0	--	--
2-Hexanone	591-78-6	--	--
2-Methoxyethanol	109-86-4	--	--
2-Methyl-2-propanol	75-65-0	--	--
2-Methyl-2-propenenitrile	126-98-7	--	--
2-Methylaziridine	75-55-8	--	--
2-Methylpropyl alcohol	78-83-1	--	--
2-Pentanone	107-87-9	--	--
2-Propanone (Acetone)	67-64-1	--	--
2-Propene-1-ol	107-18-6	--	--
2-Propyl alcohol	67-63-0	--	--
3-Heptanone	106-35-4	--	--
3-Methyl-1-butanol	123-51-3	--	--
3-Methyl-2-butanone	563-80-4	--	--
3-Pentanone	96-22-0	--	--
4-Heptanone	123-19-3	--	--
4-Methyl-2-pentanone	108-10-1	--	--
4-Methyl-3-penten-2-one	141-79-7	--	--
5-Methyl-2-hexanone	110-12-3	--	--
Acetaldehyde	75-07-0	--	--
Acetamide	60-35-5	--	--
Acetic acid	64-19-7	--	--
Acetic acid ethyl ester	141-78-6	--	--
Acetic acid n-butyl ester	123-86-4	--	--
Acetonitrile	75-05-8	--	--
Acrolein	107-02-8	--	--
Acrylonitrile	107-13-1	--	--
Bis(isopropyl)ether	108-20-3	--	--
Butane	106-97-8	--	--
Carbon disulfide	75-15-0	--	--
Cyanogen	460-19-5	--	--
Cyclohexane	110-82-7	--	--
Cyclohexanone	108-94-1	--	--
Cyclohexene	110-83-8	--	--
Cyclopentane	287-92-3	--	--
Ethyl alcohol	64-17-5	--	--
Ethyl ether	60-29-7	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
Ethyl methacrylate	97-63-2	--	--
Formaldehyde	50-00-0	--	--
Formamide	75-12-7	--	--
Formic acid	64-18-6	--	--
Formic acid, methyl ester	107-31-3	--	--
Glycidylaldehyde	765-34-4	--	--
Methyl acetate	79-20-9	--	--
Methyl alcohol	67-56-1	--	--
Methyl isocyanate	624-83-9	--	--
Methyl methacrylate	80-62-6	--	--
Methyl tert-butyl ether	1634-04-4	--	--
Methylacetylene	74-99-7	--	--
Methylcyclohexane	108-87-2	--	--
N,N-Dimethylacetamide	127-19-5	--	--
n-Butyl alcohol	71-36-3	--	--
n-Heptane	142-82-5	X	--
n-Hexane	110-54-3	--	--
Nitromethane	75-52-5	--	--
n-Nonane	111-84-2	--	--
n-Octane	111-65-9	--	--
n-Pentane	109-66-0	--	--
n-Propionaldehyde	123-38-6	--	--
n-Propyl alcohol	71-23-8	--	--
n-Valeraldehyde	110-62-3	--	--
Oxirane	75-21-8	--	--
p-Cymene	99-87-6	--	--
Phosgene	75-44-5	--	--
Propargyl alcohol	107-19-7	--	--
Propionic acid	79-09-4	--	--
Propionitrile	107-12-0	--	--
Propylene glycol monomethyl ether	107-98-2	--	--
p-tert-Butyltoluene	98-51-1	--	--
Triethylamine	121-44-8	--	--
Trimethylamine	75-50-3	--	--
Vinyl acetate	108-05-4	--	--
Non-aromatic Halogenated Hydrocarbons			
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	--	--
1,1,1,2-Tetrachloroethane	630-20-6	--	--
1,1,1-Trichloroethane	71-55-6	--	--
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	--	--
1,1,2,2-Tetrachloroethane	79-34-5	--	--
1,1,2,2-Tetrachloroethene	127-18-4	--	--
1,1,2-Trichloroethane	79-00-5	--	--
1,1,2-Trichloroethylene	79-01-6	--	--
1,1-Dichloroethane	75-34-3	--	--
1,1-Dichloroethene	75-35-4	--	--
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	--	--
1,2,3-Trichloropropane	96-18-4	--	--
1,2-Dibromo-3-chloropropane	96-12-8	--	--
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	--	--
1,2-Dichloroethane	107-06-2	--	--
1,2-Dichloroethylene	540-59-0	--	--
1,2-Dichloropropane	78-87-5	--	X
1,3-Dichloropropene	542-75-6	--	--
1,4-Dichloro-2-butene	764-41-0	--	--
1-Chloroethene	75-01-4	--	--
2,2-Dichloropropionic acid	75-99-0	--	--
2-Chloropropane	75-29-6	--	--
3-Chloropropene (Allyl chloride)	107-05-1	--	--
Bromochloromethane	74-97-5	--	--
Bromodichloromethane	75-27-4	--	--
Bromoethene	593-60-2	--	--
Bromoform	75-25-2	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
Bromomethane	74-83-9	--	--
Carbon tetrachloride	56-23-5	--	--
Chlorodibromomethane	124-48-1	--	--
Chlorodifluoromethane	75-45-6	--	--
Chloroethane	75-00-3	--	--
Chloroform	67-66-3	--	--
Chloromethane	74-87-3	--	--
Chloropentafluoroethane	76-15-3	--	--
cis-1,2-Dichloroethene	156-59-2	--	--
cis-1,3-Dichloropropene	10061-01-5	--	--
Cyanogen bromide	506-68-3	--	--
Cyanogen chloride	506-77-4	--	--
Dichlorodifluoromethane	75-71-8	--	--
Dichlorofluoromethane	75-43-4	--	--
Dichloromethane	75-09-2	--	--
Difluorodibromomethane	75-61-6	--	--
Hexafluoroacetone	684-16-2	--	--
Iodomethane	74-88-4	--	--
Methylene bromide	74-95-3	--	--
Pentachloroethane	76-01-7	--	--
trans-1,2-Dichloroethylene	156-60-5	--	--
trans-1,3-Dichloropropene	10061-02-6	--	--
Trichloroacetic acid	76-03-9	--	--
Trichlorofluoroethane	27154-33-2	--	--
Trichlorofluoromethane	75-69-4	--	--
Trifluorobromomethane	75-63-8	--	--
Dioxin and Furan Compounds (PCDDs/PCDFs)			
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	--	--
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	--	--
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	--	--
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	--	--
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	--	--
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	--	--
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	--	--
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	--	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	--	--
Dibenzofuran	132-64-9	--	--
Octachlorodibenzo(p)dioxin	3268-87-9	--	--
Octachlorodibenzofuran	39001-02-0	--	--
Polychlorinated Biphenyls (PCBs)			
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	--	--
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	--	--
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	--	--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	--	--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	--	--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	--	--
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	--	--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	--	--
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	--	--
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	--	--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	--	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	--	--
Polychlorinated biphenyls (PCBs)	1336-36-3	X	X
Phthalates			
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
Butylbenzyl phthalate	85-68-7	--	--
Dibutyl phthalate	84-74-2	X	--
Diethyl phthalate	84-66-2	X	--
Dimethyl phthalate	131-11-3	--	X
n-Dioctyl phthalate	117-84-0	--	--
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)			
2-Chloronaphthalene	91-58-7	--	--
2-Methyl naphthalene	91-57-6	--	--
5-Nitroacenaphthene	602-87-9	--	--
Acenaphthene	83-32-9	X	--
Acenaphthylene	208-96-8	--	--
Anthracene	120-12-7	--	--
Fluorene	86-73-7	--	X
Indene	95-13-6	--	--
Naphthalene	91-20-3	--	--
Phenanthrene	85-01-8	--	--
Pyrene	129-00-0	--	--
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)			
3-Methylcholanthrene	56-49-5	--	--
5-Methylchrysene	3697-24-3	--	--
Benzo[a]anthracene	56-55-3	X	X
Benzo[a]pyrene	50-32-8	X	X
Benzo[a,i]pyrene	191-30-0	--	--
Benzo[b]fluoranthene	205-99-2	X	X
Benzo[e]pyrene	192-97-2	--	--
Benzo[g,h,i]perylene	191-24-2	--	--
Benzo[j]fluoranthene	205-82-3	--	--
Benzo[k]fluoranthene	207-08-9	X	X
Chrysene	218-01-9	X	X
Dibenz[a,h]acridine	226-36-8	--	--
Dibenz[a,h]anthracene	53-70-3	X	X
Dibenz[a,j]acridine	224-42-0	--	--
Dibenzo[a,e]fluoranthene	5385-75-1	--	--
Dibenzo[a,e]pyrene	192-65-4	--	--
Dibenzo[a,h]fluoranthene	No CAS #	--	--
Dibenzo[a,h]pyrene	189-64-0	--	--
Dibenzo[a,i]pyrene	189-55-9	--	--
Fluoranthene	206-44-0	--	--
Hexachloronaphthalene	1335-87-1	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	X	X
Octachloronaphthalene	2234-13-1	--	--
Pentachloronaphthalene	1321-64-8	--	--
Tetrachloronaphthalene	1335-88-2	--	--
Trichloronaphthalene	1321-65-9	--	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)			
1,2,3-Trichlorobenzene	87-61-6	--	X
1,2,4-Trichlorobenzene	120-82-1	--	X
1,2,4-Trimethyl benzene	95-63-6	--	--
1,2-Dichlorobenzene	95-50-1	--	--
1,3,5-Trimethyl benzene	108-67-8	--	--
1,3-Dichlorobenzene	541-73-1	--	--
1,3-Dinitrobenzene	99-65-0	--	X
1,4-Dichlorobenzene	106-46-7	--	X
1,4-Dinitrobenzene	100-25-4	--	--
2,4,5-Trichlorophenol	95-95-4	X	X
2,4,6-Trichlorophenol	88-06-2	--	X
2,4-Dichlorophenol	120-83-2	--	--
2,4-Dimethylphenol	105-67-9	--	--
2,4-Dinitrophenol	51-28-5	X	--
2,4-Dinitrotoluene	121-14-2	--	--
2,6-Dinitrotoluene	606-20-2	--	--
2-Chlorophenol	95-57-8	--	--
2-Chlorotoluene	95-49-8	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
2-Nitrophenol	88-75-5	--	--
4,6-Dinitro-o-cresol	534-52-1	--	--
4-Chlorotoluene	106-43-4	--	--
4-Nitrophenol	100-02-7	--	X
alpha-Methylstyrene	98-83-9	--	--
Aniline	62-53-3	--	--
Benzotrichloride	98-07-7	--	--
Benzyl chloride	100-44-7	--	--
Bromobenzene	108-86-1	--	--
Chlorobenzene	108-90-7	--	X
Cumene	98-82-8	--	--
m-Cresol	108-39-4	--	--
n-Butyl benzene	104-51-8	--	--
Nitrobenzene	98-95-3	--	X
n-Propyl benzene	103-65-1	--	--
o-Cresol	95-48-7	--	--
o-Dinitrobenzene	528-29-0	--	--
o-Nitroaniline	88-74-4	--	--
o-Toluidine	95-53-4	--	--
p-Chloroaniline	106-47-8	--	X
p-Cresol	106-44-5	--	--
Phenol	108-95-2	X	X
p-Nitrochlorobenzene	100-00-5	--	--
p-Toluidine	106-49-0	--	--
sec-Butyl benzene	135-98-8	--	--
tert-Butyl benzene	98-06-6	--	--
Toluene-2,6-diamine	823-40-5	--	--
Trimethyl benzene	25551-13-7	--	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)			
1,1'-Biphenyl	92-52-4	X	--
1,1-Dimethylhydrazine	57-14-7	--	--
1,2-Dimethylhydrazine	540-73-8	--	--
1,2-Diphenylhydrazine	122-66-7	--	--
1,3-Propane sultone	1120-71-4	--	--
2,4-Toluene diisocyanate	584-84-9	--	--
2-Chloroacetophenone	532-27-4	--	--
2-Propenoic acid	79-10-7	--	--
4,4'-Methylenedianiline	101-77-9	--	--
Acetophenone	98-86-2	--	--
Benzoic acid	65-85-0	--	--
Bis(2-chloroethoxy)methane	111-91-1	--	--
Bis(2-chloroethyl) ether	111-44-4	--	--
Chlorocyclopentadiene	41851-50-7	--	--
Cyclohexanol	108-93-0	--	--
Dichloroisopropyl ether	108-60-1	--	--
Dichloromethyl ether	542-88-1	--	--
Dichloropentadiene	61626-71-9	--	--
Dimethyl sulfate	77-78-1	--	--
Dimethylaniline	121-69-7	--	--
di-n-Propylnitrosamine	621-64-7	--	--
Diphenyl ether	101-84-8	--	--
Epichlorohydrin	106-89-8	--	--
Ethyl carbamate (Urethane)	51-79-6	--	--
Ethyl methanesulfonate	62-50-0	--	--
Ethylene dibromide	106-93-4	--	--
Ethylene glycol	107-21-1	--	--
Ethylene glycol monobutyl ether	111-76-2	--	--
Ethylene glycol monoethyl ether acetate	111-15-9	--	--
Ethylene thiourea	96-45-7	--	--
Furfural	98-01-1	--	--
Maleic hydrazide	123-33-1	--	--
Malononitrile	109-77-3	--	--
Methyl styrene (mixed isomers)	25013-15-4	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
Methylhydrazine	60-34-4	--	--
N,N-Diphenylamine	122-39-4	--	--
Nitric acid, propyl ester	627-13-4	--	--
N-Nitrosodi-n-butylamine	924-16-3	--	--
N-Nitrosomorpholine	59-89-2	--	--
N-Nitroso-N,N-dimethylamine	62-75-9	--	--
o-Anisidine	90-04-0	--	--
Oxalic acid	144-62-7	--	--
Phthalic anhydride	85-44-9	--	--
p-Phthalic acid	100-21-0	--	--
Pyridine	110-86-1	--	--
Quinoline	91-22-5	--	--
Quinone	106-51-4	--	--
Safrole	94-59-7	--	--
Tetrahydrofuran	109-99-9	--	--
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)			
1,2,4,5-Tetrachlorobenzene	95-94-3	--	--
1,3,5-Trinitrobenzene	99-35-4	--	--
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	--	--
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	--	--
2-sec-Butyl-4,6-dinitrophenol	88-85-7	--	--
3,3'-Dichlorobenzidine	91-94-1	--	--
3,3'-Dimethoxybenzidine	119-90-4	--	--
4-Bromophenylphenyl ether	101-55-3	--	--
Ammonium perfluorooctanoate	3825-26-1	--	--
Azobenzene	103-33-3	--	--
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	--	--
Captan	133-06-2	--	--
Chlorobenzilate	510-15-6	--	--
Dibutylphosphate	107-66-4	--	--
Dimethyl aminoazobenzene	60-11-7	--	--
Hexachlorobenzene	118-74-1	--	--
Hexachlorobutadiene	87-68-3	--	--
Hexachlorocyclopentadiene	77-47-4	X	--
Hexachloroethane	67-72-1	--	--
Hexachlorophene	70-30-4	--	--
Hexamethylene-1,5-diisocyanate	822-06-0	--	--
Mirex	2385-85-5	--	--
Nitrofen	1836-75-5	--	--
Pentachlorobenzene	608-93-5	--	X
Pentachloronitrobenzene	82-68-8	--	--
Pentachlorophenol	87-86-5	X	X
Picric acid	88-89-1	--	--
Pronamide	23950-58-5	--	--
Strychnine	57-24-9	--	--
Terphenyls	26140-60-3	--	--
Tributyl phosphate	126-73-8	--	--
Trifluralin	1582-09-8	--	--
Triphenylamine	603-34-9	--	--
Herbicides and Organochlorinated Pesticides			
2,4,5-T	93-76-5	--	--
2,4-D and esters	94-75-7	--	--
4,4'-DDD	72-54-8	--	--
4,4'-DDE	72-55-9	--	--
4,4'-DDT	50-29-3	--	--
Aldrin	309-00-2	--	--
alpha-BHC	319-84-6	--	--
beta-BHC	319-85-7	--	--
Chlordane	57-74-9	--	--
delta-BHC	319-86-8	--	--
Dieldrin	60-57-1	--	--
Endothall	145-73-3	--	--
Endrin	72-20-8	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
gamma-BHC (Lindane)	58-89-9	--	--
Heptachlor	76-44-8	X	--
Isodrin	465-73-6	--	--
Methoxychlor	72-43-5	--	--
Silvex (2,4,5-TP)	93-72-1	--	--
Toxaphene	8001-35-2	--	--
Inorganic Chemicals and Compounds			
Metals			
Aluminum	7429-90-5	X	--
Antimony	7440-36-0	X	--
Arsenic	7440-38-2	X	X
Barium	7440-39-3	X	--
Beryllium	7440-41-7	X	--
Bismuth	7440-69-9	--	--
Boron	7440-42-8	X	--
Cadmium	7440-43-9	X	X
Calcium	7440-70-2	--	--
Chromium	18540-29-9	X	X
Cobalt	7440-48-4	X	--
Copper	7440-50-8	X	X
Iron	7439-89-6	--	--
Lead	7439-92-1	X	X
Lithium	7439-93-2	X	--
Magnesium	7439-95-4	--	--
Manganese	7439-96-5	X	--
Mercury	7439-97-6	--	--
Mercury - Hg+2	7487-94-7	X	X
Methylmercury	22967-92-6	--	X
Molybdenum	7439-98-7	X	--
Nickel	7440-02-0	X	X
Potassium	7440-09-7	--	--
Rhodium	7440-16-6	--	--
Selenium	7782-49-2	X	X
Silicon	7440-21-3	--	--
Silver	7440-22-4	X	--
Sodium	7440-23-5	--	--
Strontium	7440-24-6	--	--
Tantalum	7440-25-7	--	--
Thallium	7440-28-0	X	--
Tin	7440-31-5	X	--
Tungsten	7440-33-7	--	--
Uranium	7440-61-1	X	--
Vanadium	7440-62-2	X	--
Yttrium	7440-65-5	--	--
Zinc	7440-66-6	X	X
Zirconium	7440-67-7	--	--
Non-metals and Anions			
Ammonia/Ammonium	7664-41-7	--	--
Bromide	24959-67-9	X	--
Chloride	16887-00-6	--	--
Cyanide	57-12-5	--	--
Fluoride	16984-48-8	X	--
Hydroxide	14280-30-9	--	--
Iodine	7553-56-2	X	--
Nitrate	14797-55-8	--	--
Nitrite	14797-65-0	--	--
Phosphate	14265-44-2	--	--
Phosphorus	7723-14-0	--	--
Sulfate	14808-79-8	--	--
Total sulfur	63705-05-5	--	--
Criteria Pollutants			
Carbon monoxide	630-08-0	--	--

Table A-12 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Plants and Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Plants	Terrestrial Invertebrates
Nitrogen dioxide	10102-44-0	--	--
Ozone	10028-15-6	--	--
Particulate matter	No CAS #	--	--
Sulfur dioxide	7446-09-5	--	--
Radionuclides			
Actinium-227	14952-40-0	X	X
Americium-241	14596-10-2	X	X
Americium-243	14993-75-0	X	X
Antimony-125	14234-35-6	X	X
Cadmium-113m	14336-66-4	X	X
Carbon-14	14762-75-5	X	X
Cesium-134	13967-70-9	X	X
Cesium-137	10045-97-3	X	X
Cobalt-60	10198-40-0	X	X
Curium-242	15510-73-3	X	X
Curium-243	15757-87-6	X	X
Curium-244	13981-15-2	X	X
Europium-152	14683-23-9	X	X
Europium-154	15585-10-1	X	X
Europium-155	14391-16-3	X	X
Iodine-129	15046-84-1	X	X
Neptunium-237	13994-20-2	X	X
Nickel-59	14336-70-0	X	X
Nickel-63	13981-37-8	X	X
Niobium-93m	7440-03-1	X	X
Plutonium-238	13981-16-3	X	X
Plutonium-239	15117-48-3	X	X
Plutonium-240	14119-33-6	X	X
Plutonium-241	14119-32-5	X	X
Plutonium-242	13982-10-0	X	X
Protactinium-231	14331-85-2	X	X
Radium-226	13982-63-3	X	X
Radium-228	15262-20-1	X	X
Ruthenium-106	13967-48-1	X	X
Samarium-151	15715-94-3	X	X
Selenium-79	15758-45-9	X	X
Strontium-90	10098-97-2	X	X
Technetium-99	14133-76-7	X	X
Thorium-229	15594-54-4	X	X
Thorium-232	7440-29-1	X	X
Tin-126	15832-50-5	X	X
Tritium	10028-17-8	X	X
Uranium-232	14158-29-3	X	X
Uranium-233	13968-55-3	X	X
Uranium-234	13966-29-5	X	X
Uranium-235	15117-96-1	X	X
Uranium-236	13982-70-2	X	X
Uranium-238	7440-61-1	X	X
Zirconium-93	15751-77-6	X	X

CAS = Chemical Abstracts Service.
PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for acute exposure.
-- = Constituent is qualitatively evaluated for acute exposure.

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
Organic Compounds			
Aromatic Halogenated Hydrocarbons			
2,3,4,6-Tetrachlorophenol	58-90-2	X	--
4-Chloro-3-methylphenol	59-50-7	--	--
Aromatic Nonhalogenated Hydrocarbons			
2-Nitrotoluene	88-72-2	--	--
4-Nitrobiphenyl	92-93-3	--	--
Benzaldehyde	100-52-7	X	--
Benzene	71-43-2	X	--
Benzyl alcohol	100-51-6	--	--
Ethyl benzene	100-41-4	X	--
m-Xylene	108-38-3	--	--
o-Xylene	95-47-6	--	--
p-Xylene	106-42-3	--	--
Styrene	100-42-5	X	
Toluene	108-88-3	X	
Non-aromatic Nonhalogenated Hydrocarbons			
1,2-Epoxybutane	106-88-7	--	--
1,3-Butadiene	106-99-0	--	--
1,4-Dioxane	123-91-1	X	--
1-Methylpropyl alcohol	78-92-2	--	--
1-Nitropropane	108-03-2	--	--
2,2,4-Trimethylpentane	540-84-1	--	--
2-Butanone	78-93-3	X	--
2-Butenaldehyde (2-Butenal)	4170-30-3	X	--
2-Ethoxyethanol	110-80-5	--	--
2-Heptanone	110-43-0	--	--
2-Hexanone	591-78-6	--	--
2-Methoxyethanol	109-86-4	--	--
2-Methyl-2-propanol	75-65-0	--	--
2-Methyl-2-propenenitrile	126-98-7	X	--
2-Methylaziridine	75-55-8	--	--
2-Methylpropyl alcohol	78-83-1	X	--
2-Pentanone	107-87-9	--	--
2-Propanone (Acetone)	67-64-1	X	X
2-Propene-1-ol	107-18-6	X	--
2-Propyl alcohol	67-63-0	--	--
3-Heptanone	106-35-4	--	--
3-Methyl-1-butanol	123-51-3	--	--
3-Methyl-2-butanone	563-80-4	--	--
3-Pentanone	96-22-0	--	--
4-Heptanone	123-19-3	--	--
4-Methyl-2-pentanone	108-10-1	X	--
4-Methyl-3-penten-2-one	141-79-7	--	--
5-Methyl-2-hexanone	110-12-3	--	--
Acetaldehyde	75-07-0	--	--
Acetamide	60-35-5	--	--
Acetic acid	64-19-7	--	--
Acetic acid ethyl ester	141-78-6	X	--
Acetic acid n-butyl ester	123-86-4	--	--
Acetonitrile	75-05-8	--	--
Acrolein	107-02-8	--	--
Acrylonitrile	107-13-1	X	--
Bis(isopropyl)ether	108-20-3	--	--
Butane	106-97-8	--	--
Carbon disulfide	75-15-0	X	--
Cyanogen	460-19-5	--	--
Cyclohexane	110-82-7	--	--
Cyclohexanone	108-94-1	--	--
Cyclohexene	110-83-8	--	--
Cyclopentane	287-92-3	--	--
Ethyl alcohol	64-17-5	--	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
Ethyl ether	60-29-7	X	--
Ethyl methacrylate	97-63-2	--	--
Formaldehyde	50-00-0	X	--
Formamide	75-12-7	--	--
Formic acid	64-18-6	--	--
Formic acid, methyl ester	107-31-3	--	--
Glycidylaldehyde	765-34-4	X	--
Methyl acetate	79-20-9	--	--
Methyl alcohol	67-56-1	X	--
Methyl isocyanate	624-83-9	--	--
Methyl methacrylate	80-62-6	X	--
Methyl tert-butyl ether	1634-04-4	--	--
Methylacetylene	74-99-7	--	--
Methylcyclohexane	108-87-2	--	--
N,N-Dimethylacetamide	127-19-5	--	--
n-Butyl alcohol	71-36-3	X	--
n-Heptane	142-82-5	--	--
n-Hexane	110-54-3	--	--
Nitromethane	75-52-5	--	--
n-Nonane	111-84-2	--	--
n-Octane	111-65-9	--	--
n-Pentane	109-66-0	--	--
n-Propionaldehyde	123-38-6	--	--
n-Propyl alcohol	71-23-8	--	--
n-Valeraldehyde	110-62-3	--	--
Oxirane	75-21-8	--	--
p-Cymene	99-87-6	--	--
Phosgene	75-44-5	--	--
Propargyl alcohol	107-19-7	X	--
Propionic acid	79-09-4	--	--
Propionitrile	107-12-0	--	--
Propylene glycol monomethyl ether	107-98-2	--	--
p-tert-Butyltoluene	98-51-1	--	--
Triethylamine	121-44-8	--	--
Trimethylamine	75-50-3	--	--
Vinyl acetate	108-05-4	--	--
Non-aromatic Halogenated Hydrocarbons			
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	--	--
1,1,1,2-Tetrachloroethane	630-20-6	X	--
1,1,1-Trichloroethane	71-55-6	X	--
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	--	--
1,1,2,2-Tetrachloroethane	79-34-5	--	--
1,1,2,2-Tetrachloroethene	127-18-4	X	--
1,1,2-Trichloroethane	79-00-5	--	--
1,1,2-Trichloroethylene	79-01-6	X	--
1,1-Dichloroethane	75-34-3	--	--
1,1-Dichloroethene	75-35-4	X	--
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	--	--
1,2,3-Trichloropropane	96-18-4	X	--
1,2-Dibromo-3-chloropropane	96-12-8	--	--
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	--	--
1,2-Dichloroethane	107-06-2	X	X
1,2-Dichloroethylene	540-59-0	X	--
1,2-Dichloropropane	78-87-5	--	--
1,3-Dichloropropene	542-75-6	X	--
1,4-Dichloro-2-butene	764-41-0	--	--
1-Chloroethene	75-01-4	X	--
2,2-Dichloropropionic acid	75-99-0	--	--
2-Chloropropane	75-29-6	--	--
3-Chloropropene (Allyl chloride)	107-05-1	--	--
Bromochloromethane	74-97-5	--	--
Bromodichloromethane	75-27-4	X	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
Bromoethene	593-60-2	--	--
Bromoform	75-25-2	X	--
Bromomethane	74-83-9	X	--
Carbon tetrachloride	56-23-5	X	--
Chlorodibromomethane	124-48-1	X	--
Chlorodifluoromethane	75-45-6	--	--
Chloroethane	75-00-3	--	--
Chloroform	67-66-3	X	--
Chloromethane	74-87-3	--	--
Chloropentafluoroethane	76-15-3	--	--
cis-1,2-Dichloroethene	156-59-2	--	--
cis-1,3-Dichloropropene	10061-01-5	--	--
Cyanogen bromide	506-68-3	X	--
Cyanogen chloride	506-77-4	X	--
Dichlorodifluoromethane	75-71-8	X	--
Dichlorofluoromethane	75-43-4	--	--
Dichloromethane	75-09-2	X	--
Difluorodibromomethane	75-61-6	--	--
Hexafluoroacetone	684-16-2	--	--
Iodomethane	74-88-4	--	--
Methylene bromide	74-95-3	--	--
Pentachloroethane	76-01-7	--	--
trans-1,2-Dichloroethylene	156-60-5	X	--
trans-1,3-Dichloropropene	10061-02-6	--	--
Trichloroacetic acid	76-03-9	--	--
Trichlorofluoroethane	27154-33-2	--	--
Trichlorofluoromethane	75-69-4	X	--
Trifluorobromomethane	75-63-8	--	--
Dioxin and Furan Compounds (PCDDs/PCDFs)			
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	--	--
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	--	--
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	X	--
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	--	--
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	--	--
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	X	--
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	--	--
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	X	--
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	--	X
Dibenzofuran	132-64-9	--	--
Octachlorodibenzo(p)dioxin	3268-87-9	--	--
Octachlorodibenzofuran	39001-02-0	--	--
Polychlorinated Biphenyls (PCBs)			
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	--	--
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	--	--
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	--	--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	--	--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	--	--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	--	--
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	--	--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	--	--
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	--	--
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	--	--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	--	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	--	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
Polychlorinated biphenyls (PCBs)	1336-36-3	X	X
Phthalates			
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	X	X
Butylbenzyl phthalate	85-68-7	--	--
Dibutyl phthalate	84-74-2	X	X
Diethyl phthalate	84-66-2	X	--
Dimethyl phthalate	131-11-3	--	--
n-Dioctyl phthalate	117-84-0	X	--
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)			
2-Chloronaphthalene	91-58-7	X	--
2-Methyl naphthalene	91-57-6	--	--
5-Nitroacenaphthene	602-87-9	--	--
Acenaphthene	83-32-9	X	--
Acenaphthylene	208-96-8	--	--
Anthracene	120-12-7	X	--
Fluorene	86-73-7	X	--
Indene	95-13-6	--	--
Naphthalene	91-20-3	X	--
Phenanthrene	85-01-8	--	--
Pyrene	129-00-0	X	--
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)			
3-Methylcholanthrene	56-49-5	--	--
5-Methylchrysene	3697-24-3	--	--
Benzo[a]anthracene	56-55-3	X	X
Benzo[a]pyrene	50-32-8	X	X
Benzo[a,i]pyrene	191-30-0	--	--
Benzo[b]fluoranthene	205-99-2	--	X
Benzo[e]pyrene	192-97-2	--	--
Benzo[g,h,i]perylene	191-24-2	--	--
Benzo[j]fluoranthene	205-82-3	--	--
Benzo[k]fluoranthene	207-08-9	--	X
Chrysene	218-01-9	--	X
Dibenz[a,h]acridine	226-36-8	--	--
Dibenz[a,h]anthracene	53-70-3	X	X
Dibenz[a,j]acridine	224-42-0	--	--
Dibenzo[a,e]fluoranthene	5385-75-1	--	--
Dibenzo[a,e]pyrene	192-65-4	--	--
Dibenzo[a,h]fluoranthene	No CAS #	--	--
Dibenzo[a,h]pyrene	189-64-0	--	--
Dibenzo[a,i]pyrene	189-55-9	--	--
Fluoranthene	206-44-0	X	--
Hexachloronaphthalene	1335-87-1	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	--	X
Octachloronaphthalene	2234-13-1	--	--
Pentachloronaphthalene	1321-64-8	--	--
Tetrachloronaphthalene	1335-88-2	--	--
Trichloronaphthalene	1321-65-9	--	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)			
1,2,3-Trichlorobenzene	87-61-6	--	--
1,2,4-Trichlorobenzene	120-82-1	--	--
1,2,4-Trimethyl benzene	95-63-6	--	--
1,2-Dichlorobenzene	95-50-1	X	--
1,3,5-Trimethyl benzene	108-67-8	--	--
1,3-Dichlorobenzene	541-73-1	--	--
1,3-Dinitrobenzene	99-65-0	X	X
1,4-Dichlorobenzene	106-46-7	--	--
1,4-Dinitrobenzene	100-25-4	--	--
2,4,5-Trichlorophenol	95-95-4	X	--
2,4,6-Trichlorophenol	88-06-2	--	--
2,4-Dichlorophenol	120-83-2	X	--
2,4-Dimethylphenol	105-67-9	X	--
2,4-Dinitrophenol	51-28-5	X	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
2,4-Dinitrotoluene	121-14-2	X	--
2,6-Dinitrotoluene	606-20-2	X	--
2-Chlorophenol	95-57-8	--	--
2-Chlorotoluene	95-49-8	X	--
2-Nitrophenol	88-75-5	--	--
4,6-Dinitro-o-cresol	534-52-1	--	--
4-Chlorotoluene	106-43-4	--	--
4-Nitrophenol	100-02-7	--	--
alpha-Methylstyrene	98-83-9	--	--
Aniline	62-53-3	--	--
Benzotrichloride	98-07-7	--	--
Benzyl chloride	100-44-7	--	--
Bromobenzene	108-86-1	--	--
Chlorobenzene	108-90-7	X	--
Cumene	98-82-8	X	--
m-Cresol	108-39-4	X	--
n-Butyl benzene	104-51-8	--	--
Nitrobenzene	98-95-3	X	--
n-Propyl benzene	103-65-1	--	--
o-Cresol	95-48-7	X	--
o-Dinitrobenzene	528-29-0	--	--
o-Nitroaniline	88-74-4	--	--
o-Toluidine	95-53-4	--	--
p-Chloroaniline	106-47-8	X	--
p-Cresol	106-44-5	--	--
Phenol	108-95-2	X	--
p-Nitrochlorobenzene	100-00-5	--	--
p-Toluidine	106-49-0	--	--
sec-Butyl benzene	135-98-8	--	--
tert-Butyl benzene	98-06-6	--	--
Toluene-2,6-diamine	823-40-5	--	--
Trimethyl benzene	25551-13-7	--	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)			
1,1'-Biphenyl	92-52-4	X	--
1,1-Dimethylhydrazine	57-14-7	--	--
1,2-Dimethylhydrazine	540-73-8	--	--
1,2-Diphenylhydrazine	122-66-7	--	--
1,3-Propane sultone	1120-71-4	--	--
2,4-Toluene diisocyanate	584-84-9	--	--
2-Chloroacetophenone	532-27-4	--	--
2-Propenoic acid	79-10-7	X	--
4,4'-Methylenedianiline	101-77-9	--	--
Acetophenone	98-86-2	X	--
Benzoic acid	65-85-0	X	--
Bis(2-chloroethoxy)methane	111-91-1	--	--
Bis(2-chloroethyl) ether	111-44-4	--	--
Chlorocyclopentadiene	41851-50-7	--	--
Cyclohexanol	108-93-0	--	--
Dichloroisopropyl ether	108-60-1	--	--
Dichloromethyl ether	542-88-1	--	--
Dichloropentadiene	61626-71-9	--	--
Dimethyl sulfate	77-78-1	--	--
Dimethylaniline	121-69-7	X	--
di-n-Propylnitrosamine	621-64-7	--	--
Diphenyl ether	101-84-8	--	--
Epichlorohydrin	106-89-8	--	--
Ethyl carbamate (Urethane)	51-79-6	--	--
Ethyl methanesulfonate	62-50-0	--	--
Ethylene dibromide	106-93-4	--	--
Ethylene glycol	107-21-1	X	--
Ethylene glycol monobutyl ether	111-76-2	X	--
Ethylene glycol monoethyl ether acetate	111-15-9	--	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
Ethylene thiourea	96-45-7	X	--
Furfural	98-01-1	X	--
Maleic hydrazide	123-33-1	X	--
Malononitrile	109-77-3	--	--
Methyl styrene (mixed isomers)	25013-15-4	--	--
Methylhydrazine	60-34-4	--	--
N,N-Diphenylamine	122-39-4	X	--
Nitric acid, propyl ester	627-13-4	--	--
N-Nitrosodi-n-butylamine	924-16-3	--	--
N-Nitrosomorpholine	59-89-2	--	--
N-Nitroso-N,N-dimethylamine	62-75-9	--	--
o-Anisidine	90-04-0	--	--
Oxalic acid	144-62-7	--	--
Phthalic anhydride	85-44-9	X	--
p-Phthalic acid	100-21-0	--	--
Pyridine	110-86-1	X	--
Quinoline	91-22-5	--	--
Quinone	106-51-4	--	--
Safrole	94-59-7	--	--
Tetrahydrofuran	109-99-9	--	--
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)			
1,2,4,5-Tetrachlorobenzene	95-94-3	X	--
1,3,5-Trinitrobenzene	99-35-4	X	--
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	--	--
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	X	--
2-sec-Butyl-4,6-dinitrophenol	88-85-7	--	--
3,3'-Dichlorobenzidine	91-94-1	--	--
3,3'-Dimethoxybenzidine	119-90-4	--	--
4-Bromophenylphenyl ether	101-55-3	--	--
Ammonium perfluorooctanoate	3825-26-1	--	--
Azobenzene	103-33-3	--	--
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	--	--
Captan	133-06-2	--	--
Chlorobenzilate	510-15-6	--	--
Dibutylphosphate	107-66-4	--	--
Dimethyl aminoazobenzene	60-11-7	--	--
Hexachlorobenzene	118-74-1	X	X
Hexachlorobutadiene	87-68-3	X	X
Hexachlorocyclopentadiene	77-47-4	X	--
Hexachloroethane	67-72-1	X	--
Hexachlorophene	70-30-4	X	X
Hexamethylene-1,5-diisocyanate	822-06-0	--	--
Mirex	2385-85-5	X	--
Nitrofen	1836-75-5	--	--
Pentachlorobenzene	608-93-5	X	--
Pentachloronitrobenzene	82-68-8	X	X
Pentachlorophenol	87-86-5	X	X
Picric acid	88-89-1	--	--
Pronamide	23950-58-5	X	--
Strychnine	57-24-9	X	--
Terphenyls	26140-60-3	--	--
Tributyl phosphate	126-73-8	--	--
Trifluralin	1582-09-8	X	--
Triphenylamine	603-34-9	--	--
Herbicides and Organochlorinated Pesticides			
2,4,5-T	93-76-5	X	--
2,4-D and esters	94-75-7	--	--
4,4'-DDD	72-54-8	--	--
4,4'-DDE	72-55-9	X	X
4,4'-DDT	50-29-3	X	X
Aldrin	309-00-2	X	--
alpha-BHC	319-84-6	--	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
beta-BHC	319-85-7	X	--
Chlordane	57-74-9	X	X
delta-BHC	319-86-8	--	--
Dieldrin	60-57-1	X	X
Endothall	145-73-3	X	--
Endrin	72-20-8	X	X
gamma-BHC (Lindane)	58-89-9	X	X
Heptachlor	76-44-8	X	X
Isodrin	465-73-6	--	--
Methoxychlor	72-43-5	X	--
Silvex (2,4,5-TP)	93-72-1	X	--
Toxaphene	8001-35-2	X	--
Inorganic Chemicals and Compounds			
Metals			
Aluminum	7429-90-5	X	X
Antimony	7440-36-0	X	--
Arsenic	7440-38-2	X	X
Barium	7440-39-3	X	X
Beryllium	7440-41-7	X	--
Bismuth	7440-69-9	--	--
Boron	7440-42-8	X	X
Cadmium	7440-43-9	X	X
Calcium	7440-70-2	--	--
Chromium	18540-29-9	X	X
Cobalt	7440-48-4	X	--
Copper	7440-50-8	X	X
Iron	7439-89-6	--	--
Lead	7439-92-1	X	X
Lithium	7439-93-2	X	--
Magnesium	7439-95-4	--	--
Manganese	7439-96-5	X	X
Mercury	7439-97-6	--	--
Mercury - Hg+2	7487-94-7	X	X
Methylmercury	22967-92-6	X	X
Molybdenum	7439-98-7	X	X
Nickel	7440-02-0	X	X
Potassium	7440-09-7	--	--
Rhodium	7440-16-6	--	--
Selenium	7782-49-2	X	X
Silicon	7440-21-3	--	--
Silver	7440-22-4	X	X
Sodium	7440-23-5	--	--
Strontium	7440-24-6	X	--
Tantalum	7440-25-7	--	--
Thallium	7440-28-0	X	X
Tin	7440-31-5	--	--
Tungsten	7440-33-7	--	--
Uranium	7440-61-1	X	X
Vanadium	7440-62-2	X	X
Yttrium	7440-65-5	--	--
Zinc	7440-66-6	X	X
Zirconium	7440-67-7	X	--
Non-metals and Anions			
Ammonia/Ammonium	7664-41-7	--	--
Bromide	24959-67-9	--	--
Chloride	16887-00-6	--	--
Cyanide	57-12-5	X	X
Fluoride	16984-48-8	X	X
Hydroxide	14280-30-9	--	--
Iodine	7553-56-2	--	--
Nitrate	14797-55-8	--	--

Table A-13 Constituents with Data Available to Estimate Potential for Hazards to Terrestrial Mammals and Birds from Emissions

Constituent of Potential Concern	CAS Registry Number	Terrestrial Mammals	Terrestrial Birds
Nitrite	14797-65-0	--	--
Phosphate	14265-44-2	--	--
Phosphorus	7723-14-0	--	--
Sulfate	14808-79-8	--	--
Total sulfur	63705-05-5	--	--
Criteria Pollutants			
Carbon monoxide	630-08-0	--	--
Nitrogen dioxide	10102-44-0	--	--
Ozone	10028-15-6	--	--
Particulate matter	No CAS #	--	--
Sulfur dioxide	7446-09-5	--	--
Radionuclides			
Actinium-227	14952-40-0	X	X
Americium-241	14596-10-2	X	X
Americium-243	14993-75-0	X	X
Antimony-125	14234-35-6	X	X
Cadmium-113m	14336-66-4	X	X
Carbon-14	14762-75-5	X	X
Cesium-134	13967-70-9	X	X
Cesium-137	10045-97-3	X	X
Cobalt-60	10198-40-0	X	X
Curium-242	15510-73-3	X	X
Curium-243	15757-87-6	X	X
Curium-244	13981-15-2	X	X
Europium-152	14683-23-9	X	X
Europium-154	15585-10-1	X	X
Europium-155	14391-16-3	X	X
Iodine-129	15046-84-1	X	X
Neptunium-237	13994-20-2	X	X
Nickel-59	14336-70-0	X	X
Nickel-63	13981-37-8	X	X
Niobium-93m	7440-03-1	X	X
Plutonium-238	13981-16-3	X	X
Plutonium-239	15117-48-3	X	X
Plutonium-240	14119-33-6	X	X
Plutonium-241	14119-32-5	X	X
Plutonium-242	13982-10-0	X	X
Protactinium-231	14331-85-2	X	X
Radium-226	13982-63-3	X	X
Radium-228	15262-20-1	X	X
Ruthenium-106	13967-48-1	X	X
Samarium-151	15715-94-3	X	X
Selenium-79	15758-45-9	X	X
Strontium-90	10098-97-2	X	X
Technetium-99	14133-76-7	X	X
Thorium-229	15594-54-4	X	X
Thorium-232	7440-29-1	X	X
Tin-126	15832-50-5	X	X
Tritium	10028-17-8	X	X
Uranium-232	14158-29-3	X	X
Uranium-233	13968-55-3	X	X
Uranium-234	13966-29-5	X	X
Uranium-235	15117-96-1	X	X
Uranium-236	13982-70-2	X	X
Uranium-238	7440-61-1	X	X
Zirconium-93	15751-77-6	X	X

CAS = Chemical Abstracts Service.
PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for acute exposure.
-- = Constituent is qualitatively evaluated for acute exposure.

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Organic Compounds				
Aromatic Halogenated Hydrocarbons				
2,3,4,6-Tetrachlorophenol	58-90-2	--	--	--
4-Chloro-3-methylphenol	59-50-7	X	X	X
Aromatic Nonhalogenated Hydrocarbons				
2-Nitrotoluene	88-72-2	--	--	--
4-Nitrobiphenyl	92-93-3	--	--	--
Benzaldehyde	100-52-7	--	--	--
Benzene	71-43-2	X	X	X
Benzyl alcohol	100-51-6	X	X	X
Ethyl benzene	100-41-4	X	X	X
m-Xylene	108-38-3	X	X	X
o-Xylene	95-47-6	--	--	--
p-Xylene	106-42-3	--	--	--
Styrene	100-42-5	--	--	--
Toluene	108-88-3	X	X	X
Non-aromatic Nonhalogenated Hydrocarbons				
1,2-Epoxybutane	106-88-7	--	--	--
1,3-Butadiene	106-99-0	--	--	--
1,4-Dioxane	123-91-1	X	X	X
1-Methylpropyl alcohol	78-92-2	--	--	--
1-Nitropropane	108-03-2	--	--	--
2,2,4-Trimethylpentane	540-84-1	--	--	--
2-Butanone	78-93-3	X	X	X
2-Butenaldehyde (2-Butenal)	4170-30-3	X	X	--
2-Ethoxyethanol	110-80-5	--	--	--
2-Heptanone	110-43-0	--	--	--
2-Hexanone	591-78-6	X	X	X
2-Methoxyethanol	109-86-4	--	--	--
2-Methyl-2-propanol	75-65-0	--	--	--
2-Methyl-2-propenenitrile	126-98-7	--	--	--
2-Methylaziridine	75-55-8	--	--	--
2-Methylpropyl alcohol	78-83-1	--	--	--
2-Pentanone	107-87-9	--	--	--
2-Propanone (Acetone)	67-64-1	X	X	X
2-Propene-1-ol	107-18-6	--	--	--
2-Propyl alcohol	67-63-0	X	X	--
3-Heptanone	106-35-4	--	--	--
3-Methyl-1-butanol	123-51-3	--	--	--
3-Methyl-2-butanone	563-80-4	--	--	--
3-Pentanone	96-22-0	--	--	--
4-Heptanone	123-19-3	--	--	--
4-Methyl-2-pentanone	108-10-1	X	X	X
4-Methyl-3-penten-2-one	141-79-7	--	--	--
5-Methyl-2-hexanone	110-12-3	--	--	--
Acetaldehyde	75-07-0	--	--	--
Acetamide	60-35-5	--	--	--
Acetic acid	64-19-7	--	--	--
Acetic acid ethyl ester	141-78-6	--	--	--
Acetic acid n-butyl ester	123-86-4	--	--	--
Acetonitrile	75-05-8	--	--	--
Acrolein	107-02-8	X	X	X
Acrylonitrile	107-13-1	X	X	X
Bis(isopropyl)ether	108-20-3	--	--	--
Butane	106-97-8	--	--	--
Carbon disulfide	75-15-0	X	X	X
Cyanogen	460-19-5	--	--	--

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Cyclohexane	110-82-7	--	--	--
Cyclohexanone	108-94-1	--	--	--
Cyclohexene	110-83-8	--	--	--
Cyclopentane	287-92-3	--	--	--
Ethyl alcohol	64-17-5	--	--	--
Ethyl ether	60-29-7	--	--	--
Ethyl methacrylate	97-63-2	--	--	--
Formaldehyde	50-00-0	X	X	X
Formamide	75-12-7	--	--	--
Formic acid	64-18-6	--	--	--
Formic acid, methyl ester	107-31-3	--	--	--
Glycidylaldehyde	765-34-4	--	--	--
Methyl acetate	79-20-9	--	--	--
Methyl alcohol	67-56-1	--	--	--
Methyl isocyanate	624-83-9	--	--	--
Methyl methacrylate	80-62-6	--	--	--
Methyl tert-butyl ether	1634-04-4	--	--	--
Methylacetylene	74-99-7	--	--	--
Methylcyclohexane	108-87-2	--	--	--
N,N-Dimethylacetamide	127-19-5	--	--	--
n-Butyl alcohol	71-36-3	--	--	--
n-Heptane	142-82-5	--	--	--
n-Hexane	110-54-3	X	X	--
Nitromethane	75-52-5	--	--	--
n-Nonane	111-84-2	--	--	--
n-Octane	111-65-9	--	--	--
n-Pentane	109-66-0	--	--	--
n-Propionaldehyde	123-38-6	--	--	--
n-Propyl alcohol	71-23-8	--	--	--
n-Valeraldehyde	110-62-3	--	--	--
Oxirane	75-21-8	--	--	--
p-Cymene	99-87-6	--	--	--
Phosgene	75-44-5	--	--	--
Propargyl alcohol	107-19-7	--	--	--
Propionic acid	79-09-4	--	--	--
Propionitrile	107-12-0	--	--	--
Propylene glycol monomethyl ether	107-98-2	--	--	--
p-tert-Butyltoluene	98-51-1	--	--	--
Triethylamine	121-44-8	--	--	--
Trimethylamine	75-50-3	--	--	--
Vinyl acetate	108-05-4	X	X	X
Non-aromatic Halogenated Hydrocarbons				
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	--	--	--
1,1,1,2-Tetrachloroethane	630-20-6	--	--	--
1,1,1-Trichloroethane	71-55-6	X	X	X
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	X	X	X
1,1,2,2-Tetrachloroethene	127-18-4	X	X	X
1,1,2-Trichloroethane	79-00-5	X	X	X
1,1,2-Trichloroethylene	79-01-6	X	X	X
1,1-Dichloroethane	75-34-3	X	X	X
1,1-Dichloroethene	75-35-4	X	X	X
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	--	--	--
1,2,3-Trichloropropane	96-18-4	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	--	--	--
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	--	--	--
1,2-Dichloroethane	107-06-2	X	X	X

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
1,2-Dichloroethylene	540-59-0	X	X	X
1,2-Dichloropropane	78-87-5	--	--	--
1,3-Dichloropropene	542-75-6	X	X	X
1,4-Dichloro-2-butene	764-41-0	--	--	--
1-Chloroethene	75-01-4	X	X	X
2,2-Dichloropropionic acid	75-99-0	--	--	--
2-Chloropropane	75-29-6	--	--	--
3-Chloropropene (Allyl chloride)	107-05-1	--	--	--
Bromochloromethane	74-97-5	--	--	--
Bromodichloromethane	75-27-4	--	--	--
Bromoethene	593-60-2	--	--	--
Bromoform	75-25-2	--	--	--
Bromomethane	74-83-9	--	--	--
Carbon tetrachloride	56-23-5	X	X	X
Chlorodibromomethane	124-48-1	--	--	--
Chlorodifluoromethane	75-45-6	--	--	--
Chloroethane	75-00-3	--	--	--
Chloroform	67-66-3	X	X	X
Chloromethane	74-87-3	--	--	--
Chloropentafluoroethane	76-15-3	--	--	--
cis-1,2-Dichloroethene	156-59-2	--	--	--
cis-1,3-Dichloropropene	10061-01-5	--	--	--
Cyanogen bromide	506-68-3	--	--	--
Cyanogen chloride	506-77-4	--	--	--
Dichlorodifluoromethane	75-71-8	--	--	--
Dichlorofluoromethane	75-43-4	--	--	--
Dichloromethane	75-09-2	X	X	X
Difluorodibromomethane	75-61-6	--	--	--
Hexafluoroacetone	684-16-2	--	--	--
Iodomethane	74-88-4	--	--	--
Methylene bromide	74-95-3	--	--	--
Pentachloroethane	76-01-7	X	X	--
trans-1,2-Dichloroethylene	156-60-5	--	--	--
trans-1,3-Dichloropropene	10061-02-6	--	--	--
Trichloroacetic acid	76-03-9	--	--	--
Trichlorofluoroethane	27154-33-2	--	--	--
Trichlorofluoromethane	75-69-4	--	--	--
Trifluorobromomethane	75-63-8	--	--	--
Dioxin and Furan Compounds (PCDDs/PCDFs)				
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	--	--	--
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	--	--	--
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	X	X	X
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	--	--	--
Dibenzofuran	132-64-9	X	X	X
Octachlorodibenzo(p)dioxin	3268-87-9	--	--	--
Octachlorodibenzofuran	39001-02-0	--	--	--

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Polychlorinated Biphenyls (PCBs)				
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	--	--	--
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	--	--	--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	--	--	--
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	--	--	--
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	--	--	--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	--	--	--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	--	--	--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	--	--	--
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	--	--	--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	--	--	--
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	--	--	--
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	--	--	--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	--	--	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	--	--	--
Polychlorinated biphenyls (PCBs)	1336-36-3	X	X	X
Phthalates				
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	X	X	X
Butylbenzyl phthalate	85-68-7	X	X	X
Dibutyl phthalate	84-74-2	X	X	X
Diethyl phthalate	84-66-2	X	X	X
Dimethyl phthalate	131-11-3	--	X	--
n-Dioctyl phthalate	117-84-0	X	X	X
Light Polycyclic Aromatic Hydrocarbons (molecular weight <200 g/mole)				
2-Chloronaphthalene	91-58-7	--	--	--
2-Methyl naphthalene	91-57-6	--	--	X
5-Nitroacenaphthene	602-87-9	--	--	--
Acenaphthene	83-32-9	X	X	X
Acenaphthylene	208-96-8	--	--	X
Anthracene	120-12-7	X	X	X
Fluorene	86-73-7	X	X	X
Indene	95-13-6	--	--	--
Naphthalene	91-20-3	X	X	X
Phenanthrene	85-01-8	X	X	X
Pyrene	129-00-0	--	--	X
Heavy Polycyclic Aromatic Hydrocarbons (molecular weight >200 g/mole)				
3-Methylcholanthrene	56-49-5	--	--	--
5-Methylchrysene	3697-24-3	--	--	--
Benzo[a]anthracene	56-55-3	X	X	X
Benzo[a]pyrene	50-32-8	X	X	X
Benzo[a,i]pyrene	191-30-0	--	--	--
Benzo[b]fluoranthene	205-99-2	X	X	X
Benzo[e]pyrene	192-97-2	--	--	--
Benzo[g,h,i]perylene	191-24-2	--	--	X
Benzo[j]fluoranthene	205-82-3	--	--	--
Benzo[k]fluoranthene	207-08-9	X	X	X
Chrysene	218-01-9	X	X	X
Dibenz[a,h]acridine	226-36-8	--	--	--
Dibenz[a,h]anthracene	53-70-3	X	X	X
Dibenz[a,j]acridine	224-42-0	--	--	--
Dibenzo[a,e]fluoranthene	5385-75-1	--	--	--
Dibenzo[a,e]pyrene	192-65-4	--	--	--
Dibenzo[a,h]fluoranthene	No CAS #	--	--	--
Dibenzo[a,h]pyrene	189-64-0	--	--	--
Dibenzo[a,i]pyrene	189-55-9	--	--	--
Fluoranthene	206-44-0	X	X	X
Hexachloronaphthalene	1335-87-1	--	--	--

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Indeno[1,2,3-cd]pyrene	193-39-5	X	X	X
Octachloronaphthalene	2234-13-1	--	--	--
Pentachloronaphthalene	1321-64-8	--	--	--
Tetrachloronaphthalene	1335-88-2	--	--	--
Trichloronaphthalene	1321-65-9	--	--	--
Light Substituted Benzene Compounds (molecular weight <200 g/mole)				
1,2,3-Trichlorobenzene	87-61-6	--	--	--
1,2,4-Trichlorobenzene	120-82-1	X	X	X
1,2,4-Trimethyl benzene	95-63-6	--	--	--
1,2-Dichlorobenzene	95-50-1	X	X	X
1,3,5-Trimethyl benzene	108-67-8	--	--	--
1,3-Dichlorobenzene	541-73-1	X	X	X
1,3-Dinitrobenzene	99-65-0	X	X	X
1,4-Dichlorobenzene	106-46-7	X	X	X
1,4-Dinitrobenzene	100-25-4	--	--	--
2,4,5-Trichlorophenol	95-95-4	--	--	--
2,4,6-Trichlorophenol	88-06-2	X	X	--
2,4-Dichlorophenol	120-83-2	X	X	--
2,4-Dimethylphenol	105-67-9	X	X	--
2,4-Dinitrophenol	51-28-5	--	--	--
2,4-Dinitrotoluene	121-14-2	X	X	X
2,6-Dinitrotoluene	606-20-2	X	X	X
2-Chlorophenol	95-57-8	--	--	--
2-Chlorotoluene	95-49-8	--	--	--
2-Nitrophenol	88-75-5	--	--	--
4,6-Dinitro-o-cresol	534-52-1	--	--	--
4-Chlorotoluene	106-43-4	--	--	--
4-Nitrophenol	100-02-7	X	X	X
alpha-Methylstyrene	98-83-9	--	--	--
Aniline	62-53-3	--	--	--
Benzotrichloride	98-07-7	--	--	--
Benzyl chloride	100-44-7	--	--	--
Bromobenzene	108-86-1	--	--	--
Chlorobenzene	108-90-7	X	X	X
Cumene	98-82-8	--	--	--
m-Cresol	108-39-4	--	--	--
n-Butyl benzene	104-51-8	--	--	--
Nitrobenzene	98-95-3	X	X	X
n-Propyl benzene	103-65-1	--	--	--
o-Cresol	95-48-7	X	X	X
o-Dinitrobenzene	528-29-0	--	--	--
o-Nitroaniline	88-74-4	--	--	--
o-Toluidine	95-53-4	--	--	--
p-Chloroaniline	106-47-8	--	--	--
p-Cresol	106-44-5	--	--	--
Phenol	108-95-2	X	X	X
p-Nitrochlorobenzene	100-00-5	--	--	--
p-Toluidine	106-49-0	--	--	--
sec-Butyl benzene	135-98-8	--	--	--
tert-Butyl benzene	98-06-6	--	--	--
Toluene-2,6-diamine	823-40-5	--	--	--
Trimethyl benzene	25551-13-7	--	--	--
Other Light Semivolatile Compounds (molecular weight <200 g/mole)				
1,1'-Biphenyl	92-52-4	X	X	--
1,1-Dimethylhydrazine	57-14-7	--	--	--
1,2-Dimethylhydrazine	540-73-8	--	--	--
1,2-Diphenylhydrazine	122-66-7	X	X	--

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
1,3-Propane sultone	1120-71-4	--	--	--
2,4-Toluene diisocyanate	584-84-9	--	--	--
2-Chloroacetophenone	532-27-4	--	--	--
2-Propenoic acid	79-10-7	--	--	--
4,4'-Methylenedianiline	101-77-9	--	--	--
Acetophenone	98-86-2	--	--	--
Benzoic acid	65-85-0	X	X	--
Bis(2-chloroethoxy)methane	111-91-1	--	--	--
Bis(2-chloroethyl) ether	111-44-4	--	--	--
Chlorocyclopentadiene	41851-50-7	--	--	--
Cyclohexanol	108-93-0	--	--	--
Dichloroisopropyl ether	108-60-1	--	--	--
Dichloromethyl ether	542-88-1	--	--	--
Dichloropentadiene	61626-71-9	--	--	--
Dimethyl sulfate	77-78-1	--	--	--
Dimethylaniline	121-69-7	--	--	--
di-n-Propylnitrosamine	621-64-7	--	--	--
Diphenyl ether	101-84-8	--	--	--
Epichlorohydrin	106-89-8	--	--	--
Ethyl carbamate (Urethane)	51-79-6	--	--	--
Ethyl methanesulfonate	62-50-0	--	--	--
Ethylene dibromide	106-93-4	--	--	--
Ethylene glycol	107-21-1	--	--	--
Ethylene glycol monobutyl ether	111-76-2	--	--	--
Ethylene glycol monoethyl ether acetate	111-15-9	--	--	--
Ethylene thiourea	96-45-7	--	--	--
Furfural	98-01-1	--	--	--
Maleic hydrazide	123-33-1	--	--	--
Malononitrile	109-77-3	--	--	--
Methyl styrene (mixed isomers)	25013-15-4	--	--	--
Methylhydrazine	60-34-4	--	--	--
N,N-Diphenylamine	122-39-4	--	--	--
Nitric acid, propyl ester	627-13-4	--	--	--
N-Nitrosodi-n-butylamine	924-16-3	--	--	--
N-Nitrosomorpholine	59-89-2	--	--	--
N-Nitroso-N,N-dimethylamine	62-75-9	--	--	--
o-Anisidine	90-04-0	--	--	--
Oxalic acid	144-62-7	--	--	--
Phthalic anhydride	85-44-9	--	--	--
p-Phthalic acid	100-21-0	--	--	--
Pyridine	110-86-1	--	--	--
Quinoline	91-22-5	--	--	--
Quinone	106-51-4	--	--	--
Safrole	94-59-7	--	--	--
Tetrahydrofuran	109-99-9	--	--	--
Other Heavy Semivolatile Compounds (molecular weight >200 g/mole)				
1,2,4,5-Tetrachlorobenzene	95-94-3	--	--	--
1,3,5-Trinitrobenzene	99-35-4	--	X	--
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	--	--	--
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	--	--	--
2-sec-Butyl-4,6-dinitrophenol	88-85-7	--	X	--
3,3'-Dichlorobenzidine	91-94-1	--	--	--
3,3'-Dimethoxybenzidine	119-90-4	--	--	--
4-Bromophenylphenyl ether	101-55-3	X	X	--
Ammonium perfluorooctanoate	3825-26-1	--	--	--
Azobenzene	103-33-3	--	--	--
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	--	--	--

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Captan	133-06-2	--	--	--
Chlorobenzilate	510-15-6	--	--	--
Dibutylphosphate	107-66-4	--	--	--
Dimethyl aminoazobenzene	60-11-7	--	--	--
Hexachlorobenzene	118-74-1	X	X	X
Hexachlorobutadiene	87-68-3	X	X	X
Hexachlorocyclopentadiene	77-47-4	X	X	X
Hexachloroethane	67-72-1	X	X	X
Hexachlorophene	70-30-4	X	X	X
Hexamethylene-1,5-diisocyanate	822-06-0	--	--	--
Mirex	2385-85-5	X	X	X
Nitrofen	1836-75-5	--	--	--
Pentachlorobenzene	608-93-5	X	X	X
Pentachloronitrobenzene	82-68-8	X	X	X
Pentachlorophenol	87-86-5	X	X	X
Picric acid	88-89-1	--	--	--
Pronamide	23950-58-5	--	--	--
Strychnine	57-24-9	--	--	--
Terphenyls	26140-60-3	--	--	--
Tributyl phosphate	126-73-8	--	--	--
Trifluralin	1582-09-8	--	--	--
Triphenylamine	603-34-9	--	--	--
Herbicides and Organochlorinated Pesticides				
2,4,5-T	93-76-5	--	--	--
2,4-D and esters	94-75-7	--	--	--
4,4'-DDD	72-54-8	X	X	X
4,4'-DDE	72-55-9	X	X	X
4,4'-DDT	50-29-3	X	X	X
Aldrin	309-00-2	X	X	X
alpha-BHC	319-84-6	X	X	X
beta-BHC	319-85-7	X	X	X
Chlordane	57-74-9	X	X	X
delta-BHC	319-86-8	X	X	X
Dieldrin	60-57-1	X	X	X
Endothall	145-73-3	--	--	--
Endrin	72-20-8	X	X	X
gamma-BHC (Lindane)	58-89-9	X	X	X
Heptachlor	76-44-8	X	X	X
Isodrin	465-73-6	--	--	--
Methoxychlor	72-43-5	X	X	X
Silvex (2,4,5-TP)	93-72-1	--	--	--
Toxaphene	8001-35-2	X	X	X
Inorganic Chemicals and Compounds				
Metals				
Aluminum	7429-90-5	X	X	X
Antimony	7440-36-0	X	X	X
Arsenic	7440-38-2	X	X	X
Barium	7440-39-3	X	X	X
Beryllium	7440-41-7	X	X	--
Bismuth	7440-69-9	--	--	--
Boron	7440-42-8	X	X	--
Cadmium	7440-43-9	X	X	X
Calcium	7440-70-2	--	--	--
Chromium	18540-29-9	X	X	X
Cobalt	7440-48-4	X	X	--
Copper	7440-50-8	X	X	X
Iron	7439-89-6	X	X	X

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Lead	7439-92-1	X	X	X
Lithium	7439-93-2	X	X	--
Magnesium	7439-95-4	--	--	--
Manganese	7439-96-5	X	X	X
Mercury	7439-97-6	--	--	--
Mercury - Hg+2	7487-94-7	X	X	X
Methylmercury	22967-92-6	X	X	X
Molybdenum	7439-98-7	X	X	--
Nickel	7440-02-0	X	X	X
Potassium	7440-09-7	--	--	--
Rhodium	7440-16-6	--	--	--
Selenium	7782-49-2	X	X	X
Silicon	7440-21-3	--	--	--
Silver	7440-22-4	X	X	X
Sodium	7440-23-5	--	--	--
Strontium	7440-24-6	X	X	--
Tantalum	7440-25-7	--	--	--
Thallium	7440-28-0	X	X	--
Tin	7440-31-5	X	X	--
Tungsten	7440-33-7	--	--	--
Uranium	7440-61-1	X	X	--
Vanadium	7440-62-2	X	X	--
Yttrium	7440-65-5	--	--	--
Zinc	7440-66-6	X	X	X
Zirconium	7440-67-7	X	X	--
Non-metals and Anions				
Ammonia/Ammonium	7664-41-7	--	X	X
Bromide	24959-67-9	--	--	--
Chloride	16887-00-6	--	--	--
Cyanide	57-12-5	X	X	X
Fluoride	16984-48-8	--	--	--
Hydroxide	14280-30-9	--	--	--
Iodine	7553-56-2	--	--	--
Nitrate	14797-55-8	--	--	--
Nitrite	14797-65-0	--	--	--
Phosphate	14265-44-2	--	--	--
Phosphorus	7723-14-0	--	--	--
Sulfate	14808-79-8	--	--	--
Total sulfur	63705-05-5	--	--	--
Criteria Pollutants				
Carbon monoxide	630-08-0	--	--	--
Nitrogen dioxide	10102-44-0	--	--	--
Ozone	10028-15-6	--	--	--
Particulate matter	No CAS #	--	--	--
Sulfur dioxide	7446-09-5	--	--	--
Radionuclides				
Actinium-227	14952-40-0	X	X	X
Americium-241	14596-10-2	X	X	X
Americium-243	14993-75-0	X	X	X
Antimony-125	14234-35-6	X	X	X
Cadmium-113m	14336-66-4	X	X	X
Carbon-14	14762-75-5	X	X	X
Cesium-134	13967-70-9	X	X	X
Cesium-137	10045-97-3	X	X	X
Cobalt-60	10198-40-0	X	X	X
Curium-242	15510-73-3	X	X	X

Table A-14 Constituents with Data Available to Estimate Potential for Hazards to Aquatic Biota, Salmonids, and Benthic Invertebrates from Emissions

Constituent of Potential Concern	CAS Registry Number	Aquatic Biota	Chinook Salmon and Other Salmonids	Benthic Invertebrates
Curium-243	15757-87-6	X	X	X
Curium-244	13981-15-2	X	X	X
Europium-152	14683-23-9	X	X	X
Europium-154	15585-10-1	X	X	X
Europium-155	14391-16-3	X	X	X
Iodine-129	15046-84-1	X	X	X
Neptunium-237	13994-20-2	X	X	X
Nickel-59	14336-70-0	X	X	X
Nickel-63	13981-37-8	X	X	X
Niobium-93m	7440-03-1	X	X	X
Plutonium-238	13981-16-3	X	X	X
Plutonium-239	15117-48-3	X	X	X
Plutonium-240	14119-33-6	X	X	X
Plutonium-241	14119-32-5	X	X	X
Plutonium-242	13982-10-0	X	X	X
Protactinium-231	14331-85-2	X	X	X
Radium-226	13982-63-3	X	X	X
Radium-228	15262-20-1	X	X	X
Ruthenium-106	13967-48-1	X	X	X
Samarium-151	15715-94-3	X	X	X
Selenium-79	15758-45-9	X	X	X
Strontium-90	10098-97-2	X	X	X
Technetium-99	14133-76-7	X	X	X
Thorium-229	15594-54-4	X	X	X
Thorium-232	7440-29-1	X	X	X
Tin-126	15832-50-5	X	X	X
Tritium	10028-17-8	X	X	X
Uranium-232	14158-29-3	X	X	X
Uranium-233	13968-55-3	X	X	X
Uranium-234	13966-29-5	X	X	X
Uranium-235	15117-96-1	X	X	X
Uranium-236	13982-70-2	X	X	X
Uranium-238	7440-61-1	X	X	X
Zirconium-93	15751-77-6	X	X	X

CAS = Chemical Abstracts Service.
PCDD = Polychlorinated dibenzo-p-dioxin.
PCDF = Polychlorinated dibenzofuran.

X = Constituent is quantitatively evaluated for acute exposure.
-- = Constituent is qualitatively evaluated for acute exposure.

Appendix B

Modeling Parameters and Human Health Risk Assessment

Appendix B
Modeling Parameters and Human Health Risk Assessment

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Appendix B-1

Constituent of Potential Concern-Specific Parameters

Appendix B-1
Constituent of Potential Concern-Specific Parameters

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Overview of Database

A database has been developed in support of this risk assessment work plan to contain physical constituent-specific parameters that are used for various purposes, including modeling exposure point concentrations for the screening-level risk assessment. Values are presented for the chemicals of potential concern (COPCs) and radionuclides of potential concern (ROPCs), as identified in section 4 of this work plan, for the following parameters (shown in alphabetical order below, but shown in functional order on tables B1-1, B1-2, and B1-3):

Parameter	O[a]	I[a]	R[a]	Definition (Units)
Ba_{beef}	✓	✓	✓	Biotransfer factor for beef (mg constituent/kg FW tissue)/(mg constituent/day) OR (day/kg FW tissue)
$Ba_{chicken}$	✓	✓	✓	Biotransfer factor for chicken (mg constituent/kg FW tissue)/(mg constituent/day) OR (day/kg FW tissue)
Ba_{egg}	✓	✓	✓	Biotransfer factor for eggs (mg constituent/kg FW tissue)/(mg constituent/day) OR (day/kg FW tissue)
Ba_{milk}	✓	✓	✓	Biotransfer factor for milk (mg constituent/kg FW tissue)/(mg constituent/day) OR (day/kg FW tissue)
Ba_{pork}	✓	✓	✓	Biotransfer factor for pork (mg constituent/kg FW tissue)/(mg constituent/day) OR (day/kg FW tissue)
BAF_{fish}	✓	✓	✓	Bioaccumulation factor in fish (mg constituent/kg FW tissue)/(mg constituent/L total water column) OR (L water/kg FW tissue)
BCF_{fish}	✓	✓	✓	Bioconcentration factor in fish (L water/kg FW tissue)
Br_{ag}	✓	✓	✓	Plant-soil bioconcentration factor in aboveground produce as a weighted average of $Br_{ag(fruit)}$ and $Br_{ag(veg)}$ (µg constituent/g DW plant)/(µg constituent/g DW soil)
$Br_{ag(fruit)}$		✓	✓	Plant-soil bioconcentration factor in aboveground produce for fruit (µg constituent/g DW plant)/(µg constituent/g DW soil)
$Br_{ag(veg)}$		✓	✓	Plant-soil bioconcentration factor in aboveground produce for vegetables (µg constituent/g DW plant)/(µg constituent/g DW soil)
Br_{forage}	✓	✓	✓	Plant-soil bioconcentration factor in forage (µg constituent/g DW plant)/(µg constituent/g DW soil). Also used as plant-soil bioconcentration factor in silage.
Br_{grain}	✓	✓	✓	Plant-soil bioconcentration factor in grain (µg constituent/g DW grain)/(µg constituent/g DW soil)
$Br_{rootveg}$	✓	✓	✓	Plant-soil bioconcentration factor for belowground produce (µg constituent/g DW plant)/(µg constituent/g DW soil)
$BSAF_{fish}$	✓	✓	✓	Biota-sediment accumulation factor in fish (mg constituent/kg lipid tissue)/(mg constituent/kg sediment) OR (unitless)
Bv_{ag}	✓	✓		COPC air-to-plant biotransfer factor for aboveground produce (µg constituent/g DW plant)/(µg constituent/g air)

Parameter	O[a]	I[a]	R[a]	Definition (Units)
Bv_{forage}	✓	✓		COPC air-to-plant biotransfer factor for forage and silage (µg constituent/g DW plant)/(µg constituent/g air)
D_a	✓	✓	✓	Diffusivity of COPC or ROPC in air (cm^2/s)
D_w	✓	✓	✓	Diffusivity of COPC or ROPC in water (cm^2/s)
F_v	✓	✓	✓	Fraction of COPC or ROPC air concentration in vapor phase (unitless)
H	✓	✓		Henry's / DW Cons Water (DW Resph Hen × m^3/mol)
k_{decay}			✓	ROPC soil loss due to radiological decay ($year^{-1}$)
h_{oc}	✓			Poil organic carbon-water partitioning coefficient (mL water/g soil)
h_{ow}	✓			Octanol/water partitioning coefficient (unitless)
$h\ d_{bs}$	✓	✓	✓	Bed sediment/sediment pore water partitioning coefficient (L constituent/kg bottom sediment) OR (cm^3 [or mL] constituent/g bottom sediment)
$h\ d_s$	✓	✓	✓	Poil-water partitioning coefficient (cm^3 [or mL] water/g soil)
$h\ d_{sw}$	✓	✓	✓	Puspended sediment/surface water partitioning coefficient (L water/kg suspended sediment) OR (cm^3 [or mL] water/g suspended sediment)
h p	✓			COPC permeability constant (cm/hr)
ks_e	✓	✓	✓	COPC or ROPC soil loss due to soil erosion ($year^{-1}$)
ks_g	✓	✓		COPC soil loss due to biotic and abiotic degradation ($year^{-1}$)
ks_l	✓	✓	✓	COPC or ROPC soil loss due to leaching ($year^{-1}$)
ks_r	✓	✓	✓	COPC or ROPC soil loss due to surface runoff ($year^{-1}$)
ks_v	✓	✓	✓	COPC or ROPC soil loss due to volatilization ($year^{-1}$)
MW	✓	✓	✓	Molecular weight of COPC or ROPC (g/mole)
pH	✓	✓		Ppecific pH level used to obtain other parameter values (unitless). A neutral pH level (in the 6 to 8 range) is normal.
RCF	✓			Root concentration factor (µg constituent/g DW plant)/(µg constituent/mL soil water)
$t_{1/2}$	✓		✓	Half-time of COPC or ROPC in soil (days)

COPC = chemical of potential concern.

DW = dry weight.

FW = fresh weight.

ROPC = radionuclide of potential concern.

[a] Column is checked if relevant for organic compound (O), inorganic compound (I), or radionuclide (R) parameters in tables B1-1, B1-2, or B1-3.

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW (g/mol)	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source			H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Aromatic Halogenated Hydrocarbons												
2,3,4,6-Tetrachlorophenol	58-90-2	0 or 1	b	231.89	7	1.53E-05	c	1.53E-05	2.55E-02	c	5.78E-06	c
4-Chloro-3-methylphenol	59-50-7	0 or 1	b	142.58	NA	4.00E-07	h	4.00E-07	6.96E-02	c	8.06E-06	c
Aromatic Nonhalogenated Hydrocarbons												
2-Nitrotoluene	88-72-2	0 or 1	b	137.13	NA	5.81E+00	i	5.75E-05	4.75E-02	j	8.67E-06	j
4-Nitrobiphenyl	92-93-3	0 or 1	b	199.21	NA	1.45E-04	k	3.53E-06	5.57E-02	e	6.45E-06	e
Benzaldehyde	100-52-7	0 or 1	b	106.12	NA	4.18E-05	c	4.18E-05	7.07E-02	c	9.48E-06	c
Benzene	71-43-2	0 or 1	b	78.11	NA	5.49E-03	c	5.49E-03	1.17E-01	c	1.02E-05	c
Benzyl alcohol	100-51-6	0 or 1	b	108.13	NA	3.78E-07	c	3.78E-07	6.89E-02	c	9.38E-06	c
Ethyl benzene	100-41-4	0 or 1	b	106.16	NA	7.73E-03	c	7.73E-03	7.65E-02	c	8.49E-06	c
m-Xylene	108-38-3	0 or 1	b	106.16	NA	6.05E-03	h	6.05E-03	7.69E-02	c	8.49E-06	c
o-Xylene	95-47-6	0 or 1	b	106.16	NA	6.05E-03	h	6.05E-03	7.69E-02	c	8.44E-06	c
p-Xylene	106-42-3	0 or 1	b	106.16	NA	6.05E-03	h	6.05E-03	7.61E+02	c	8.50E-06	c
Styrene	100-42-5	0 or 1	b	104.14	NA	3.33E-03	c	3.33E-03	7.73E-02	c	8.77E-06	c
Toluene	108-88-3	0 or 1	b	92.13	NA	6.13E-03	c	6.13E-03	9.72E-02	c	9.23E-06	c
Non-aromatic Nonhalogenated Hydrocarbons												
1,2-Epoxybutane	106-88-7	0 or 1	b	72.12	NA	7.36E-03	m	1.79E-04	1.34E-01	j	1.03E-05	j
1,3-Butadiene	106-99-0	0 or 1	b	54.091	NA	7.46E+00	n	7.39E-02	1.33E-01	e	1.54E-05	e
1,4-Dioxane	123-91-1	0 or 1	b	88.1	NA	4.89E-06	c	4.89E-06	9.20E-02	c	1.05E-05	c
1-Methylpropyl alcohol	78-92-2	0 or 1	b	74.122	NA	1.03E+00	i	1.02E-05	1.08E-01	e	1.25E-05	e
1-Nitropropane	108-03-2	0 or 1	b	89.09	NA	3.56E-03	k	8.68E-05	9.53E-02	e	1.10E-05	e
2,2,4-Trimethylpentane	540-84-1	0 or 1	b	114.23	NA	3.05E+05	i	3.02E+00	8.07E-02	e	9.34E-06	e
2-Butanone	78-93-3	0 or 1	b	72.1	NA	3.61E-05	c	3.61E-05	1.35E-01	c	1.03E-05	c
2-Butenaldehyde (2-Butenal)	4170-30-3	0 or 1	b	70.091	NA	3.96E-04	k	9.66E-06	1.12E-01	e	1.29E-05	e
2-Ethoxyethanol	110-80-5	0 or 1	b	90.12	NA	5.13E-02	p	5.13E-02	9.32E-02	j	9.76E-06	j
2-Heptanone	110-43-0	0 or 1	b	114.19	NA	1.46E+01	i	1.45E-04	8.07E-02	e	9.35E-06	e
2-Hexanone	591-78-6	0 or 1	b	100.16	NA	9.70E+00	i	9.60E-05	8.81E-02	e	1.02E-05	e
2-Methoxyethanol	109-86-4	0 or 1	b	76	NA	1.35E-05	m	3.29E-07	1.29E-01	j	9.57E-06	j
2-Methyl-2-propanol	75-65-0	0 or 1	b	74.122	NA	1.21E+00	i	1.20E-05	1.08E-01	e	1.25E-05	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Aromatic Halogenated Hydrocarbons											
2,3,4,6-Tetrachlorophenol	58-90-2	2.49E+02	c	2.49E+02	2.00E+04	c	2.00E+04	9.97E+00	c	2.49E+00	c
4-Chloro-3-methylphenol	59-50-7	3.71E+02	h	3.71E+02	1.26E+03	c	1.26E+03	1.48E+01	h	3.71E+00	h
Aromatic Nonhalogenated Hydrocarbons											
2-Nitrotoluene	88-72-2	2.63E+00	i	4.27E+02	2.30E+00	i	2.00E+02	1.71E+01	e	4.27E+00	e
4-Nitrobiphenyl	92-93-3	NA	e	1.23E+03	3.77E+00	l	5.89E+03	4.94E+01	e	1.23E+01	e
Benzaldehyde	100-52-7	2.01E+01	h	2.01E+01	3.00E+01	c	3.00E+01	8.04E-01	c	2.01E-01	c
Benzene	71-43-2	6.20E+01	c	6.20E+01	1.37E+02	c	1.37E+02	2.48E+00	c	6.20E-01	c
Benzyl alcohol	100-51-6	1.02E+01	c	1.02E+01	1.26E+01	c	1.26E+01	4.09E-01	c	1.02E-01	c
Ethyl benzene	100-41-4	2.04E+02	c	2.04E+02	1.33E+03	c	1.33E+03	8.16E+00	c	2.04E+00	c
m-Xylene	108-38-3	1.96E+02	c	1.96E+02	1.59E+03	c	1.59E+03	7.84E+00	c	1.96E+00	c
o-Xylene	95-47-6	2.41E+02	c	2.41E+02	1.35E+03	c	1.35E+03	9.64E+00	c	2.41E+00	c
p-Xylene	106-42-3	3.11E+02	c	3.11E+02	1.48E+03	c	1.48E+03	1.24E+01	c	3.11E+00	c
Styrene	100-42-5	9.12E+02	c	9.12E+02	8.49E+02	c	8.49E+02	3.65E+01	c	9.12E+00	c
Toluene	108-88-3	1.40E+02	c	1.40E+02	4.65E+02	c	4.65E+02	5.60E+00	c	1.40E+00	c
Non-aromatic Nonhalogenated Hydrocarbons											
1,2-Epoxybutane	106-88-7	4.49E+00	m	4.49E+00	8.60E-01	m	7.24E+00	1.80E-01	e	4.49E-02	e
1,3-Butadiene	106-99-0	4.38E+01	m	4.38E+01	1.99E+00	m	9.77E+01	1.75E+00	e	4.38E-01	e
1,4-Dioxane	123-91-1	8.76E-01	c	8.76E-01	5.40E-01	c	5.40E-01	3.50E-02	c	8.76E-03	c
1-Methylpropyl alcohol	78-92-2	NA	e	4.23E+00	6.10E-01	i	4.07E+00	1.69E-01	e	4.23E-02	e
1-Nitropropane	108-03-2	NA	e	6.75E+00	8.70E-01	o	7.41E+00	2.70E-01	e	6.75E-02	e
2,2,4-Trimethylpentane	540-84-1	NA	e	1.17E+04	5.02E+00	i	1.05E+05	4.66E+02	e	1.17E+02	e
2-Butanone	78-93-3	2.34E+00	c	2.34E+00	1.91E+00	c	1.91E+00	9.36E-02	c	2.34E-02	c
2-Butenaldehyde (2-Butenal)	4170-30-3	NA	e	3.80E+00	5.50E-01	o	3.55E+00	1.52E-01	e	3.80E-02	e
2-Ethoxyethanol	110-80-5	1.32E+00	p	2.09E+01	-1.00E-01	p	7.94E-01	8.36E-01	e	2.09E-01	e
2-Heptanone	110-43-0	NA	e	4.96E+01	1.98E+00	i	9.55E+01	1.98E+00	e	4.96E-01	e
2-Hexanone	591-78-6	2.13E+00	i	1.34E+02	1.38E+00	i	2.40E+01	5.36E+00	e	1.34E+00	e
2-Methoxyethanol	109-86-4	1.00E+00	m	1.00E+00	-7.70E-01	m	1.70E-01	4.00E-02	e	1.00E-02	e
2-Methyl-2-propanol	75-65-0	1.57E+00	i	3.72E+01	3.50E-01	i	2.24E+00	1.49E+00	e	3.72E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Aromatic Halogenated Hydrocarbons								
2,3,4,6-Tetrachlorophenol	58-90-2	1.87E+01	c	1.27E-01	c	1.27E-01	c	1.27E-01
4-Chloro-3-methylphenol	59-50-7	2.78E+01	h	6.25E-01	c	6.25E-01	c	6.25E-01
Aromatic Nonhalogenated Hydrocarbons								
2-Nitrotoluene	88-72-2	3.20E+01	e	1.81E+00	e	1.81E+00	e	1.81E+00
4-Nitrobiphenyl	92-93-3	9.26E+01	e	2.56E-01	e	2.56E-01	e	2.56E-01
Benzaldehyde	100-52-7	1.51E+00	c	5.42E+00	c	5.42E+00	c	5.42E+00
Benzene	71-43-2	4.65E+00	c	2.25E+00	c	2.25E+00	c	2.25E+00
Benzyl alcohol	100-51-6	7.66E-01	c	8.95E+00	c	8.95E+00	c	8.95E+00
Ethyl benzene	100-41-4	1.53E+01	c	6.07E-01	c	6.07E-01	c	6.07E-01
m-Xylene	108-38-3	1.47E+01	c	5.47E-01	c	5.47E-01	c	5.47E-01
o-Xylene	95-47-6	1.81E+01	c	6.01E-01	c	6.01E-01	c	6.01E-01
p-Xylene	106-42-3	2.33E+01	c	5.70E-01	c	5.70E-01	c	5.70E-01
Styrene	100-42-5	6.84E+01	c	7.85E-01	c	7.85E-01	c	7.85E-01
Toluene	108-88-3	1.05E+01	c	1.11E+00	c	1.11E+00	c	1.11E+00
Non-aromatic Nonhalogenated Hydrocarbons								
1,2-Epoxybutane	106-88-7	3.37E-01	e	1.23E+01	e	1.23E+01	c	1.23E+01
1,3-Butadiene	106-99-0	3.28E+00	e	2.74E+00	e	2.74E+00	e	2.74E+00
1,4-Dioxane	123-91-1	6.57E-02	c	5.53E+01	c	5.53E+01	c	5.53E+01
1-Methylpropyl alcohol	78-92-2	3.18E-01	e	1.72E+01	e	1.72E+01	e	1.72E+01
1-Nitropropane	108-03-2	5.07E-01	e	1.22E+01	e	1.22E+01	e	1.22E+01
2,2,4-Trimethylpentane	540-84-1	8.74E+02	e	4.86E-02	e	4.86E-02	e	4.86E-02
2-Butanone	78-93-3	1.76E-01	c	2.67E+01	c	2.67E+01	c	2.67E+01
2-Butenaldehyde (2-Butenal)	4170-30-3	2.85E-01	e	1.86E+01	e	1.86E+01	e	1.86E+01
2-Ethoxyethanol	110-80-5	1.57E+00	e	4.42E+01	e	4.42E+01	e	4.42E+01
2-Heptanone	110-43-0	3.72E+00	e	2.78E+00	e	2.78E+00	e	2.78E+00
2-Hexanone	591-78-6	1.00E+01	e	6.17E+00	e	6.17E+00	e	6.17E+00
2-Methoxyethanol	109-86-4	7.50E-02	e	1.08E+02	e	1.08E+02	e	1.08E+02
2-Methyl-2-propanol	75-65-0	2.79E+00	e	2.43E+01	e	2.43E+01	e	2.43E+01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Aromatic Halogenated Hydrocarbons									
2,3,4,6-Tetrachlorophenol	58-90-2	1.94E+02	c	1.39E+02	c	1.39E+02	c	4.83E+02	c
4-Chloro-3-methylphenol	59-50-7	1.70E+01	h	2.80E+02	h	2.80E+02	h	6.30E+01	c
Aromatic Nonhalogenated Hydrocarbons									
2-Nitrotoluene	88-72-2	4.69E+00	e	2.74E-01	e	2.74E-01	e	2.00E+01	e
4-Nitrobiphenyl	92-93-3	1.56E+01	e	1.64E+02	e	1.64E+02	e	1.92E+02	e
Benzaldehyde	100-52-7	4.72E+01	c	5.00E-02	c	5.00E-02	c	9.50E+00	c
Benzene	71-43-2	2.67E+01	c	1.92E-03	c	1.92E-03	c	1.66E+01	c
Benzyl alcohol	100-51-6	7.77E+01	c	2.19E+00	c	2.19E+00	c	7.94E+00	c
Ethyl benzene	100-41-4	3.20E+01	c	1.53E-02	c	1.53E-02	c	6.52E+01	c
m-Xylene	108-38-3	3.78E+01	c	2.37E-02	h	2.37E-02	h	7.41E+01	c
o-Xylene	95-47-6	2.74E+01	c	1.99E-02	h	1.99E-02	h	6.61E+01	c
p-Xylene	106-42-3	2.27E+01	c	2.20E-02	h	2.20E-02	h	7.05E+01	c
Styrene	100-42-5	5.28E+00	c	2.21E-02	c	2.21E-02	c	4.81E+01	c
Toluene	108-88-3	2.33E+01	c	6.33E-03	c	6.33E-03	c	3.26E+01	c
Non-aromatic Nonhalogenated Hydrocarbons									
1,2-Epoxybutane	106-88-7	1.64E+02	e	2.57E-03	e	2.57E-03	c	7.37E+00	e
1,3-Butadiene	106-99-0	3.25E+01	e	9.99E-05	e	9.99E-05	e	1.42E+01	e
1,4-Dioxane	123-91-1	7.37E+02	c	5.93E-03	c	5.93E-03	c	6.45E+00	c
1-Methylpropyl alcohol	78-92-2	1.65E+02	e	2.45E-02	e	2.45E-02	e	6.99E+00	e
1-Nitropropane	108-03-2	1.09E+02	e	5.45E-03	e	5.45E-03	e	7.39E+00	e
2,2,4-Trimethylpentane	540-84-1	1.47E+01	e	4.12E-03	e	4.12E-03	e	1.71E+03	e
2-Butanone	78-93-3	2.86E+02	c	3.08E-03	c	3.08E-03	c	6.69E+00	c
2-Butenaldehyde (2-Butenal)	4170-30-3	1.82E+02	e	2.24E-02	e	2.24E-02	e	6.92E+00	e
2-Ethoxyethanol	110-80-5	3.11E+01	e	8.55E-07	e	8.55E-07	e	6.50E+00	e
2-Heptanone	110-43-0	2.84E+01	e	4.98E-02	e	4.98E-02	e	1.41E+01	e
2-Hexanone	591-78-6	6.71E+00	e	1.72E-02	e	1.72E-02	e	8.99E+00	e
2-Methoxyethanol	109-86-4	6.37E+02	e	2.58E-02	e	2.58E-02	e	6.37E+00	e
2-Methyl-2-propanol	75-65-0	1.81E+01	e	1.10E-02	e	1.10E-02	e	6.74E+00	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Aromatic Halogenated Hydrocarbons											
2,3,4,6-Tetrachlorophenol	58-90-2	5.02E-04	c	3.97E-04	c	1.59E-01	c	1.59E-04	c	6.08E-04	c
4-Chloro-3-methylphenol	59-50-7	3.16E-05	c	2.50E-05	c	1.00E-02	c	1.00E-05	c	3.83E-05	c
Aromatic Nonhalogenated Hydrocarbons											
2-Nitrotoluene	88-72-2	5.01E-06	e	3.96E-06	e	1.58E-03	e	1.58E-06	e	6.07E-06	e
4-Nitrobiphenyl	92-93-3	1.48E-04	e	1.17E-04	e	4.68E-02	e	4.68E-05	e	1.79E-04	e
Benzaldehyde	100-52-7	7.54E-07	c	5.95E-07	c	2.38E-04	c	2.38E-07	c	9.12E-07	c
Benzene	71-43-2	3.44E-06	c	2.72E-06	c	1.09E-03	c	1.09E-06	c	4.17E-06	c
Benzyl alcohol	100-51-6	3.16E-07	c	2.50E-07	c	1.00E-04	c	1.00E-07	c	3.83E-07	c
Ethyl benzene	100-41-4	3.33E-05	c	2.63E-05	c	1.05E-02	c	1.05E-05	c	4.03E-05	c
m-Xylene	108-38-3	3.99E-05	c	3.15E-05	c	1.26E-02	c	1.26E-05	c	4.83E-05	c
o-Xylene	95-47-6	3.39E-05	c	2.68E-05	c	1.07E-02	c	1.07E-05	c	4.10E-05	c
p-Xylene	106-42-3	3.72E-05	c	2.93E-05	c	1.18E-02	c	1.18E-05	c	4.50E-05	c
Styrene	100-42-5	2.13E-05	c	1.68E-05	c	6.74E-03	c	6.74E-06	c	2.58E-05	c
Toluene	108-88-3	1.17E-05	c	9.22E-06	c	3.69E-03	c	3.69E-06	c	1.41E-05	c
Non-aromatic Nonhalogenated Hydrocarbons											
1,2-Epoxybutane	106-88-7	1.82E-07	e	1.44E-07	e	5.75E-05	e	5.75E-08	e	2.20E-07	e
1,3-Butadiene	106-99-0	2.45E-06	e	1.94E-06	e	7.76E-04	e	7.76E-07	e	2.97E-06	e
1,4-Dioxane	123-91-1	1.36E-08	c	1.07E-08	c	4.29E-06	c	4.29E-09	c	1.64E-08	c
1-Methylpropyl alcohol	78-92-2	1.02E-07	e	8.08E-08	e	3.24E-05	e	3.24E-08	e	1.24E-07	e
1-Nitropropane	108-03-2	1.86E-07	e	1.47E-07	e	5.89E-05	e	5.89E-08	e	2.25E-07	e
2,2,4-Trimethylpentane	540-84-1	2.63E-03	e	2.08E-03	e	8.32E-01	e	8.32E-04	e	3.18E-03	e
2-Butanone	78-93-3	4.79E-08	c	3.78E-08	c	1.51E-05	c	1.51E-08	c	5.79E-08	c
2-Butenaldehyde (2-Butenal)	4170-30-3	8.91E-08	e	7.04E-08	e	2.82E-05	e	2.82E-08	e	1.08E-07	e
2-Ethoxyethanol	110-80-5	2.00E-08	e	1.58E-08	e	6.31E-06	e	6.31E-09	e	2.42E-08	e
2-Heptanone	110-43-0	2.40E-06	e	1.89E-06	e	7.59E-04	e	7.59E-07	e	2.90E-06	e
2-Hexanone	591-78-6	6.03E-07	e	4.76E-07	e	1.91E-04	e	1.91E-07	e	7.29E-07	e
2-Methoxyethanol	109-86-4	4.27E-09	e	3.37E-09	e	1.35E-06	e	1.35E-09	e	5.16E-09	e
2-Methyl-2-propanol	75-65-0	5.62E-08	e	4.44E-08	e	1.78E-05	e	1.78E-08	e	6.81E-08	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Aromatic Halogenated Hydrocarbons									
2,3,4,6-Tetrachlorophenol	58-90-2	1.63E+03	c	NA	NA	NA	NA	1.80E+02	d
4-Chloro-3-methylphenol	59-50-7	NA	NA	1.34E+02	c	NA	NA	NA	NA
Aromatic Nonhalogenated Hydrocarbons									
2-Nitrotoluene	88-72-2	NA	NA	3.30E+01	e	NA	NA	NA	NA
4-Nitrobiphenyl	92-93-3	NA	NA	4.32E+02	e	NA	NA	2.80E+01	d
Benzaldehyde	100-52-7	NA	NA	7.81E+00	c	NA	NA	NA	NA
Benzene	71-43-2	NA	NA	2.48E+01	c	NA	NA	1.60E+01	d
Benzyl alcohol	100-51-6	NA	NA	4.04E+00	c	NA	NA	NA	NA
Ethyl benzene	100-41-4	NA	NA	1.39E+02	c	NA	NA	1.00E+01	d
m-Xylene	108-38-3	NA	NA	1.60E+02	c	NA	NA	2.80E+01	d
o-Xylene	95-47-6	NA	NA	1.41E+02	c	NA	NA	2.80E+01	d
p-Xylene	106-42-3	NA	NA	1.51E+02	c	NA	NA	2.80E+01	d
Styrene	100-42-5	NA	NA	9.91E+01	c	NA	NA	2.80E+01	d
Toluene	108-88-3	NA	NA	6.27E+01	c	NA	NA	NA	NA
Non-aromatic Nonhalogenated Hydrocarbons									
1,2-Epoxybutane	106-88-7	NA	NA	2.65E+00	e	NA	NA	1.29E+01	d
1,3-Butadiene	106-99-0	NA	NA	1.92E+01	e	NA	NA	2.80E+01	d
1,4-Dioxane	123-91-1	NA	NA	3.69E-01	c	NA	NA	NA	NA
1-Methylpropyl alcohol	78-92-2	NA	NA	1.71E+00	e	NA	NA	7.00E+00	d
1-Nitropropane	108-03-2	NA	NA	2.70E+00	e	NA	NA	NA	NA
2,2,4-Trimethylpentane	540-84-1	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	78-93-3	NA	NA	9.61E-01	c	NA	NA	NA	NA
2-Butenaldehyde (2-Butenal)	4170-30-3	NA	NA	1.54E+00	e	NA	NA	NA	NA
2-Ethoxyethanol	110-80-5	NA	NA	4.94E-01	e	NA	NA	2.80E+01	d
2-Heptanone	110-43-0	NA	NA	1.88E+01	e	NA	NA	NA	NA
2-Hexanone	591-78-6	NA	NA	6.59E+00	e	NA	NA	NA	NA
2-Methoxyethanol	109-86-4	NA	NA	1.53E-01	e	NA	NA	2.80E+01	d
2-Methyl-2-propanol	75-65-0	NA	NA	1.09E+00	e	NA	NA	2.00E+02	d

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Aromatic Halogenated Hydrocarbons													
2,3,4,6-Tetrachlorophenol	58-90-2	0.0E+00	NA	4.98E-03	3.32E-04	2.49E-04	e	1.41E+00	c	1.22E+00	8.12E-02	6.09E-02	e
4-Chloro-3-methylphenol	59-50-7	0.0E+00	NA	5.07E-03	3.38E-04	2.54E-04	e	1.10E+01	c	8.33E-01	5.56E-02	4.17E-02	e
Aromatic Nonhalogenated Hydrocarbons													
2-Nitrotoluene	88-72-2	0.0E+00	NA	5.10E-03	3.40E-04	2.55E-04	e	0.0E+00	NA	7.29E-01	4.86E-02	3.64E-02	e
4-Nitrobiphenyl	92-93-3	0.0E+00	NA	5.22E-03	3.48E-04	2.61E-04	e	9.03E+00	e	2.58E-01	1.72E-02	1.29E-02	e
Benzaldehyde	100-52-7	0.0E+00	NA	2.99E-03	2.00E-04	1.50E-04	e	0.0E+00	NA	9.08E+00	6.05E-01	4.54E-01	e
Benzene	71-43-2	0.0E+00	NA	4.23E-03	2.82E-04	2.12E-04	e	3.89E+00	c	4.16E+00	2.77E-01	2.08E-01	e
Benzyl alcohol	100-51-6	0.0E+00	NA	2.11E-03	1.40E-04	1.05E-04	e	0.0E+00	NA	1.26E+01	8.39E-01	6.29E-01	e
Ethyl benzene	100-41-4	0.0E+00	NA	4.91E-03	3.28E-04	2.46E-04	e	2.53E+01	c	1.47E+00	9.79E-02	7.34E-02	e
m-Xylene	108-38-3	0.0E+00	NA	4.90E-03	3.27E-04	2.45E-04	e	9.03E+00	c	1.52E+00	1.02E-01	7.62E-02	e
o-Xylene	95-47-6	0.0E+00	NA	4.97E-03	3.31E-04	2.48E-04	e	9.03E+00	c	1.26E+00	8.37E-02	6.28E-02	e
p-Xylene	106-42-3	0.0E+00	NA	5.04E-03	3.36E-04	2.52E-04	e	9.03E+00	c	9.87E-01	6.58E-02	4.93E-02	e
Styrene	100-42-5	0.0E+00	NA	5.20E-03	3.46E-04	2.60E-04	e	9.03E+00	c	3.47E-01	2.31E-02	1.74E-02	e
Toluene	108-88-3	0.0E+00	NA	4.76E-03	3.17E-04	2.38E-04	e	1.15E+01	c	2.07E+00	1.38E-01	1.04E-01	e
Non-aromatic Nonhalogenated Hydrocarbons													
1,2-Epoxybutane	106-88-7	0.0E+00	NA	1.19E-03	7.96E-05	5.97E-05	e	1.96E+01	e	1.62E+01	1.08E+00	8.10E-01	e
1,3-Butadiene	106-99-0	0.0E+00	NA	3.91E-03	2.61E-04	1.96E-04	e	9.03E+00	e	5.44E+00	3.63E-01	2.72E-01	e
1,4-Dioxane	123-91-1	0.0E+00	NA	2.85E-04	1.90E-05	1.42E-05	e	1.41E+00	c	1.98E+01	1.32E+00	9.90E-01	e
1-Methylpropyl alcohol	78-92-2	0.0E+00	NA	1.14E-03	7.60E-05	5.70E-05	e	3.61E+01	e	1.64E+01	1.09E+00	8.21E-01	e
1-Nitropropane	108-03-2	0.0E+00	NA	1.61E-03	1.07E-04	8.06E-05	e	0.0E+00	NA	1.45E+01	9.70E-01	7.27E-01	e
2,2,4-Trimethylpentane	540-84-1	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	2.76E-02	1.84E-03	1.38E-03	e
2-Butanone	78-93-3	0.0E+00	NA	6.98E-04	4.65E-05	3.49E-05	e	3.61E+01	c	1.82E+01	1.21E+00	9.08E-01	e
2-Butenaldehyde (2-Butenal)	4170-30-3	0.0E+00	NA	1.05E-03	6.98E-05	5.24E-05	e	0.0E+00	NA	1.68E+01	1.12E+00	8.39E-01	e
2-Ethoxyethanol	110-80-5	0.0E+00	NA	3.04E-03	2.03E-04	1.52E-04	e	9.03E+00	e	8.88E+00	5.92E-01	4.44E-01	e
2-Heptanone	110-43-0	0.0E+00	NA	4.03E-03	2.69E-04	2.02E-04	e	0.0E+00	NA	4.96E+00	3.30E-01	2.48E-01	e
2-Hexanone	591-78-6	0.0E+00	NA	4.74E-03	3.16E-04	2.37E-04	e	0.0E+00	NA	2.16E+00	1.44E-01	1.08E-01	e
2-Methoxyethanol	109-86-4	0.0E+00	NA	3.23E-04	2.15E-05	1.61E-05	e	9.03E+00	e	1.97E+01	1.31E+00	9.83E-01	e
2-Methyl-2-propanol	75-65-0	0.0E+00	NA	3.74E-03	2.49E-04	1.87E-04	e	1.26E+00	e	6.13E+00	4.09E-01	3.06E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
Aromatic Halogenated Hydrocarbons											
2,3,4,6-Tetrachlorophenol	58-90-2	7.27E-01	4.85E-02	3.64E-02	e	4.81E+01	2.14E-01	1.20E-01	f	6.07E-02	aa
4-Chloro-3-methylphenol	59-50-7	4.98E-01	3.32E-02	2.49E-02	e	2.30E+00	1.02E-02	5.76E-03	f	2.90E-02	ab
Aromatic Nonhalogenated Hydrocarbons											
2-Nitrotoluene	88-72-2	4.35E-01	2.90E-02	2.18E-02	e	1.97E+02	8.74E-01	4.92E-01	f	9.40E-03	aa
4-Nitrobiphenyl	92-93-3	1.54E-01	1.03E-02	7.69E-03	e	4.89E+00	2.17E-02	1.22E-02	f	3.80E-02	ab
Benzaldehyde	100-52-7	5.42E+00	3.61E-01	2.71E-01	e	4.51E+03	2.01E+01	1.13E+01	f	3.94E-03	aa
Benzene	71-43-2	2.49E+00	1.66E-01	1.24E-01	e	3.18E+05	1.41E+03	7.95E+02	f	1.50E-02	ab
Benzyl alcohol	100-51-6	7.52E+00	5.01E-01	3.76E-01	e	7.84E+01	3.48E-01	1.96E-01	f	2.15E-03	aa
Ethyl benzene	100-41-4	8.77E-01	5.84E-02	4.38E-02	e	8.90E+04	3.95E+02	2.22E+02	f	4.90E-02	ab
m-Xylene	108-38-3	9.10E-01	6.07E-02	4.55E-02	e	7.28E+04	3.24E+02	1.82E+02	f	5.30E-02	ab
o-Xylene	95-47-6	7.50E-01	5.00E-02	3.75E-02	e	5.92E+04	2.63E+02	1.48E+02	f	5.04E-02	aa
p-Xylene	106-42-3	5.89E-01	3.93E-02	2.95E-02	e	4.54E+08	2.02E+06	1.14E+06	f	5.37E-02	aa
Styrene	100-42-5	2.07E-01	1.38E-02	1.04E-02	e	8.66E+03	3.85E+01	2.17E+01	f	3.70E-02	ab
Toluene	108-88-3	1.24E+00	8.25E-02	6.19E-02	e	1.31E+05	5.81E+02	3.27E+02	f	3.10E-02	ab
Non-aromatic Nonhalogenated Hydrocarbons											
1,2-Epoxybutane	106-88-7	9.68E+00	6.45E-01	4.84E-01	e	1.65E+05	7.32E+02	4.12E+02	f	2.36E-03	aa
1,3-Butadiene	106-99-0	3.25E+00	2.17E-01	1.62E-01	e	6.88E+06	3.06E+04	1.72E+04	f	1.60E-02	ab
1,4-Dioxane	123-91-1	1.18E+01	7.88E-01	5.91E-01	e	1.58E+04	7.00E+01	3.94E+01	f	3.30E-04	ab
1-Methylpropyl alcohol	78-92-2	9.80E+00	6.53E-01	4.90E-01	e	7.98E+03	3.55E+01	2.00E+01	f	1.56E-03	aa
1-Nitropropane	108-03-2	8.69E+00	5.79E-01	4.34E-01	e	3.76E+04	1.67E+02	9.40E+01	f	1.92E-03	aa
2,2,4-Trimethylpentane	540-84-1	1.65E-02	1.10E-03	8.24E-04	e	6.42E+05	2.85E+03	1.60E+03	f	8.39E-01	aa
2-Butanone	78-93-3	1.08E+01	7.23E-01	5.42E-01	e	6.39E+04	2.84E+02	1.60E+02	f	9.60E-04	ab
2-Butenaldehyde (2-Butenal)	4170-30-3	1.00E+01	6.68E-01	5.01E-01	e	8.72E+03	3.87E+01	2.18E+01	f	1.50E-03	aa
2-Ethoxyethanol	110-80-5	5.30E+00	3.53E-01	2.65E-01	e	7.02E+06	3.12E+04	1.76E+04	f	3.00E-04	ab
2-Heptanone	110-43-0	2.96E+00	1.97E-01	1.48E-01	e	7.22E+03	3.21E+01	1.81E+01	f	7.71E-03	aa
2-Hexanone	591-78-6	1.29E+00	8.58E-02	6.44E-02	e	1.94E+03	8.61E+00	4.84E+00	f	3.66E-03	aa
2-Methoxyethanol	109-86-4	1.17E+01	7.82E-01	5.87E-01	e	1.30E+03	5.79E+00	3.26E+00	f	1.80E-04	ab
2-Methyl-2-propanol	75-65-0	3.66E+00	2.44E-01	1.83E-01	e	1.07E+03	4.75E+00	2.67E+00	f	1.05E-03	aa

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW (g/mol)	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source			H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
2-Methyl-2-propenenitrile	126-98-7	0 or 1	b	67.09	NA	2.39E-04	c	2.39E-04	1.15E-01	c	1.33E-05	c
2-Methylaziridine	75-55-8	0 or 1	b	57.1	NA	3.45E-04	k	8.40E-06	1.28E-01	e	1.48E-05	e
2-Methylpropyl alcohol	78-83-1	0 or 1	b	74.12	NA	1.21E+00	i	1.20E-05	8.60E-02	j	9.30E-06	j
2-Pentanone	107-87-9	0 or 1	b	86.133	NA	6.52E+00	i	6.46E-05	9.74E-02	e	1.13E-05	e
2-Propanone (Acetone)	67-64-1	0 or 1	b	58.08	NA	2.88E-05	c	2.88E-05	1.87E-01	c	1.15E-05	c
2-Propene-1-ol	107-18-6	0 or 1	b	58.08	NA	5.06E-01	i	5.01E-06	1.14E-01	j	1.14E-05	j
2-Propyl alcohol	67-63-0	0 or 1	b	60.096	NA	8.20E-01	i	8.12E-06	1.24E-01	e	1.43E-05	e
3-Heptanone	106-35-4	0 or 1	b	114.19	NA	3.72E-03	k	9.06E-05	8.07E-02	e	9.35E-06	e
3-Methyl-1-butanol	123-51-3	0 or 1	b	88.15	NA	5.77E-04	k	1.41E-05	9.59E-02	e	1.11E-05	e
3-Methyl-2-butanone	563-80-4	0 or 1	b	86.133	NA	3.98E-03	k	9.71E-05	9.74E-02	e	1.13E-05	e
3-Pentanone	96-22-0	0 or 1	b	86.133	NA	8.13E+00	i	8.05E-05	9.74E-02	e	1.13E-05	e
4-Heptanone	123-19-3	0 or 1	b	114.19	NA	2.25E-03	k	5.48E-05	8.07E-02	e	9.35E-06	e
4-Methyl-2-pentanone	108-10-1	0 or 1	b	100.16	NA	1.25E-04	c	1.25E-04	8.59E-02	c	8.36E-06	c
4-Methyl-3-penten-2-one	141-79-7	0 or 1	b	98.14	NA	1.50E-03	k	3.66E-05	8.93E-02	e	1.03E-05	e
5-Methyl-2-hexanone	110-12-3	0 or 1	b	114.19	NA	6.55E-03	k	1.60E-04	8.07E-02	e	9.35E-06	e
Acetaldehyde	75-07-0	0 or 1	b	44.05	NA	7.89E-05	l	7.89E-05	2.72E-01	c	1.33E-05	c
Acetamide	60-35-5	0 or 1	b	59.07	NA	3.53E-04	i	3.50E-09	1.25E-01	e	1.45E-05	e
Acetic acid	64-19-7	0 or 1	b	60.052	NA	3.05E-02	i	3.02E-07	1.24E-01	e	1.43E-05	e
Acetic acid ethyl ester	141-78-6	0 or 1	b	88.1	NA	1.36E+01	i	1.35E-04	7.32E-02	j	9.66E-06	j
Acetic acid n-butyl ester	123-86-4	0 or 1	b	116.16	NA	3.34E+01	i	3.31E-04	7.98E-02	e	9.24E-06	e
Acetonitrile	75-05-8	0 or 1	b	41.05	NA	6.57E-05	h	6.57E-05	3.14E-01	c	1.40E-05	c
Acrolein	107-02-8	0 or 1	b	56.06	NA	9.34E-05	c	9.34E-05	1.92E-01	c	1.22E-05	c
Acrylonitrile	107-13-1	0 or 1	b	53.06	NA	9.90E-05	c	9.90E-05	2.11E-01	c	1.23E-05	c
Bis(isopropyl)ether	108-20-3	0 or 1	b	102.18	NA	9.33E-02	k	2.28E-03	8.69E-02	e	1.01E-05	e
Butane	106-97-8	0 or 1	b	58.123	NA	9.59E+01	n	9.50E-01	1.27E-01	e	1.47E-05	e
Carbon disulfide	75-15-0	0 or 1	b	76.14	NA	1.27E-02	c	1.27E-02	1.04E-01	c	1.29E-05	c
Cyanogen	460-19-5	0 or 1	b	52.04	NA	1.41E-02	m	3.44E-04	2.04E-01	j	1.37E-05	j
Cyclohexane	110-82-7	0 or 1	b	84.161	NA	1.97E+04	i	1.95E-01	9.89E-02	e	1.15E-05	e
Cyclohexanone	108-94-1	0 or 1	b	98.2	NA	1.22E+00	i	1.20E-05	7.84E-02	j	8.62E-06	j

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
2-Methyl-2-propenenitrile	126-98-7	3.74E+00	c	3.74E+00	3.47E+00	c	3.47E+00	1.49E-01	c	3.74E-02	c
2-Methylaziridine	75-55-8	NA	e	4.79E-01	-6.03E-01	l	2.49E-01	1.92E-02	e	4.79E-03	e
2-Methylpropyl alcohol	78-83-1	NA	e	5.54E+00	7.60E-01	i	5.75E+00	2.22E-01	e	5.54E-02	e
2-Pentanone	107-87-9	1.87E+00	i	7.40E+01	9.10E-01	i	8.13E+00	2.96E+00	e	7.40E-01	e
2-Propanone (Acetone)	67-64-1	9.51E-01	c	9.51E-01	6.00E-01	c	6.00E-01	3.80E-02	c	9.51E-03	c
2-Propene-1-ol	107-18-6	NA	e	1.92E+00	1.70E-01	i	1.48E+00	7.69E-02	e	1.92E-02	e
2-Propyl alcohol	67-63-0	NA	e	1.55E+00	5.00E-02	i	1.12E+00	6.20E-02	e	1.55E-02	e
3-Heptanone	106-35-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-1-butanol	123-51-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-2-butanone	563-80-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Pentanone	96-22-0	1.08E+00	i	1.20E+01	9.90E-01	i	9.77E+00	4.81E-01	e	1.20E-01	e
4-Heptanone	123-19-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	1.20E+01	c	1.20E+01	1.55E+01	c	1.55E+01	4.80E-01	c	1.20E-01	c
4-Methyl-3-penten-2-one	141-79-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2-hexanone	110-12-3	3.90E+01	p	3.90E+01	1.72E+00	p	5.25E+01	1.56E+00	e	3.90E-01	e
Acetaldehyde	75-07-0	9.53E-01	c	9.53E-01	6.02E-01	c	6.02E-01	3.81E-02	c	9.53E-03	c
Acetamide	60-35-5	-1.55E+00	i	2.82E-02	-1.26E+00	i	5.50E-02	1.13E-03	e	2.82E-04	e
Acetic acid	64-19-7	0.00E+00	i	1.00E+00	-1.70E-01	i	6.76E-01	4.00E-02	e	1.00E-02	e
Acetic acid ethyl ester	141-78-6	3.61E-01	i	2.30E+00	7.30E-01	i	5.37E+00	9.18E-02	e	2.30E-02	e
Acetic acid n-butyl ester	123-86-4	NA	e	3.17E+01	1.73E+00	i	5.37E+01	1.27E+00	e	3.17E-01	e
Acetonitrile	75-05-8	7.69E-01	c	7.69E-01	4.57E-01	c	4.57E-01	3.07E-02	c	7.69E-03	c
Acrolein	107-02-8	1.39E+00	c	1.39E+00	9.80E-01	c	9.80E-01	5.57E-02	c	1.39E-02	c
Acrylonitrile	107-13-1	2.22E+00	c	2.22E+00	1.78E+00	c	1.78E+00	8.88E-02	c	2.22E-02	c
Bis(isopropyl)ether	108-20-3	1.68E+02	p	1.68E+02	1.56E+00	p	3.63E+01	6.72E+00	e	1.68E+00	e
Butane	106-97-8	NA	e	2.54E+02	2.89E+00	q	7.76E+02	1.02E+01	e	2.54E+00	e
Carbon disulfide	75-15-0	5.14E+01	c	5.14E+01	1.00E+02	c	1.00E+02	2.06E+00	c	5.14E-01	c
Cyanogen	460-19-5	8.30E+00	m	8.30E+00	7.00E-02	m	1.17E+00	3.32E-01	e	8.30E-02	e
Cyclohexane	110-82-7	2.68E+00	i	4.79E+02	3.44E+00	i	2.75E+03	1.91E+01	e	4.79E+00	e
Cyclohexanone	108-94-1	NA	e	6.06E+00	8.10E-01	i	6.46E+00	2.43E-01	e	6.06E-02	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
2-Methyl-2-propenenitrile	126-98-7	2.80E-01	c	1.89E+01	c	1.89E+01	c	1.89E+01
2-Methylaziridine	75-55-8	3.60E-02	e	8.64E+01	e	8.64E+01	e	8.64E+01
2-Methylpropyl alcohol	78-83-1	4.16E-01	e	1.41E+01	e	1.41E+01	e	1.41E+01
2-Pentanone	107-87-9	5.55E+00	e	1.15E+01	e	1.15E+01	e	1.15E+01
2-Propanone (Acetone)	67-64-1	7.13E-02	c	5.20E+01	c	5.20E+01	c	5.20E+01
2-Propene-1-ol	107-18-6	1.44E-01	e	3.09E+01	e	3.09E+01	e	3.09E+01
2-Propyl alcohol	67-63-0	1.16E-01	e	3.62E+01	e	3.62E+01	e	3.62E+01
3-Heptanone	106-35-4	NA	NA	NA	NA	NA	NA	NA
3-Methyl-1-butanol	123-51-3	NA	NA	NA	NA	NA	NA	NA
3-Methyl-2-butanone	563-80-4	NA	NA	NA	NA	NA	NA	NA
3-Pentanone	96-22-0	9.02E-01	e	1.04E+01	e	1.04E+01	e	1.04E+01
4-Heptanone	123-19-3	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	9.00E-01	c	7.95E+00	c	7.95E+00	c	7.95E+00
4-Methyl-3-penten-2-one	141-79-7	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2-hexanone	110-12-3	2.93E+00	e	3.93E+00	e	3.93E+00	e	3.93E+00
Acetaldehyde	75-07-0	7.15E-02	c	5.19E+01	c	5.19E+01	c	5.19E+01
Acetamide	60-35-5	2.11E-03	e	2.07E+02	e	2.07E+02	e	2.07E+02
Acetic acid	64-19-7	7.50E-02	e	4.86E+01	e	4.86E+01	e	4.86E+01
Acetic acid ethyl ester	141-78-6	1.72E-01	e	1.47E+01	e	1.47E+01	e	1.47E+01
Acetic acid n-butyl ester	123-86-4	2.37E+00	e	3.87E+00	e	3.87E+00	e	3.87E+00
Acetonitrile	75-05-8	5.76E-02	c	6.09E+01	c	6.09E+01	c	6.09E+01
Acrolein	107-02-8	1.05E-01	c	3.92E+01	c	3.92E+01	c	3.92E+01
Acrylonitrile	107-13-1	1.66E-01	c	2.77E+01	c	2.77E+01	c	2.77E+01
Bis(isopropyl)ether	108-20-3	1.26E+01	e	4.86E+00	e	4.86E+00	e	4.86E+00
Butane	106-97-8	1.91E+01	e	8.27E-01	e	8.27E-01	e	8.27E-01
Carbon disulfide	75-15-0	3.86E+00	c	2.70E+00	c	2.70E+00	c	2.70E+00
Cyanogen	460-19-5	6.23E-01	e	3.53E+01	e	3.53E+01	e	3.53E+01
Cyclohexane	110-82-7	3.59E+01	e	3.98E-01	e	3.98E-01	e	3.98E-01
Cyclohexanone	108-94-1	4.55E-01	e	1.32E+01	e	1.32E+01	e	1.32E+01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
2-Methyl-2-propenenitrile	126-98-7	1.85E+02	c	8.81E-04	c	8.81E-04	c	6.91E+00	c
2-Methylaziridine	75-55-8	1.33E+03	e	1.52E-03	e	1.52E-03	e	6.39E+00	e
2-Methylpropyl alcohol	78-83-1	1.30E+02	e	3.01E-02	e	3.01E-02	e	7.20E+00	e
2-Pentanone	107-87-9	1.01E+01	e	8.09E-03	e	8.09E-03	e	7.47E+00	e
2-Propanone (Acetone)	67-64-1	6.80E+02	c	1.13E-03	c	1.13E-03	c	6.46E+00	c
2-Propene-1-ol	107-18-6	3.45E+02	e	1.70E-02	e	1.70E-02	e	6.62E+00	e
2-Propyl alcohol	67-63-0	4.24E+02	e	7.80E-03	e	7.80E-03	e	6.56E+00	e
3-Heptanone	106-35-4	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-1-butanol	123-51-3	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-2-butanone	563-80-4	NA	NA	NA	NA	NA	NA	NA	NA
3-Pentanone	96-22-0	6.36E+01	e	7.89E-03	e	7.89E-03	e	7.65E+00	e
4-Heptanone	123-19-3	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	6.85E+01	c	8.26E-03	c	8.26E-03	c	8.22E+00	c
4-Methyl-3-penten-2-one	141-79-7	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2-hexanone	110-12-3	2.87E+01	e	2.38E-02	e	2.38E-02	e	1.12E+01	e
Acetaldehyde	75-07-0	6.78E+02	c	4.14E-04	e	4.14E-04	e	6.46E+00	c
Acetamide	60-35-5	2.25E+04	e	7.30E-01	e	7.30E-01	e	6.33E+00	e
Acetic acid	64-19-7	6.48E+02	e	1.22E-01	e	1.22E-01	e	6.48E+00	e
Acetic acid ethyl ester	141-78-6	3.12E+02	e	2.49E-03	e	2.49E-03	e	7.16E+00	e
Acetic acid n-butyl ester	123-86-4	3.57E+01	e	1.18E-02	e	1.18E-02	e	1.13E+01	e
Acetonitrile	75-05-8	8.37E+02	c	3.70E-04	h	3.70E-04	h	6.43E+00	c
Acrolein	107-02-8	4.69E+02	c	5.86E-04	c	5.86E-04	c	6.54E+00	c
Acrylonitrile	107-13-1	3.00E+02	c	1.04E-03	c	1.04E-03	c	6.67E+00	c
Bis(isopropyl)ether	108-20-3	5.95E+00	e	1.13E-03	e	1.13E-03	e	1.00E+01	e
Butane	106-97-8	1.78E+01	e	7.06E-05	e	7.06E-05	e	4.53E+01	e
Carbon disulfide	75-15-0	2.79E+01	c	5.92E-04	c	5.92E-04	c	1.44E+01	c
Cyanogen	460-19-5	7.92E+01	e	1.93E-04	e	1.93E-04	e	6.57E+00	e
Cyclohexane	110-82-7	2.29E+01	e	1.33E-03	e	1.33E-03	e	1.10E+02	e
Cyclohexanone	108-94-1	1.20E+02	e	3.39E-02	e	3.39E-02	e	7.28E+00	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
2-Methyl-2-propenenitrile	126-98-7	8.72E-08	c	6.88E-08	c	2.76E-05	c	2.76E-08	c	1.06E-07	c
2-Methylaziridine	75-55-8	6.27E-09	e	4.95E-09	e	1.98E-06	e	1.98E-09	e	7.59E-09	e
2-Methylpropyl alcohol	78-83-1	1.45E-07	e	1.14E-07	e	4.57E-05	e	4.57E-08	e	1.75E-07	e
2-Pentanone	107-87-9	2.04E-07	e	1.61E-07	e	6.46E-05	e	6.46E-08	e	2.47E-07	e
2-Propanone (Acetone)	67-64-1	1.15E-08	c	1.19E-08	c	4.77E-06	c	4.77E-09	c	1.82E-08	c
2-Propene-1-ol	107-18-6	3.72E-08	e	2.93E-08	e	1.17E-05	e	1.17E-08	e	4.50E-08	e
2-Propyl alcohol	67-63-0	2.82E-08	e	2.23E-08	e	8.91E-06	e	8.91E-09	e	3.41E-08	e
3-Heptanone	106-35-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-1-butanol	123-51-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-2-butanone	563-80-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Pentanone	96-22-0	2.45E-07	e	1.94E-07	e	7.76E-05	e	7.76E-08	e	2.97E-07	e
4-Heptanone	123-19-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	3.89E-07	c	3.07E-07	c	1.23E-04	c	1.23E-07	c	4.71E-07	c
4-Methyl-3-penten-2-one	141-79-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2-hexanone	110-12-3	1.32E-06	e	1.04E-06	e	4.17E-04	e	4.17E-07	e	1.60E-06	e
Acetaldehyde	75-07-0	1.51E-08	c	1.19E-08	c	4.78E-06	c	4.78E+09	c	1.83E-08	c
Acetamide	60-35-5	1.38E-09	e	1.09E-09	e	4.37E-07	e	4.37E-10	e	1.67E-09	e
Acetic acid	64-19-7	1.70E-08	e	1.34E-08	e	5.37E-06	e	5.37E-09	e	2.06E-08	e
Acetic acid ethyl ester	141-78-6	1.35E-07	e	1.06E-07	e	4.27E-05	e	4.27E-08	e	1.63E-07	e
Acetic acid n-butyl ester	123-86-4	1.35E-06	e	1.06E-06	e	4.27E-04	e	4.27E-07	e	1.63E-06	e
Acetonitrile	75-05-8	1.15E-08	c	9.06E-09	c	3.63E-06	c	3.63E-09	c	1.39E-08	c
Acrolein	107-02-8	2.46E-08	c	1.94E-08	c	7.78E-06	c	7.78E-09	c	2.98E-08	c
Acrylonitrile	107-13-1	4.47E-08	c	3.53E-08	c	1.41E-05	c	1.41E-08	c	5.41E-08	c
Bis(isopropyl)ether	108-20-3	9.12E-07	e	7.20E-07	e	2.88E-04	e	2.88E-07	e	1.10E-06	e
Butane	106-97-8	1.95E-05	e	1.54E-05	e	6.17E-03	e	6.17E-06	e	2.36E-05	e
Carbon disulfide	75-15-0	2.51E-06	c	1.98E-06	c	7.94E-04	c	7.94E-07	c	3.04E-06	c
Cyanogen	460-19-5	2.95E-08	e	2.33E-08	e	9.33E-06	e	9.33E-09	e	3.57E-08	e
Cyclohexane	110-82-7	6.92E-05	e	5.46E-05	e	2.19E-02	e	2.19E-05	e	8.37E-05	e
Cyclohexanone	108-94-1	1.62E-07	e	1.28E-07	e	5.13E-05	e	5.13E-08	e	1.96E-07	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
2-Methyl-2-propenenitrile	126-98-7	NA	NA	1.52E+00	c	NA	NA	NA	NA
2-Methylaziridine	75-55-8	NA	NA	2.05E-01	e	NA	NA	3.63E+01	d
2-Methylpropyl alcohol	78-83-1	NA	NA	2.23E+00	e	NA	NA	7.21E+00	d
2-Pentanone	107-87-9	NA	NA	2.89E+00	e	NA	NA	NA	NA
2-Propanone (Acetone)	67-64-1	NA	NA	1.03E-01	s	NA	NA	NA	NA
2-Propene-1-ol	107-18-6	NA	NA	7.93E-01	e	NA	NA	7.00E+00	d
2-Propyl alcohol	67-63-0	NA	NA	6.43E-01	e	NA	NA	7.00E+00	d
3-Heptanone	106-35-4	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-1-butanol	123-51-3	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-2-butanone	563-80-4	NA	NA	NA	NA	NA	NA	NA	NA
3-Pentanone	96-22-0	NA	NA	3.33E+00	e	NA	NA	NA	NA
4-Heptanone	123-19-3	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	NA	NA	4.73E+00	c	NA	NA	NA	NA
4-Methyl-3-penten-2-one	141-79-7	NA	NA	NA	NA	NA	NA	NA	NA
5-Methyl-2-hexanone	110-12-3	NA	NA	1.19E+01	e	NA	NA	NA	NA
Acetaldehyde	75-07-0	NA	NA	4.00E-01	c	NA	NA	NA	NA
Acetamide	60-35-5	NA	NA	6.49E-02	e	NA	NA	7.00E+00	d
Acetic acid	64-19-7	NA	NA	4.37E-01	e	NA	NA	NA	NA
Acetic acid ethyl ester	141-78-6	NA	NA	2.11E+00	e	NA	NA	7.00E+00	d
Acetic acid n-butyl ester	123-86-4	NA	NA	1.22E+01	e	NA	NA	NA	NA
Acetonitrile	75-05-8	NA	NA	3.25E-01	c	NA	NA	NA	NA
Acrolein	107-02-8	NA	NA	5.80E-01	c	NA	NA	NA	NA
Acrylonitrile	107-13-1	NA	NA	4.80E+01	c	NA	NA	NA	NA
Bis(isopropyl)ether	108-20-3	NA	NA	9.03E+00	e	NA	NA	NA	NA
Butane	106-97-8	NA	NA	9.26E+01	e	NA	NA	NA	NA
Carbon disulfide	75-15-0	NA	NA	1.95E+01	c	NA	NA	NA	NA
Cyanogen	460-19-5	NA	NA	6.66E-01	e	NA	NA	NA	NA
Cyclohexane	110-82-7	NA	NA	2.42E+02	e	NA	NA	1.80E+02	d
Cyclohexanone	108-94-1	NA	NA	2.43E+00	e	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
2-Methyl-2-propenenitrile	126-98-7	0.0E+00	NA	1.03E-03	6.89E-05	5.17E-05	e	0.0E+00	NA	1.68E+01	1.12E+00	8.42E-01	e
2-Methylaziridine	75-55-8	0.0E+00	NA	1.60E-04	1.06E-05	7.98E-06	e	6.98E+00	e	2.03E+01	1.35E+00	1.01E+00	e
2-Methylpropyl alcohol	78-83-1	0.0E+00	NA	1.40E-03	9.33E-05	7.00E-05	e	3.51E+01	e	1.54E+01	1.03E+00	7.69E-01	e
2-Pentanone	107-87-9	0.0E+00	NA	4.37E-03	2.92E-04	2.19E-04	e	0.0E+00	NA	3.60E+00	2.40E-01	1.80E-01	e
2-Propanone (Acetone)	67-64-1	0.0E+00	NA	3.08E-04	2.05E-05	1.54E-05	e	3.61E+01	c	1.97E+01	1.31E+00	9.86E-01	e
2-Propene-1-ol	107-18-6	0.0E+00	NA	5.87E-04	3.91E-05	2.93E-05	e	3.61E+01	e	1.86E+01	1.24E+00	9.30E-01	e
2-Propyl alcohol	67-63-0	0.0E+00	NA	4.83E-04	3.22E-05	2.42E-05	e	3.61E+01	e	1.90E+01	1.27E+00	9.51E-01	e
3-Heptanone	106-35-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
3-Methyl-1-butanol	123-51-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
3-Methyl-2-butanone	563-80-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
3-Pentanone	96-22-0	0.0E+00	NA	2.32E-03	1.55E-04	1.16E-04	e	0.0E+00	NA	1.17E+01	7.83E-01	5.87E-01	e
4-Heptanone	123-19-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
4-Methyl-2-pentanone	108-10-1	0.0E+00	NA	2.32E-03	1.54E-04	1.16E-04	e	3.61E+01	c	1.18E+01	7.84E-01	5.88E-01	e
4-Methyl-3-penten-2-one	141-79-7	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
5-Methyl-2-hexanone	110-12-3	0.0E+00	NA	3.79E-03	2.53E-04	1.89E-04	e	0.0E+00	NA	5.92E+00	3.95E-01	2.96E-01	e
Acetaldehyde	75-07-0	0.0E+00	NA	3.08E-04	2.05E-05	1.54E-05	e	0.0E+00	NA	1.97E+01	1.31E+00	9.86E-01	e
Acetamide	60-35-5	0.0E+00	NA	9.66E-06	6.44E-07	4.83E-07	e	3.61E+01	e	2.09E+01	1.39E+00	1.04E+00	e
Acetic acid	64-19-7	0.0E+00	NA	3.23E-04	2.15E-05	1.61E-05	e	0.0E+00	NA	1.97E+01	1.31E+00	9.83E-01	e
Acetic acid ethyl ester	141-78-6	0.0E+00	NA	6.86E-04	4.58E-05	3.43E-05	e	3.61E+01	e	1.82E+01	1.21E+00	9.11E-01	e
Acetic acid n-butyl ester	123-86-4	0.0E+00	NA	3.56E-03	2.37E-04	1.78E-04	e	0.0E+00	NA	6.85E+00	4.56E-01	3.42E-01	e
Acetonitrile	75-05-8	0.0E+00	NA	2.52E-04	1.68E-05	1.26E-05	e	9.03E+00	c	1.99E+01	1.33E+00	9.97E-01	e
Acrolein	107-02-8	0.0E+00	NA	4.38E-04	2.92E-05	2.19E-05	e	9.03E+00	c	1.92E+01	1.28E+00	9.60E-01	e
Acrylonitrile	107-13-1	0.0E+00	NA	6.66E-04	4.44E-05	3.33E-05	e	1.10E+01	c	1.83E+01	1.22E+00	9.15E-01	e
Bis(isopropyl)ether	108-20-3	0.0E+00	NA	4.84E-03	3.23E-04	2.42E-04	e	0.0E+00	NA	1.76E+00	1.17E-01	8.78E-02	e
Butane	106-97-8	0.0E+00	NA	4.98E-03	3.32E-04	2.49E-04	e	0.0E+00	NA	1.19E+00	7.96E-02	5.97E-02	e
Carbon disulfide	75-15-0	0.0E+00	NA	4.07E-03	2.71E-04	2.03E-04	e	0.0E+00	NA	4.82E+00	3.21E-01	2.41E-01	e
Cyanogen	460-19-5	0.0E+00	NA	1.85E-03	1.23E-04	9.26E-05	e	0.0E+00	NA	1.36E+01	9.06E-01	6.80E-01	e
Cyclohexane	110-82-7	0.0E+00	NA	5.12E-03	3.41E-04	2.56E-04	e	1.41E+00	e	6.52E-01	4.35E-02	3.26E-02	e
Cyclohexanone	108-94-1	0.0E+00	NA	1.49E-03	9.96E-05	7.47E-05	e	0.0E+00	NA	1.50E+01	1.00E+00	7.51E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
2-Methyl-2-propenenitrile	126-98-7	1.01E+01	6.70E-01	5.03E-01	e	2.26E+05	1.00E+03	5.64E+02	f	1.54E-03	aa
2-Methylaziridine	75-55-8	1.21E+01	8.08E-01	6.06E-01	e	6.89E+04	3.06E+02	1.72E+02	f	3.00E-04	ab
2-Methylpropyl alcohol	78-83-1	9.19E+00	6.13E-01	4.59E-01	e	5.72E+03	2.54E+01	1.43E+01	f	1.97E-03	aa
2-Pentanone	107-87-9	2.15E+00	1.43E-01	1.08E-01	e	2.61E+03	1.16E+01	6.52E+00	f	2.12E-03	aa
2-Propanone (Acetone)	67-64-1	1.18E+01	7.85E-01	5.89E-01	e	1.74E+05	7.72E+02	4.34E+02	f	5.32E-04	aa
2-Propene-1-ol	107-18-6	1.11E+01	7.41E-01	5.56E-01	e	9.12E+03	4.05E+01	2.28E+01	f	9.74E-04	aa
2-Propyl alcohol	67-63-0	1.14E+01	7.57E-01	5.68E-01	e	1.99E+04	8.85E+01	4.98E+01	f	7.89E-04	aa
3-Heptanone	106-35-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
3-Methyl-1-butanol	123-51-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
3-Methyl-2-butanone	563-80-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
3-Pentanone	96-22-0	7.02E+00	4.68E-01	3.51E-01	e	2.00E+04	8.90E+01	5.01E+01	f	2.40E-03	aa
4-Heptanone	123-19-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
4-Methyl-2-pentanone	108-10-1	7.02E+00	4.68E-01	3.51E-01	e	2.75E+04	1.22E+02	6.87E+01	f	2.70E-03	ab
4-Methyl-3-penten-2-one	141-79-7	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
5-Methyl-2-hexanone	110-12-3	3.54E+00	2.36E-01	1.77E-01	e	1.01E+04	4.51E+01	2.54E+01	f	5.16E-03	aa
Acetaldehyde	75-07-0	1.18E+01	7.85E-01	5.89E-01	e	6.91E+05	3.07E+03	1.73E+03	f	6.30E-04	ab
Acetamide	60-35-5	1.25E+01	8.32E-01	6.24E-01	e	4.77E+02	2.12E+00	1.19E+00	f	1.10E-04	ab
Acetic acid	64-19-7	1.17E+01	7.82E-01	5.87E-01	e	1.15E+03	5.10E+00	2.87E+00	f	5.62E-04	aa
Acetic acid ethyl ester	141-78-6	1.09E+01	7.25E-01	5.44E-01	e	1.32E+05	5.86E+02	3.30E+02	f	1.57E-03	aa
Acetic acid n-butyl ester	123-86-4	4.09E+00	2.73E-01	2.04E-01	e	2.56E+04	1.14E+02	6.41E+01	f	5.11E-03	aa
Acetonitrile	75-05-8	1.19E+01	7.94E-01	5.95E-01	e	8.23E+05	3.66E+03	2.06E+03	f	5.52E-04	aa
Acrolein	107-02-8	1.15E+01	7.64E-01	5.73E-01	e	3.96E+05	1.76E+03	9.90E+02	f	6.50E-04	ab
Acrylonitrile	107-13-1	1.09E+01	7.28E-01	5.46E-01	e	2.89E+05	1.28E+03	7.22E+02	f	1.20E-03	ab
Bis(isopropyl)ether	108-20-3	1.05E+00	6.99E-02	5.24E-02	e	3.61E+04	1.61E+02	9.03E+01	f	4.71E-03	aa
Butane	106-97-8	7.13E-01	4.76E-02	3.57E-02	e	1.45E+07	6.45E+04	3.63E+04	f	6.47E-02	aa
Carbon disulfide	75-15-0	2.88E+00	1.92E-01	1.44E-01	e	7.89E+05	3.50E+03	1.97E+03	f	1.70E-02	ab
Cyanogen	460-19-5	8.12E+00	5.41E-01	4.06E-01	e	2.59E+05	1.15E+03	6.47E+02	f	9.03E-04	aa
Cyclohexane	110-82-7	3.89E-01	2.60E-02	1.95E-02	e	1.24E+06	5.50E+03	3.09E+03	f	1.08E-01	aa
Cyclohexanone	108-94-1	8.97E+00	5.98E-01	4.48E-01	e	4.78E+03	2.12E+01	1.19E+01	f	1.56E-03	aa

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Cyclohexene	110-83-8	0 or 1	b	82.145	NA	4.02E+03	i	3.98E-02	1.01E-01	e	1.16E-05	e
Cyclopentane	287-92-3	0 or 1	b	70.134	NA	1.88E+04	i	1.86E-01	1.12E-01	e	1.29E-05	e
Ethyl alcohol	64-17-5	0 or 1	b	46.069	NA	6.29E-06	p	6.29E-06	1.48E-01	e	1.71E-05	e
Ethyl ether	60-29-7	0 or 1	b	74.12	NA	1.30E+02	i	1.29E-03	7.40E-02	j	9.30E-06	j
Ethyl methacrylate	97-63-2	0 or 1	b	114.14	NA	1.38E-04	c	1.38E-04	8.07E-02	c	9.35E-06	c
Formaldehyde	50-00-0	0 or 1	b	30.03	NA	2.78E-04	c	2.78E-04	5.00E-01	c	1.74E-05	c
Formamide	75-12-7	0 or 1	b	45.04	NA	5.69E-08	k	1.39E-09	1.50E-01	e	1.74E-05	e
Formic acid	64-18-6	0 or 1	b	46.03	NA	2.49E-06	c	2.49E-06	2.22E-01	c	1.71E-05	c
Formic acid, methyl ester	107-31-3	0 or 1	b	60.05	NA	9.13E-03	k	2.23E-04	1.24E-01	e	1.43E-05	e
Glycidylaldehyde	765-34-4	0 or 1	b	72.07	NA	3.21E-05	m	7.82E-07	1.10E-01	e	1.27E-05	e
Methyl acetate	79-20-9	0 or 1	b	74.08	NA	8.64E-05	c	8.64E-05	1.23E-01	c	1.10E-05	c
Methyl alcohol	67-56-1	0 or 1	b	32.04	NA	1.44E-04	c	1.44E-04	4.58E-01	c	1.64E-05	c
Methyl isocyanate	624-83-9	0 or 1	b	57.052	NA	3.79E-02	k	9.24E-04	1.28E-01	e	1.48E-05	e
Methyl methacrylate	80-62-6	0 or 1	b	100.13	NA	3.21E+01	i	3.18E-04	7.70E-02	j	8.60E-06	j
Methyl tert-butyl ether	1634-04-4	0 or 1	b	88.15	NA	5.95E+01	i	5.89E-04	1.02E-01	j	1.05E-05	j
Methylacetylene	74-99-7	0 or 1	b	40.07	NA	4.51E-01	k	1.10E-02	1.62E-01	e	1.88E-05	e
Methylcyclohexane	108-87-2	0 or 1	b	98.188	NA	4.41E+04	i	4.36E-01	8.93E-02	e	1.03E-05	e
N,N-Dimethylacetamide	127-19-5	0 or 1	b	87.12	NA	5.36E-07	k	1.31E-08	9.67E-02	e	1.12E-05	e
n-Butyl alcohol	71-36-3	0 or 1	b	74.1	NA	8.60E-01	i	8.51E-06	8.00E-02	j	9.30E-06	j
n-Heptane	142-82-5	0 or 1	b	100.2	NA	2.30E+05	i	2.28E+00	8.81E-02	e	1.02E-05	e
n-Hexane	110-54-3	0 or 1	b	86.177	NA	1.84E+05	i	1.82E+00	9.74E-02	e	1.13E-05	e
Nitromethane	75-52-5	0 or 1	b	61.04	NA	1.17E-03	k	2.85E-05	1.23E-01	e	1.42E-05	e
n-Nonane	111-84-2	0 or 1	b	128.26	NA	5.00E+05	i	4.95E+00	7.47E-02	e	8.65E-06	e
n-Octane	111-65-9	0 or 1	b	114.23	NA	3.27E+05	i	3.24E+00	8.07E-02	e	9.34E-06	e
n-Pentane	109-66-0	0 or 1	b	72.15	NA	1.27E+05	i	1.26E+00	1.10E-01	e	1.27E-05	e
n-Propionaldehyde	123-38-6	0 or 1	b	58.08	NA	7.49E+00	i	7.41E-05	1.27E-01	e	1.47E-05	e
n-Propyl alcohol	71-23-8	0 or 1	b	60.096	NA	3.03E-04	k	7.40E-06	1.24E-01	e	1.43E-05	e
n-Valeraldehyde	110-62-3	0 or 1	b	86.13	NA	6.02E-03	k	1.47E-04	9.74E-02	e	1.13E-05	e
Oxirane	75-21-8	0 or 1	b	44.05	NA	1.67E-04	c	1.67E-04	2.71E-01	c	1.44E-05	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Cyclohexene	110-83-8	NA	e	2.41E+02	2.86E+00	i	7.24E+02	9.64E+00	e	2.41E+00	e
Cyclopentane	287-92-3	NA	e	3.10E+02	3.00E+00	i	1.00E+03	1.24E+01	e	3.10E+00	e
Ethyl alcohol	64-17-5	NA	e	8.11E-01	-3.10E-01	p	4.90E-01	3.25E-02	e	8.11E-03	e
Ethyl ether	60-29-7	NA	e	7.00E+00	8.90E-01	i	7.76E+00	2.80E-01	e	7.00E-02	e
Ethyl methacrylate	97-63-2	2.46E+01	c	2.46E+01	3.89E+01	c	3.89E+01	9.80E-01	c	2.46E-01	c
Formaldehyde	50-00-0	2.62E+00	c	2.62E+00	2.20E+00	c	2.20E+00	1.05E-01	c	2.62E-02	c
Formamide	75-12-7	NA	e	9.40E-02	-1.51E+00	l	3.09E-02	3.76E-03	e	9.40E-04	e
Formic acid	64-18-6	5.39E-01	h	5.39E-01	2.90E-01	c	2.90E-01	2.16E-02	h	5.39E-03	h
Formic acid, methyl ester	107-31-3	NA	e	8.81E-01	2.64E-01	l	5.45E-01	3.52E-02	e	8.81E-03	e
Glycidylaldehyde	765-34-4	1.00E+00	m	1.00E+00	-1.20E-01	m	7.59E-01	4.00E-02	e	1.00E-02	e
Methyl acetate	79-20-9	3.25E+00	c	3.25E+00	2.90E+00	c	2.90E+00	1.30E-01	c	3.25E-02	c
Methyl alcohol	67-56-1	3.96E-01	c	3.96E-01	1.95E-01	c	1.95E-01	1.58E-02	c	3.96E-03	c
Methyl isocyanate	624-83-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl methacrylate	80-62-6	1.80E+00	i	6.31E+01	7.90E-01	i	6.17E+00	2.52E+00	e	6.31E-01	e
Methyl tert-butyl ether	1634-04-4	NA	e	7.66E+00	9.40E-01	i	8.71E+00	3.06E-01	e	7.66E-02	e
Methylacetylene	74-99-7	NA	e	7.66E+00	9.40E-01	l	8.71E+00	3.06E-01	e	7.66E-02	e
Methylcyclohexane	108-87-2	NA	e	2.23E+03	4.10E+00	i	1.26E+04	8.93E+01	e	2.23E+01	e
N,N-Dimethylacetamide	127-19-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butyl alcohol	71-36-3	NA	e	6.88E+00	8.80E-01	i	7.59E+00	2.75E-01	e	6.88E-02	e
n-Heptane	142-82-5	NA	e	6.11E+03	4.66E+00	i	4.57E+04	2.44E+02	e	6.11E+01	e
n-Hexane	110-54-3	NA	e	2.27E+03	4.11E+00	i	1.29E+04	9.10E+01	e	2.27E+01	e
Nitromethane	75-52-5	NA	e	7.55E-01	-3.50E-01	o	4.47E-01	3.02E-02	e	7.55E-03	e
n-Nonane	111-84-2	NA	e	3.61E+04	5.65E+00	i	4.47E+05	1.45E+03	e	3.61E+02	e
n-Octane	111-65-9	NA	e	1.87E+03	4.00E+00	i	1.00E+04	7.47E+01	e	1.87E+01	e
n-Pentane	109-66-0	NA	e	4.52E+02	3.21E+00	i	1.62E+03	1.81E+01	e	4.52E+00	e
n-Propionaldehyde	123-38-6	NA	e	4.09E+00	5.90E-01	i	3.89E+00	1.63E-01	e	4.09E-02	e
n-Propyl alcohol	71-23-8	NA	e	2.22E+00	2.50E-01	l	1.78E+00	8.87E-02	e	2.22E-02	e
n-Valeraldehyde	110-62-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane	75-21-8	8.26E-01	c	8.26E-01	5.01E-01	c	5.01E-01	3.30E-02	c	8.26E-03	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Cyclohexene	110-83-8	1.81E+01	e	8.61E-01	e	8.61E-01	e	8.61E-01
Cyclopentane	287-92-3	2.32E+01	e	7.14E-01	e	7.14E-01	e	7.14E-01
Ethyl alcohol	64-17-5	6.09E-02	e	5.85E+01	e	5.85E+01	e	5.85E+01
Ethyl ether	60-29-7	5.25E-01	e	1.18E+01	e	1.18E+01	e	1.18E+01
Ethyl methacrylate	97-63-2	1.85E+00	c	4.67E+00	c	4.67E+00	c	4.67E+00
Formaldehyde	50-00-0	1.96E-01	c	2.46E+01	c	2.46E+01	c	2.46E+01
Formamide	75-12-7	7.05E-03	e	2.89E+02	e	2.89E+02	e	2.89E+02
Formic acid	64-18-6	4.04E-02	h	7.92E+01	c	7.92E+01	c	7.92E+01
Formic acid, methyl ester	107-31-3	6.61E-02	e	5.50E+01	e	5.50E+01	e	5.50E+01
Glycidylaldehyde	765-34-4	7.50E-02	e	4.54E+01	e	4.54E+01	e	4.54E+01
Methyl acetate	79-20-9	2.44E-01	c	2.09E+01	c	2.09E+01	c	2.09E+01
Methyl alcohol	67-56-1	2.97E-02	c	9.96E+01	c	9.96E+01	c	9.96E+01
Methyl isocyanate	624-83-9	NA	NA	NA	NA	NA	NA	NA
Methyl methacrylate	80-62-6	4.73E+00	e	1.35E+01	e	1.35E+01	e	1.35E+01
Methyl tert-butyl ether	1634-04-4	5.74E-01	e	1.11E+01	e	1.11E+01	e	1.11E+01
Methylacetylene	74-99-7	5.74E-01	e	1.11E+01	e	1.11E+01	e	1.11E+01
Methylcyclohexane	108-87-2	1.68E+02	e	1.65E-01	e	1.65E-01	e	1.65E-01
N,N-Dimethylacetamide	127-19-5	NA	NA	NA	NA	NA	NA	NA
n-Butyl alcohol	71-36-3	5.16E-01	e	1.20E+01	e	1.20E+01	e	1.20E+01
n-Heptane	142-82-5	4.58E+02	e	7.84E-02	e	7.84E-02	e	7.84E-02
n-Hexane	110-54-3	1.71E+02	e	1.63E-01	e	1.63E-01	e	1.63E-01
Nitromethane	75-52-5	5.66E-02	e	6.17E+01	e	6.17E+01	e	6.17E+01
n-Nonane	111-84-2	2.71E+03	e	2.10E-02	e	2.10E-02	e	2.10E-02
n-Octane	111-65-9	1.40E+02	e	1.89E-01	e	1.89E-01	e	1.89E-01
n-Pentane	109-66-0	3.39E+01	e	5.40E-01	e	5.40E-01	e	5.40E-01
n-Propionaldehyde	123-38-6	3.06E-01	e	1.77E+01	e	1.77E+01	e	1.77E+01
n-Propyl alcohol	71-23-8	1.66E-01	e	2.78E+01	e	2.78E+01	e	2.78E+01
n-Valeraldehyde	110-62-3	NA	NA	NA	NA	NA	NA	NA
Oxirane	75-21-8	6.19E-02	c	5.77E+01	c	5.77E+01	c	5.77E+01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Cyclohexene	110-83-8	1.80E+01	e	1.57E-03	e	1.57E-03	e	4.33E+01	e
Cyclopentane	287-92-3	1.73E+01	e	4.72E-04	e	4.72E-04	e	5.37E+01	e
Ethyl alcohol	64-17-5	7.94E+02	e	4.17E-03	e	4.17E-03	e	6.44E+00	e
Ethyl ether	60-29-7	1.06E+02	e	3.86E-04	e	3.86E-04	e	7.43E+00	e
Ethyl methacrylate	97-63-2	4.14E+01	c	2.00E-02	c	2.00E-02	c	1.02E+01	c
Formaldehyde	50-00-0	2.57E+02	c	4.65E-04	c	4.65E-04	c	6.73E+00	c
Formamide	75-12-7	6.73E+03	e	9.96E-01	e	9.96E-01	e	6.32E+00	e
Formic acid	64-18-6	1.19E+03	h	6.02E-03	c	6.02E-03	c	6.40E+00	c
Formic acid, methyl ester	107-31-3	7.32E+02	e	1.32E-04	e	1.32E-04	e	6.45E+00	e
Glycidylaldehyde	765-34-4	6.50E+02	e	5.34E-02	e	5.34E-02	e	6.50E+00	e
Methyl acetate	79-20-9	2.10E+02	c	2.01E-03	c	2.01E-03	c	6.84E+00	c
Methyl alcohol	67-56-1	1.61E+03	c	6.82E-05	c	6.82E-05	c	6.37E+00	c
Methyl isocyanate	624-83-9	NA	NA	NA	NA	NA	NA	NA	NA
Methyl methacrylate	80-62-6	1.15E+01	e	1.22E-03	e	1.22E-03	e	7.25E+00	e
Methyl tert-butyl ether	1634-04-4	9.84E+01	e	9.55E-04	e	9.55E-04	e	7.54E+00	e
Methylacetylene	74-99-7	9.84E+01	e	5.11E-05	e	5.11E-05	e	7.54E+00	e
Methylcyclohexane	108-87-2	1.52E+01	e	2.99E-03	e	2.99E-03	e	3.40E+02	e
N,N-Dimethylacetamide	127-19-5	NA	NA	NA	NA	NA	NA	NA	NA
n-Butyl alcohol	71-36-3	1.08E+02	e	5.70E-02	e	5.70E-02	e	7.41E+00	e
n-Heptane	142-82-5	1.48E+01	e	2.26E-03	e	2.26E-03	e	9.06E+02	e
n-Hexane	110-54-3	1.52E+01	e	7.35E-04	e	7.35E-04	e	3.46E+02	e
Nitromethane	75-52-5	8.52E+02	e	8.32E-04	e	8.32E-04	e	6.43E+00	e
n-Nonane	111-84-2	1.44E+01	e	1.18E-02	e	1.18E-02	e	5.21E+03	e
n-Octane	111-65-9	1.53E+01	e	3.15E-04	e	3.15E-04	e	2.86E+02	e
n-Pentane	109-66-0	1.66E+01	e	1.17E-04	e	1.17E-04	e	7.51E+01	e
n-Propionaldehyde	123-38-6	1.71E+02	e	3.21E-03	e	3.21E-03	e	6.97E+00	e
n-Propyl alcohol	71-23-8	3.01E+02	e	1.40E-02	e	1.40E-02	e	6.67E+00	e
n-Valeraldehyde	110-62-3	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane	75-21-8	7.80E+02	c	1.60E-04	c	1.60E-04	c	6.44E+00	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Cyclohexene	110-83-8	1.82E-05	e	1.44E-05	e	5.75E-03	e	5.75E-06	e	2.20E-05	e
Cyclopentane	287-92-3	2.51E-05	e	1.98E-05	e	7.94E-03	e	7.94E-06	e	3.04E-05	e
Ethyl alcohol	64-17-5	1.23E-08	e	9.71E-09	e	3.89E-06	e	3.89E-09	e	1.49E-08	e
Ethyl ether	60-29-7	1.95E-07	e	1.54E-07	e	6.17E-05	e	6.17E-08	e	2.36E-07	e
Ethyl methacrylate	97-63-2	9.77E-07	c	7.71E-07	c	3.09E-04	c	3.09E-07	c	1.18E-06	c
Formaldehyde	50-00-0	5.53E-08	c	4.36E-08	c	1.75E-05	c	1.75E-08	c	6.69E-08	c
Formamide	75-12-7	7.76E-10	e	6.13E-10	e	2.45E-07	e	2.45E-10	e	9.40E-10	e
Formic acid	64-18-6	7.28E-09	c	5.75E-09	c	2.30E-06	c	2.30E-09	c	8.82E-09	c
Formic acid, methyl ester	107-31-3	1.37E-08	e	1.08E-08	e	4.33E-06	e	4.33E-09	e	1.66E-08	e
Glycidylaldehyde	765-34-4	1.91E-08	e	1.50E-08	e	6.03E-06	e	6.03E-09	e	2.31E-08	e
Methyl acetate	79-20-9	7.28E-08	c	5.75E-08	c	2.30E-05	c	2.30E-08	c	8.82E-08	c
Methyl alcohol	67-56-1	4.30E-09	c	3.39E-09	c	1.55E-06	c	1.30E-09	c	5.21E-09	c
Methyl isocyanate	624-83-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl methacrylate	80-62-6	1.55E-07	e	1.22E-07	e	4.90E-05	e	4.90E-08	e	1.87E-07	e
Methyl tert-butyl ether	1634-04-4	2.19E-07	e	1.73E-07	e	6.92E-05	e	6.92E-08	e	2.65E-07	e
Methylacetylene	74-99-7	2.19E-07	e	1.73E-07	e	6.92E-05	e	6.92E-08	e	2.65E-07	e
Methylcyclohexane	108-87-2	3.16E-04	e	2.50E-04	e	1.00E-01	e	1.00E-04	e	3.83E-04	e
N,N-Dimethylacetamide	127-19-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Butyl alcohol	71-36-3	1.91E-07	e	1.50E-07	e	6.03E-05	e	6.03E-08	e	2.31E-07	e
n-Heptane	142-82-5	1.15E-03	e	9.06E-04	e	3.63E-01	e	3.63E-04	e	1.39E-03	e
n-Hexane	110-54-3	3.24E-04	e	2.55E-04	e	1.02E-01	e	1.02E-04	e	3.92E-04	e
Nitromethane	75-52-5	1.12E-08	e	8.86E-09	e	3.55E-06	e	3.55E-09	e	1.36E-08	e
n-Nonane	111-84-2	1.12E-02	e	8.86E-03	e	3.55E+00	e	3.55E-03	e	1.36E-02	e
n-Octane	111-65-9	2.51E-04	e	1.98E-04	e	7.94E-02	e	7.94E-05	e	3.04E-04	e
n-Pentane	109-66-0	4.07E-05	e	3.22E-05	e	1.29E-02	e	1.29E-05	e	4.93E-05	e
n-Propionaldehyde	123-38-6	9.77E-08	e	7.72E-08	e	3.09E-05	e	3.09E-08	e	1.18E-07	e
n-Propyl alcohol	71-23-8	4.47E-08	e	3.53E-08	e	1.41E-05	e	1.41E-08	e	5.41E-08	e
n-Valeraldehyde	110-62-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane	75-21-8	1.26E-08	c	9.94E-09	c	3.98E-06	c	3.98E-09	c	1.52E-08	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Cyclohexene	110-83-8	NA	NA	8.78E+01	e	NA	NA	NA	NA
Cyclopentane	287-92-3	NA	NA	1.12E+02	e	NA	NA	NA	NA
Ethyl alcohol	64-17-5	NA	NA	3.42E-01	e	NA	NA	1.00E+00	d
Ethyl ether	60-29-7	NA	NA	2.80E+00	e	NA	NA	NA	NA
Ethyl methacrylate	97-63-2	NA	NA	9.51E+00	c	NA	NA	NA	NA
Formaldehyde	50-00-0	NA	NA	3.35E-01	s	NA	NA	NA	NA
Formamide	75-12-7	NA	NA	4.19E-02	e	NA	NA	NA	NA
Formic acid	64-18-6	NA	NA	2.30E-01	c	NA	NA	NA	NA
Formic acid, methyl ester	107-31-3	NA	NA	3.71E-01	e	NA	NA	NA	NA
Glycidylaldehyde	765-34-4	NA	NA	4.77E-01	e	NA	NA	2.80E+01	d
Methyl acetate	79-20-9	NA	NA	1.32E+00	c	NA	NA	NA	NA
Methyl alcohol	67-56-1	NA	NA	1.70E-01	c	NA	NA	NA	NA
Methyl isocyanate	624-83-9	NA	NA	NA	NA	NA	NA	1.36E-02	d
Methyl methacrylate	80-62-6	NA	NA	2.35E+00	e	NA	NA	2.80E+01	d
Methyl tert-butyl ether	1634-04-4	NA	NA	3.05E+00	e	NA	NA	1.80E+02	d
Methylacetylene	74-99-7	NA	NA	3.05E+00	e	NA	NA	NA	NA
Methylcyclohexane	108-87-2	1.20E+02	m	NA	NA	NA	NA	NA	NA
N,N-Dimethylacetamide	127-19-5	NA	NA	NA	NA	NA	NA	NA	NA
n-Butyl alcohol	71-36-3	NA	NA	2.75E+00	e	NA	NA	7.00E+00	d
n-Heptane	142-82-5	7.73E+02	m	NA	NA	NA	NA	NA	NA
n-Hexane	110-54-3	1.15E+03	r	NA	NA	NA	NA	NA	NA
Nitromethane	75-52-5	NA	NA	3.19E-01	e	NA	NA	NA	NA
n-Nonane	111-84-2	NA	NA	NA	NA	NA	NA	NA	NA
n-Octane	111-65-9	NA	NA	6.46E+02	e	NA	NA	NA	NA
n-Pentane	109-66-0	NA	NA	1.62E+02	e	NA	NA	NA	NA
n-Propionaldehyde	123-38-6	NA	NA	1.65E+00	e	NA	NA	7.00E+00	d
n-Propyl alcohol	71-23-8	NA	NA	9.12E-01	e	NA	NA	NA	NA
n-Valeraldehyde	110-62-3	NA	NA	NA	NA	NA	NA	NA	NA
Oxirane	75-21-8	NA	NA	3.48E-01	c	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Cyclohexene	110-83-8	0.0E+00	NA	4.97E-03	3.31E-04	2.48E-04	e	0.0E+00	NA	1.26E+00	8.38E-02	6.28E-02	e
Cyclopentane	287-92-3	0.0E+00	NA	5.03E-03	3.36E-04	2.52E-04	e	0E+00	NA	9.90E-01	6.60E-02	4.95E-02	e
Ethyl alcohol	64-17-5	0.0E+00	NA	2.65E-04	1.76E-05	1.32E-05	e	2.53E+02	e	1.99E+01	1.33E+00	9.94E-01	e
Ethyl ether	60-29-7	0.0E+00	NA	1.65E-03	1.10E-04	8.26E-05	e	0.0E+00	NA	1.44E+01	9.59E-01	7.19E-01	e
Ethyl methacrylate	97-63-2	0.0E+00	NA	3.25E-03	2.17E-04	1.63E-04	e	0.0E+00	NA	8.05E+00	5.37E-01	4.03E-01	e
Formaldehyde	50-00-0	0.0E+00	NA	7.69E-04	5.13E-05	3.84E-05	e	3.61E+01	c	1.79E+01	1.19E+00	8.94E-01	e
Formamide	75-12-7	0.0E+00	NA	3.21E-05	2.14E-06	1.60E-06	e	0.0E+00	NA	2.08E+01	1.39E+00	1.04E+00	e
Formic acid	64-18-6	0.0E+00	NA	1.79E-04	1.19E-05	8.94E-06	e	3.61E+01	c	2.02E+01	1.35E+00	1.01E+00	e
Formic acid, methyl ester	107-31-3	0.0E+00	NA	2.86E-04	1.91E-05	1.43E-05	e	0.0E+00	NA	1.98E+01	1.32E+00	9.90E-01	e
Glycidylaldehyde	765-34-4	0.0E+00	NA	3.23E-04	2.15E-05	1.61E-05	e	9.03E+00	e	1.97E+01	1.31E+00	9.83E-01	e
Methyl acetate	79-20-9	0.0E+00	NA	9.22E-04	6.14E-05	4.61E-05	e	0.0E+00	NA	1.73E+01	1.15E+00	8.64E-01	e
Methyl alcohol	67-56-1	0.0E+00	NA	1.33E-04	8.84E-06	6.63E-06	e	3.61E+01	c	2.04E+01	1.36E+00	1.02E+00	e
Methyl isocyanate	624-83-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	1.9E+04	e	0.0E+00	0.0E+00	0.0E+00	NA
Methyl methacrylate	80-62-6	0.0E+00	NA	4.25E-03	2.83E-04	2.12E-04	e	9.03E+00	e	4.10E+00	2.74E-01	2.05E-01	e
Methyl tert-butyl ether	1634-04-4	0.0E+00	NA	1.76E-03	1.17E-04	8.78E-05	e	1.41E+00	e	1.40E+01	9.32E-01	6.99E-01	e
Methylacetylene	74-99-7	0.0E+00	NA	1.76E-03	1.17E-04	8.78E-05	e	0.0E+00	NA	1.40E+01	9.32E-01	6.99E-01	e
Methylcyclohexane	108-87-2	0.0E+00	NA	5.25E-03	3.50E-04	2.62E-04	e	0.0E+00	NA	1.43E-01	9.55E-03	7.16E-03	e
N,N-Dimethylacetamide	127-19-5	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
n-Butyl alcohol	71-36-3	0.0E+00	NA	1.63E-03	1.09E-04	8.16E-05	e	3.61E+01	e	1.45E+01	9.64E-01	7.23E-01	e
n-Heptane	142-82-5	0.0E+00	NA	5.27E-03	3.51E-04	2.64E-04	e	0.0E+00	NA	5.26E-02	3.51E-03	2.63E-03	e
n-Hexane	110-54-3	0.0E+00	NA	5.25E-03	3.50E-04	2.62E-04	e	0.0E+00	NA	1.41E-01	9.38E-03	7.03E-03	e
Nitromethane	75-52-5	0.0E+00	NA	2.47E-04	1.65E-05	1.24E-05	e	0.0E+00	NA	2.00E+01	1.33E+00	9.98E-01	e
n-Nonane	111-84-2	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	8.91E-03	5.94E-04	4.45E-04	e
n-Octane	111-65-9	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	0.0E+00	NA	1.71E-01	1.14E-02	8.56E-03	e
n-Pentane	109-66-0	0.0E+00	NA	5.11E-03	3.41E-04	2.56E-04	e	0.0E+00	NA	6.90E-01	4.60E-02	3.45E-02	e
n-Propionaldehyde	123-38-6	0.0E+00	NA	1.11E-03	7.39E-05	5.54E-05	e	3.61E+01	e	1.65E+01	1.10E+00	8.27E-01	e
n-Propyl alcohol	71-23-8	0.0E+00	NA	6.66E-04	4.44E-05	3.33E-05	e	0.0E+00	NA	1.83E+01	1.22E+00	9.15E-01	e
n-Valeraldehyde	110-62-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Oxirane	75-21-8	0.0E+00	NA	2.69E-04	1.80E-05	1.35E-05	e	2.13E+01	c	1.99E+01	1.32E+00	9.93E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
Cyclohexene	110-83-8	7.50E-01	5.00E-02	3.75E-02	e	5.10E+05	2.27E+03	1.27E+03	f	4.53E-02	aa
Cyclopentane	287-92-3	5.91E-01	3.94E-02	2.96E-02	e	2.06E+06	9.16E+03	5.15E+03	f	6.57E-02	aa
Ethyl alcohol	64-17-5	1.19E+01	7.92E-01	5.94E-01	e	3.52E+04	1.56E+02	8.79E+01	f	5.40E-04	ab
Ethyl ether	60-29-7	8.59E+00	5.73E-01	4.30E-01	e	4.18E+05	1.86E+03	1.04E+03	f	2.30E-03	ab
Ethyl methacrylate	97-63-2	4.81E+00	3.21E-01	2.40E-01	e	1.39E+04	6.17E+01	3.47E+01	f	4.23E-03	aa
Formaldehyde	50-00-0	1.07E+01	7.12E-01	5.34E-01	e	1.63E+06	7.24E+03	4.07E+03	f	1.80E-03	ab
Formamide	75-12-7	1.24E+01	8.28E-01	6.21E-01	e	6.80E+01	3.02E-01	1.70E-01	f	8.63E-05	aa
Formic acid	64-18-6	1.21E+01	8.05E-01	6.04E-01	e	3.15E+04	1.40E+02	7.87E+01	f	3.82E-04	aa
Formic acid, methyl ester	107-31-3	1.18E+01	7.88E-01	5.91E-01	e	9.60E+05	4.27E+03	2.40E+03	f	4.86E-04	aa
Glycidylaldehyde	765-34-4	1.17E+01	7.82E-01	5.87E-01	e	2.63E+03	1.17E+01	6.58E+00	f	5.20E-04	aa
Methyl acetate	79-20-9	1.03E+01	6.88E-01	5.16E-01	e	1.00E+05	4.46E+02	2.51E+02	f	1.24E-03	aa
Methyl alcohol	67-56-1	1.22E+01	8.12E-01	6.09E-01	e	5.11E+06	2.27E+04	1.28E+04	f	3.20E-04	ab
Methyl isocyanate	624-83-9	0.0E+00	0E+00	0E+00	NA	0E+00	0E+00	0E+00	NA	NA	NA
Methyl methacrylate	80-62-6	2.45E+00	1.63E-01	1.23E-01	e	1.19E+04	5.29E+01	2.97E+01	f	1.47E-03	aa
Methyl tert-butyl ether	1634-04-4	8.35E+00	5.56E-01	4.17E-01	e	2.42E+05	1.07E+03	6.04E+02	f	2.17E-03	aa
Methylacetylene	74-99-7	8.35E+00	5.56E-01	4.17E-01	e	7.14E+06	3.18E+04	1.79E+04	f	4.03E-03	aa
Methylcyclohexane	108-87-2	8.55E-02	5.70E-03	4.28E-03	e	5.35E+05	2.38E+03	1.34E+03	f	2.50E-01	aa
N,N-Dimethylacetamide	127-19-5	0.0E+00	0E+00	0E+00	NA	0E+00	0E+00	0E+00	NA	NA	NA
n-Butyl alcohol	71-36-3	8.64E+00	5.76E-01	4.32E-01	e	3.04E+03	1.35E+01	7.60E+00	f	2.30E-03	ab
n-Heptane	142-82-5	3.14E-02	2.09E-03	1.57E-03	e	1.01E+06	4.48E+03	2.52E+03	f	5.77E-01	aa
n-Hexane	110-54-3	8.40E-02	5.60E-03	4.20E-03	e	2.39E+06	1.06E+04	5.98E+03	f	2.96E-01	aa
Nitromethane	75-52-5	1.19E+01	7.94E-01	5.96E-01	e	1.42E+05	6.32E+02	3.55E+02	f	4.20E-04	aa
n-Nonane	111-84-2	5.32E-03	3.55E-04	2.66E-04	e	3.14E+05	1.40E+03	7.85E+02	f	1.85E+00	aa
n-Octane	111-65-9	1.02E-01	6.81E-03	5.11E-03	e	4.29E+06	1.91E+04	1.07E+04	f	1.74E-01	aa
n-Pentane	109-66-0	4.12E-01	2.75E-02	2.06E-02	e	9.37E+06	4.16E+04	2.34E+04	f	8.84E-02	aa
n-Propionaldehyde	123-38-6	9.88E+00	6.58E-01	4.94E-01	e	7.05E+04	3.14E+02	1.76E+02	f	1.86E-03	aa
n-Propyl alcohol	71-23-8	1.09E+01	7.28E-01	5.46E-01	e	1.27E+04	5.63E+01	3.17E+01	f	1.10E-03	ab
n-Valeraldehyde	110-62-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Oxirane	75-21-8	1.19E+01	7.91E-01	5.93E-01	e	1.68E+06	7.47E+03	4.20E+03	f	5.60E-04	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
p-Cymene	99-87-6	0 or 1	b	134.22	NA	8.00E-01	n	7.92E-03	7.25E-02	e	8.39E-06	e
Phosgene	75-44-5	0 or 1	b	98.916	NA	NA	NA	NA	8.88E-02	e	1.03E-05	e
Propargyl alcohol	107-19-7	0 or 1	b	56.06	NA	4.70E-05	m	1.15E-06	1.81E-01	j	1.33E-05	j
Propionic acid	79-09-4	0 or 1	b	74.08	NA	4.50E-02	i	4.46E-07	1.08E-01	e	1.25E-05	e
Propionitrile	107-12-0	0 or 1	b	55.079	NA	3.75E+00	i	3.71E-05	1.31E-01	e	1.52E-05	e
Propylene glycol monomethyl ether	107-98-2	0 or 1	b	90	NA	3.76E-05	m	9.17E-07	7.17E-02	j	9.73E-06	j
p-tert-Butyltoluene	98-51-1	0 or 1	b	148.25	NA	6.28E-01	k	1.53E-02	6.78E-02	e	7.85E-06	e
Triethylamine	121-44-8	0 or 1	b	101.19	NA	NA	e	7.45E+01	8.81E-02	j	7.88E-06	j
Trimethylamine	75-50-3	0 or 1	b	59.11	NA	1.05E+01	i	1.04E-04	1.25E-01	e	1.45E-05	e
Vinyl acetate	108-05-4	0 or 1	b	86.09	NA	5.50E-04	c	5.50E-04	9.94E-02	c	1.00E-05	c
Non-aromatic Halogenated Hydrocarbons												
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	0 or 1	b	203.83	NA	6.02E+00	k	1.47E-01	5.49E-02	e	6.35E-06	e
1,1,1,2-Tetrachloroethane	630-20-6	0 or 1	b	167.85	NA	2.44E-03	c	2.44E-03	3.15E-02	c	9.30E-06	c
1,1,1-Trichloroethane	71-55-6	0 or 1	b	133.42	NA	1.86E-02	c	1.86E-02	4.66E-02	s	9.56E-06	c
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	0 or 1	b	203.83	NA	9.87E+03	i	9.77E-02	5.49E-02	e	6.35E-06	e
1,1,2,2-Tetrachloroethane	79-34-5	0 or 1	b	167.86	NA	3.72E-04	c	3.72E-04	3.16E-02	c	9.26E-06	c
1,1,2,2-Tetrachloroethene	127-18-4	0 or 1	b	165.85	NA	1.73E-02	c	1.73E-02	7.20E-02	c	8.20E-06	c
1,1,2-Trichloroethane	79-00-5	0 or 1	b	133.42	NA	1.00E-03	c	1.00E-03	4.51E-02	c	1.00E-05	c
1,1,2-Trichloroethylene	79-01-6	0 or 1	b	131.4	NA	1.06E-02	c	1.06E-02	4.65E-02	c	9.94E-06	c
1,1-Dichloroethane	75-34-3	0 or 1	b	98.97	NA	5.75E-03	c	5.75E-03	7.42E-02	c	1.05E-05	c
1,1-Dichloroethene	75-35-4	0 or 1	b	96.95	NA	2.55E-02	c	2.55E-02	7.53E-02	c	1.09E-05	c
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	0 or 1	b	187.38	NA	5.33E+04	i	5.28E-01	2.88E-02	j	8.07E-06	j
1,2,3-Trichloropropane	96-18-4	0 or 1	b	147.43	NA	3.80E-04	c	3.80E-04	3.99E-02	c	9.24E-06	c
1,2-Dibromo-3-chloropropane	96-12-8	0 or 1	b	236.36	NA	1.97E-04	c	1.97E-04	1.79E-02	c	8.79E-06	c
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	0 or 1	b	170.92	NA	1.15E+02	k	2.79E+00	6.17E-02	e	7.14E-06	e
1,2-Dichloroethane	107-06-2	0 or 1	b	98.96	NA	1.27E-03	c	1.27E-03	7.19E-02	c	1.10E-05	c
1,2-Dichloroethylene	540-59-0	0 or 1	b	96.94	NA	7.61E-01	n	7.53E-03	9.00E-02	e	1.04E-05	e
1,2-Dichloropropane	78-87-5	0 or 1	b	112.99	NA	2.81E-03	c	2.81E-03	6.21E-02	c	9.71E-06	c
1,3-Dichloropropene	542-75-6	0 or 1	b	110.98	NA	2.94E-03	c	2.94E-03	6.26E-02	c	1.00E-05	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
p-Cymene	99-87-6	NA	e	2.23E+03	4.10E+00	l	1.26E+04	8.93E+01	e	2.23E+01	e
Phosgene	75-44-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propargyl alcohol	107-19-7	1.33E+00	m	1.33E+00	-3.80E-01	m	4.17E-01	5.30E-02	e	1.33E-02	e
Propionic acid	79-09-4	NA	e	2.56E+00	3.30E-01	i	2.14E+00	1.02E-01	e	2.56E-02	e
Propionitrile	107-12-0	NA	e	1.89E+00	1.60E-01	i	1.45E+00	7.55E-02	e	1.89E-02	e
Propylene glycol monomethyl ether	107-98-2	1.00E+00	m	1.00E+00	-4.90E-01	m	3.24E-01	4.00E-02	e	1.00E-02	e
p-tert-Butyltoluene	98-51-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Triethylamine	121-44-8	1.07E+02	m	1.07E+02	1.45E+00	m	2.82E+01	4.29E+00	e	1.07E+00	e
Trimethylamine	75-50-3	6.02E-01	i	4.00E+00	1.60E-01	i	1.45E+00	1.60E-01	e	4.00E-02	e
Vinyl acetate	108-05-4	4.97E+00	c	4.97E+00	5.00E+00	c	5.00E+00	1.99E-01	c	4.97E-02	c
Non-aromatic Halogenated Hydrocarbons											
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	3.47E+02	p	3.47E+02	3.41E+00	p	2.57E+03	1.39E+01	e	3.47E+00	e
1,1,1,2-Tetrachloroethane	630-20-6	1.59E+02	c	1.59E+02	4.27E+02	c	4.27E+02	6.37E+00	c	1.59E+00	c
1,1,1-Trichloroethane	71-55-6	1.35E+05	c	1.35E+05	2.64E+02	c	2.64E+02	5.40E+03	c	1.35E+03	c
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	2.50E+00	i	3.16E+02	3.73E+00	i	5.37E+03	1.26E+01	e	3.16E+00	e
1,1,2,2-Tetrachloroethane	79-34-5	7.90E+01	c	7.90E+01	4.40E+04	c	4.40E+04	3.16E+00	c	7.90E-01	c
1,1,2,2-Tetrachloroethene	127-18-4	2.65E+02	c	2.65E+02	3.51E+02	c	3.51E+02	1.06E+01	c	2.65E+00	c
1,1,2-Trichloroethane	79-00-5	7.50E+01	c	7.50E+01	1.25E+02	c	1.25E+02	3.00E+00	c	7.50E-01	c
1,1,2-Trichloroethylene	79-01-6	9.40E+01	c	9.40E+01	2.71E+02	c	2.71E+02	3.76E+00	c	9.40E-01	c
1,1-Dichloroethane	75-34-3	5.30E+01	c	5.30E+01	6.20E+01	c	6.20E+01	2.12E+00	c	5.30E-01	c
1,1-Dichloroethene	75-35-4	6.50E+01	c	6.50E+01	1.32E+02	c	1.32E+02	2.60E+00	c	6.50E-01	c
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	2.41E+00	i	2.57E+02	3.16E+00	i	1.45E+03	1.03E+01	e	2.57E+00	e
1,2,3-Trichloropropane	96-18-4	8.05E+01	c	8.05E+01	1.78E+02	c	1.78E+02	3.22E+00	c	8.10E-01	c
1,2-Dibromo-3-chloropropane	96-12-8	9.47E+01	c	9.47E+01	2.19E+02	c	2.19E+02	3.79E+00	c	9.47E-01	c
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	NA	e	2.24E+02	2.82E+00	l	6.61E+02	8.97E+00	e	2.24E+00	e
1,2-Dichloroethane	107-06-2	1.96E+01	c	1.96E+01	2.90E+01	c	2.90E+01	7.83E-01	c	1.96E-01	c
1,2-Dichloroethylene	540-59-0	4.38E+01	m	4.38E+01	2.09E+00	m	1.23E+02	1.75E+00	e	4.38E-01	e
1,2-Dichloropropane	78-87-5	4.70E+01	c	4.70E+01	1.78E+02	c	1.78E+02	1.88E+00	c	4.70E-01	c
1,3-Dichloropropene	542-75-6	2.70E+01	c	2.70E+01	5.60E+01	c	5.60E+01	1.08E+00	c	2.70E-01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
p-Cymene	99-87-6	1.68E+02	e	1.65E-01	e	1.65E-01	e	1.65E-01
Phosgene	75-44-5	NA	NA	NA	NA	NA	NA	NA
Propargyl alcohol	107-19-7	9.94E-02	e	6.42E+01	e	6.42E+01	e	6.42E+01
Propionic acid	79-09-4	1.92E-01	e	2.50E+01	e	2.50E+01	e	2.50E+01
Propionitrile	107-12-0	1.42E-01	e	3.13E+01	e	3.13E+01	e	3.13E+01
Propylene glycol monomethyl ether	107-98-2	7.50E-02	e	7.43E+01	e	7.43E+01	e	7.43E+01
p-tert-Butyltoluene	98-51-1	NA	NA	NA	NA	NA	NA	NA
Triethylamine	121-44-8	8.04E+00	e	5.62E+00	e	5.62E+00	e	5.62E+00
Trimethylamine	75-50-3	3.00E-01	e	3.13E+01	e	3.13E+01	e	3.13E+01
Vinyl acetate	108-05-4	3.73E-01	c	1.53E+01	c	1.53E+01	c	1.53E+01
Non-aromatic Halogenated Hydrocarbons								
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	2.60E+01	e	4.14E-01	e	4.14E-01	e	4.14E-01
1,1,1,2-Tetrachloroethane	630-20-6	1.20E+01	c	1.17E+00	c	1.17E+00	c	1.17E+00
1,1,1-Trichloroethane	71-55-6	1.01E+04	c	1.54E+00	c	1.54E+00	c	1.54E+00
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	2.37E+01	e	2.70E-01	e	2.70E-01	e	2.70E-01
1,1,2,2-Tetrachloroethane	79-34-5	5.93E+00	c	8.02E-02	c	8.02E-02	c	8.02E-02
1,1,2,2-Tetrachloroethene	127-18-4	1.99E+01	c	1.31E+00	c	1.31E+00	c	1.31E+00
1,1,2-Trichloroethane	79-00-5	5.63E+00	c	2.38E+00	c	2.38E+00	c	2.38E+00
1,1,2-Trichloroethylene	79-01-6	7.05E+00	c	1.52E+00	c	1.52E+00	c	1.52E+00
1,1-Dichloroethane	75-34-3	3.98E+00	c	3.56E+00	c	3.56E+00	c	3.56E+00
1,1-Dichloroethene	75-35-4	4.88E+00	c	2.30E+00	c	2.30E+00	c	2.30E+00
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	1.93E+01	e	5.77E-01	e	5.77E-01	e	5.77E-01
1,2,3-Trichloropropane	96-18-4	6.04E+00	c	1.94E+00	c	1.94E+00	c	1.94E+00
1,2-Dibromo-3-chloropropane	96-12-8	7.10E+00	c	1.72E+00	c	1.72E+00	c	1.72E+00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	1.68E+01	e	9.08E-01	e	9.08E-01	e	9.08E-01
1,2-Dichloroethane	107-06-2	1.47E+00	c	5.53E+00	c	5.53E+00	c	5.53E+00
1,2-Dichloroethylene	540-59-0	3.28E+00	e	2.40E+00	e	2.40E+00	e	2.40E+00
1,2-Dichloropropane	78-87-5	3.53E+00	c	1.94E+00	c	1.94E+00	c	1.94E+00
1,3-Dichloropropene	542-75-6	2.03E+00	c	3.78E+00	c	3.78E+00	c	3.78E+00

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
p-Cymene	99-87-6	1.52E+01	e	1.65E-01	e	1.65E-01	e	3.40E+02	e
Phosgene	75-44-5	NA	NA	NA	NA	NA	NA	NA	NA
Propargyl alcohol	107-19-7	4.85E+02	e	1.93E-02	e	1.93E-02	e	6.43E+00	e
Propionic acid	79-09-4	2.63E+02	e	2.83E-01	e	2.83E-01	e	6.72E+00	e
Propionitrile	107-12-0	3.51E+02	e	2.23E-03	e	2.23E-03	e	6.62E+00	e
Propylene glycol monomethyl ether	107-98-2	6.41E+02	e	1.84E-02	e	1.84E-02	e	6.41E+00	e
p-tert-Butyltoluene	98-51-1	NA	NA	NA	NA	NA	NA	NA	NA
Triethylamine	121-44-8	8.72E+00	e	2.63E-08	e	2.63E-08	e	9.35E+00	e
Trimethylamine	75-50-3	1.65E+02	e	7.95E-04	e	7.95E-04	e	6.62E+00	e
Vinyl acetate	108-05-4	1.43E+02	c	5.65E-04	c	5.65E-04	c	7.11E+00	c
Non-aromatic Halogenated Hydrocarbons									
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	3.01E+01	e	1.64E-03	e	1.64E-03	e	1.04E+02	e
1,1,1,2-Tetrachloroethane	630-20-6	1.94E+01	c	1.45E-02	c	1.45E-02	c	3.09E+01	c
1,1,1-Trichloroethane	71-55-6	1.73E-02	c	1.14E-03	c	1.14E-03	c	2.33E+01	c
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	5.67E+01	e	5.38E-03	e	5.38E-03	e	1.79E+02	e
1,1,2,2-Tetrachloroethane	79-34-5	1.11E+03	c	1.33E+01	c	1.33E+01	c	8.80E+02	c
1,1,2,2-Tetrachloroethene	127-18-4	1.04E+01	h	1.66E-03	c	1.66E-03	c	2.75E+01	c
1,1,2-Trichloroethane	79-00-5	2.12E+01	c	9.53E-03	c	9.53E-03	c	1.59E+01	c
1,1,2-Trichloroethylene	79-01-6	2.12E+01	c	2.07E-03	c	2.07E-03	c	2.37E+01	c
1,1-Dichloroethane	75-34-3	2.24E+01	c	7.88E-04	c	7.88E-04	c	1.19E+01	c
1,1-Dichloroethene	75-35-4	2.50E+01	c	3.98E-04	c	3.98E-04	c	1.63E+01	c
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	2.70E+01	e	2.46E-04	e	2.46E-04	e	6.93E+01	e
1,2,3-Trichloropropane	96-18-4	2.34E+01	c	3.66E-02	c	3.66E-02	c	1.89E+01	c
1,2-Dibromo-3-chloropropane	96-12-8	2.22E+01	c	8.81E-02	c	8.81E-02	c	2.10E+01	c
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	1.82E+01	e	2.02E-05	e	2.02E-05	e	4.08E+01	e
1,2-Dichloroethane	107-06-2	4.81E+01	c	1.58E-03	c	1.58E-03	c	9.41E+00	c
1,2-Dichloroethylene	540-59-0	3.60E+01	e	1.25E-03	e	1.25E-03	e	1.58E+01	e
1,2-Dichloropropane	78-87-5	4.01E+01	c	4.96E-03	c	4.96E-03	c	1.89E+01	c
1,3-Dichloropropene	542-75-6	4.25E+01	c	1.38E-03	c	1.38E-03	c	1.15E+01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
p-Cymene	99-87-6	3.16E-04	e	2.50E-04	e	1.00E-01	e	1.00E-04	e	3.83E-04	e
Phosgene	75-44-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Propargyl alcohol	107-19-7	1.05E-08	e	8.27E-09	e	3.31E-06	e	3.31E-09	e	1.27E-08	e
Propionic acid	79-09-4	5.37E-08	e	4.24E-08	e	1.70E-05	e	1.70E-08	e	6.50E-08	e
Propionitrile	107-12-0	3.63E-08	e	2.87E-08	e	1.15E-05	e	1.15E-08	e	4.40E-08	e
Propylene glycol monomethyl ether	107-98-2	8.13E-09	e	6.42E-09	e	2.57E-06	e	2.57E-09	e	9.84E-09	e
p-tert-Butyltoluene	98-51-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Triethylamine	121-44-8	7.08E-07	e	5.59E-07	e	2.24E-04	e	2.24E-07	e	8.57E-07	e
Trimethylamine	75-50-3	3.63E-08	e	2.87E-08	e	1.15E-05	e	1.15E-08	e	4.40E-08	e
Vinyl acetate	108-05-4	1.26E-07	c	9.92E-08	c	3.97E-05	c	3.97E-08	c	1.52E-07	c
Non-aromatic Halogenated Hydrocarbons											
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	6.46E-05	e	5.10E-05	e	2.04E-02	e	2.04E-05	e	7.82E-05	e
1,1,1,2-Tetrachloroethane	630-20-6	1.07E-05	c	8.46E-06	c	3.39E-03	c	3.39E-06	c	1.30E-05	c
1,1,1-Trichloroethane	71-55-6	6.63E-06	c	5.24E-06	c	2.10E-03	c	2.10E-06	c	8.03E-06	c
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	1.35E-04	e	1.06E-04	e	4.27E-02	e	4.27E-05	e	1.63E-04	e
1,1,2,2-Tetrachloroethane	79-34-5	1.11E-03	c	8.73E-04	c	3.50E-01	c	3.50E-04	c	1.34E-03	c
1,1,2,2-Tetrachloroethene	127-18-4	8.82E-06	c	6.96E-06	c	2.79E-03	c	2.79E-06	c	1.07E-05	c
1,1,2-Trichloroethane	79-00-5	3.14E-06	c	2.48E-06	c	9.93E-04	c	9.93E-07	c	3.80E-06	c
1,1,2-Trichloroethylene	79-01-6	6.81E-06	c	5.37E-06	c	2.15E-03	c	2.15E-06	c	8.24E-06	c
1,1-Dichloroethane	75-34-3	1.56E-06	c	1.23E-06	c	4.92E-04	c	4.93E-07	c	1.89E-06	c
1,1-Dichloroethene	75-35-4	3.32E-06	c	2.62E-06	c	1.05E-03	c	1.05E-06	c	4.01E-06	c
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	3.63E-05	e	2.87E-05	e	1.15E-02	e	1.15E-05	e	4.40E-05	e
1,2,3-Trichloropropane	96-18-4	4.47E-06	c	3.53E-06	c	1.41E-03	c	1.41E-06	c	5.41E-06	c
1,2-Dibromo-3-chloropropane	96-12-8	5.50E-06	c	4.34E-06	c	1.74E-03	c	1.74E-06	c	6.65E-06	c
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	1.66E-05	e	1.31E-05	e	5.25E-03	e	5.25E-06	e	2.01E-05	e
1,2-Dichloroethane	107-06-2	7.28E-07	c	5.75E-07	c	2.30E-04	c	2.30E-07	c	8.82E-07	c
1,2-Dichloroethylene	540-59-0	3.09E-06	e	2.44E-06	e	9.77E-04	e	9.77E-07	e	3.74E-06	e
1,2-Dichloropropane	78-87-5	4.47E-06	c	3.53E-06	c	1.41E-03	c	1.41E-06	c	5.41E-06	c
1,3-Dichloropropene	542-75-6	1.41E-06	c	1.11E-06	c	4.45E-04	c	4.45E-07	c	1.70E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
p-Cymene	99-87-6	NA	NA	NA	NA	NA	NA	NA	NA
Phosgene	75-44-5	NA	NA	NA	NA	NA	NA	4.17E-02	d
Propargyl alcohol	107-19-7	NA	NA	3.03E-01	e	NA	NA	NA	NA
Propionic acid	79-09-4	NA	NA	1.05E+00	e	NA	NA	NA	NA
Propionitrile	107-12-0	NA	NA	7.79E-01	e	NA	NA	NA	NA
Propylene glycol monomethyl ether	107-98-2	NA	NA	2.50E-01	e	NA	NA	2.80E+01	d
p-tert-Butyltoluene	98-51-1	NA	NA	NA	NA	NA	NA	NA	NA
Triethylamine	121-44-8	NA	NA	7.45E+00	e	NA	NA	NA	NA
Trimethylamine	75-50-3	NA	NA	7.79E-01	e	NA	NA	NA	NA
Vinyl acetate	108-05-4	NA	NA	2.00E+00	c	NA	NA	NA	NA
Non-aromatic Halogenated Hydrocarbons									
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	NA	NA	2.30E+02	e	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane	630-20-6	NA	NA	5.87E+01	c	NA	NA	NA	NA
1,1,1-Trichloroethane	71-55-6	NA	NA	4.08E+01	c	NA	NA	NA	NA
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	NA	NA	4.03E+02	e	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	4.33E+03	c	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethene	127-18-4	NA	NA	5.06E+01	c	NA	NA	NA	NA
1,1,2-Trichloroethane	79-00-5	NA	NA	2.31E+01	c	NA	NA	NA	NA
1,1,2-Trichloroethylene	79-01-6	NA	NA	4.16E+01	c	NA	NA	NA	NA
1,1-Dichloroethane	75-34-3	NA	NA	1.36E+01	c	NA	NA	NA	NA
1,1-Dichloroethene	75-35-4	NA	NA	2.41E+01	c	NA	NA	NA	NA
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	NA	NA	1.48E+02	e	NA	NA	3.60E+02	d
1,2,3-Trichloropropane	96-18-4	NA	NA	3.02E+01	c	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	96-12-8	NA	NA	3.54E+01	c	NA	NA	NA	NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	NA	NA	8.19E+01	e	NA	NA	NA	NA
1,2-Dichloroethane	107-06-2	NA	NA	7.61E+00	c	NA	NA	NA	NA
1,2-Dichloroethylene	540-59-0	NA	NA	2.28E+01	e	NA	NA	1.80E+02	d
1,2-Dichloropropane	78-87-5	NA	NA	3.02E+01	c	NA	NA	NA	NA
1,3-Dichloropropene	542-75-6	NA	NA	1.25E+01	c	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_t (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
p-Cymene	99-87-6	0.0E+00	NA	5.25E-03	3.50E-04	2.62E-04	e	0.0E+00	NA	1.43E-01	9.55E-03	7.16E-03	e
Phosgene	75-44-5	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	6.07E+03	e	0.00E+00	0.00E+00	0.00E+00	NA
Propargyl alcohol	107-19-7	0.0E+00	NA	4.19E-04	2.79E-05	2.10E-05	e	0.0E+00	NA	1.93E+01	1.28E+00	9.64E-01	e
Propionic acid	79-09-4	0.0E+00	NA	7.54E-04	5.03E-05	3.77E-05	e	0.0E+00	NA	1.79E+01	1.20E+00	8.97E-01	e
Propionitrile	107-12-0	0.0E+00	NA	5.77E-04	3.85E-05	2.89E-05	e	0.0E+00	NA	1.86E+01	1.24E+00	9.32E-01	e
Propylene glycol monomethyl ether	107-98-2	0.0E+00	NA	3.23E-04	2.15E-05	1.61E-05	e	9.03E+00	e	1.97E+01	1.31E+00	9.83E-01	e
p-tert-Butyltoluene	98-51-1	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Triethylamine	121-44-8	0.0E+00	NA	4.62E-03	3.08E-04	2.31E-04	e	0.0E+00	NA	2.63E+00	1.75E-01	1.31E-01	e
Trimethylamine	75-50-3	0.0E+00	NA	1.09E-03	7.27E-05	5.45E-05	e	0.0E+00	NA	1.66E+01	1.11E+00	8.31E-01	e
Vinyl acetate	108-05-4	0.0E+00	NA	1.29E-03	8.60E-05	6.45E-05	e	0.0E+00	NA	1.58E+01	1.05E+00	7.91E-01	e
Non-aromatic Halogenated Hydrocarbons													
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	0.0E+00	NA	5.06E-03	3.37E-04	2.53E-04	e	0.0E+00	NA	8.89E-01	5.92E-02	4.44E-02	e
1,1,1,2-Tetrachloroethane	630-20-6	0.0E+00	NA	4.82E-03	3.21E-04	2.41E-04	e	5.75E+00	c	1.85E+00	1.23E-01	9.23E-02	e
1,1,1-Trichloroethane	71-55-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	9.26E-01	c	2.39E-03	1.59E-04	1.19E-04	e
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	0.0E+00	NA	5.04E-03	3.36E-04	2.52E-04	e	0.0E+00	NA	9.71E-01	6.47E-02	4.86E-02	e
1,1,2,2-Tetrachloroethane	79-34-5	0.0E+00	NA	4.42E-03	2.95E-04	2.21E-04	e	5.75E+00	c	3.41E+00	2.27E-01	1.71E-01	e
1,1,2,2-Tetrachloroethene	127-18-4	0.0E+00	NA	4.99E-03	3.33E-04	2.50E-04	e	7.03E-01	c	1.15E+00	7.66E-02	5.74E-02	e
1,1,2-Trichloroethane	79-00-5	0.0E+00	NA	4.38E-03	2.92E-04	2.19E-04	e	6.93E-01	c	3.56E+00	2.38E-01	1.78E-01	e
1,1,2-Trichloroethylene	79-01-6	0.0E+00	NA	4.54E-03	3.03E-04	2.27E-04	e	7.03E-01	c	2.94E+00	1.96E-01	1.47E-01	e
1,1-Dichloroethane	75-34-3	0.0E+00	NA	4.10E-03	2.73E-04	2.05E-04	e	1.64E+00	c	4.71E+00	3.14E-01	2.35E-01	e
1,1-Dichloroethene	75-35-4	0.0E+00	NA	4.27E-03	2.85E-04	2.14E-04	e	1.41E+00	c	4.01E+00	2.67E-01	2.00E-01	e
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	0.0E+00	NA	4.99E-03	3.32E-04	2.49E-04	e	7.03E-01	e	1.18E+00	7.88E-02	5.91E-02	e
1,2,3-Trichloropropane	96-18-4	0.0E+00	NA	4.44E-03	2.96E-04	2.22E-04	e	7.03E-01	c	3.34E+00	2.23E-01	1.67E-01	e
1,2-Dibromo-3-chloropropane	96-12-8	0.0E+00	NA	4.55E-03	3.03E-04	2.27E-04	e	1.41E+00	c	2.93E+00	1.95E-01	1.46E-01	e
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	0.0E+00	NA	4.95E-03	3.30E-04	2.47E-04	e	0.0E+00	NA	1.34E+00	8.96E-02	6.72E-02	e
1,2-Dichloroethane	107-06-2	0.0E+00	NA	2.96E-03	1.97E-04	1.48E-04	e	1.41E+00	c	9.20E+00	6.14E-01	4.60E-01	e
1,2-Dichloroethylene	540-59-0	0.0E+00	NA	3.91E-03	2.61E-04	1.96E-04	e	1.41E+00	e	5.44E+00	3.63E-01	2.72E-01	e
1,2-Dichloropropane	78-87-5	0.0E+00	NA	3.98E-03	2.65E-04	1.99E-04	e	1.96E-01	c	5.16E+00	3.44E-01	2.58E-01	e
1,3-Dichloropropene	542-75-6	0.0E+00	NA	3.37E-03	2.24E-04	1.68E-04	e	2.24E+01	c	7.60E+00	5.07E-01	3.80E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
p-Cymene	99-87-6	8.55E-02	5.70E-03	4.28E-03	e	7.89E+03	3.51E+01	1.97E+01	f	1.57E-01	aa
Phosgene	75-44-5	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Propargyl alcohol	107-19-7	1.15E+01	7.67E-01	5.75E-01	e	4.80E+03	2.14E+01	1.20E+01	f	4.28E-04	aa
Propionic acid	79-09-4	1.07E+01	7.14E-01	5.36E-01	e	5.75E+02	2.56E+00	1.44E+00	f	1.01E-03	aa
Propionitrile	107-12-0	1.11E+01	7.42E-01	5.57E-01	e	7.93E+04	3.52E+02	1.98E+02	f	9.97E-04	aa
Propylene glycol monomethyl ether	107-98-2	1.17E+01	7.82E-01	5.87E-01	e	2.02E+03	8.98E+00	5.05E+00	f	3.70E-04	ab
p-tert-Butyltoluene	98-51-1	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Triethylamine	121-44-8	1.57E+00	1.05E-01	7.84E-02	e	1.88E+09	8.35E+06	4.70E+06	f	4.03E-03	aa
Trimethylamine	75-50-3	9.92E+00	6.61E-01	4.96E-01	e	1.00E+05	4.46E+02	2.51E+02	f	9.47E-04	aa
Vinyl acetate	108-05-4	9.45E+00	6.30E-01	4.72E-01	e	3.38E+05	1.50E+03	8.44E+02	f	1.54E-03	aa
Non-aromatic Halogenated Hydrocarbons											
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	5.31E-01	3.54E-02	2.65E-02	e	7.12E+05	3.16E+03	1.78E+03	f	2.20E-02	aa
1,1,1,2-Tetrachloroethane	630-20-6	1.10E+00	7.35E-02	5.51E-02	e	1.48E+04	6.59E+01	3.71E+01	f	1.05E-02	aa
1,1,1-Trichloroethane	71-55-6	1.42E-03	9.50E-05	7.12E-05	e	1.97E+02	8.76E-01	4.93E-01	f	1.30E-02	ab
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	5.80E-01	3.87E-02	2.90E-02	e	5.20E+05	2.31E+03	1.30E+03	f	3.61E-02	aa
1,1,2,2-Tetrachloroethane	79-34-5	2.04E+00	1.36E-01	1.02E-01	e	4.57E+03	2.03E+01	1.14E+01	f	6.90E-03	ab
1,1,2,2-Tetrachloroethene	127-18-4	6.86E-01	4.57E-02	3.43E-02	e	1.44E+05	6.41E+02	3.61E+02	f	3.30E-02	ab
1,1,2-Trichloroethane	79-00-5	2.13E+00	1.42E-01	1.06E-01	e	1.85E+04	8.20E+01	4.61E+01	f	6.40E-03	ab
1,1,2-Trichloroethylene	79-01-6	1.76E+00	1.17E-01	8.79E-02	e	1.61E+05	7.15E+02	4.02E+02	f	1.20E-02	ab
1,1-Dichloroethane	75-34-3	2.81E+00	1.87E-01	1.41E-01	e	2.47E+05	1.10E+03	6.18E+02	f	6.70E-03	ab
1,1-Dichloroethene	75-35-4	2.39E+00	1.59E-01	1.20E-01	e	9.07E+05	4.03E+03	2.27E+03	f	1.20E-02	ab
1,2,2-Trichloro-1,1,2-trifluoroethane	76-13-1	7.06E-01	4.71E-02	3.53E-02	e	1.81E+06	8.06E+03	4.54E+03	f	1.85E-02	aa
1,2,3-Trichloropropane	96-18-4	2.00E+00	1.33E-01	9.98E-02	e	5.74E+03	2.55E+01	1.44E+01	f	7.62E-03	aa
1,2-Dibromo-3-chloropropane	96-12-8	1.75E+00	1.16E-01	8.73E-02	e	1.14E+03	5.08E+00	2.86E+00	f	2.78E-03	aa
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	8.03E-01	5.35E-02	4.01E-02	e	2.36E+07	1.05E+05	5.90E+04	f	1.36E-02	aa
1,2-Dichloroethane	107-06-2	5.50E+00	3.66E-01	2.75E-01	e	1.43E+05	6.35E+02	3.57E+02	f	4.20E-03	ab
1,2-Dichloroethylene	540-59-0	3.25E+00	2.17E-01	1.62E-01	e	4.75E+05	2.11E+03	1.19E+03	f	1.14E-02	aa
1,2-Dichloropropane	78-87-5	3.08E+00	2.06E-01	1.54E-01	e	1.14E+05	5.06E+02	2.85E+02	f	7.80E-03	ab
1,3-Dichloropropene	542-75-6	4.54E+00	3.02E-01	2.27E-01	e	2.09E+05	9.30E+02	5.23E+02	f	4.30E-03	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
1,4-Dichloro-2-butene	764-41-0	0 or 1	b	125	NA	3.48E-01	m	8.49E-03	7.60E-02	e	8.80E-06	e
1-Chloroethene	75-01-4	0 or 1	b	62.5	NA	3.15E-01	c	3.15E-01	1.58E-01	c	1.19E-05	c
2,2-Dichloropropionic acid	75-99-0	0 or 1	b	142.97	NA	6.43E-08	l	6.43E-08	6.95E-02	e	8.05E-06	e
2-Chloropropane	75-29-6	0 or 1	b	78.541	NA	1.65E+03	i	1.64E-02	1.04E-01	e	1.20E-05	e
3-Chloropropene (Allyl chloride)	107-05-1	0 or 1	b	76.526	NA	1.10E+00	n	1.09E-02	1.05E-01	e	1.22E-05	e
Bromochloromethane	74-97-5	0 or 1	b	129.39	NA	5.97E-02	m	1.46E-03	4.74E-02	j	1.00E-05	j
Bromodichloromethane	75-27-4	0 or 1	b	163.83	NA	3.17E-03	c	3.17E-03	2.98E-02	c	1.06E-05	c
Bromoethene	593-60-2	0 or 1	b	106.95	NA	5.03E-01	m	1.23E-02	8.43E-02	e	9.76E-06	e
Bromoform	75-25-2	0 or 1	b	252.77	NA	6.16E-04	c	6.16E-04	1.41E-02	c	1.03E-05	c
Bromomethane	74-83-9	0 or 1	b	94.95	NA	1.41E-02	c	1.41E-02	7.28E-02	c	1.21E-05	c
Carbon tetrachloride	56-23-5	0 or 1	b	153.84	NA	2.87E-02	c	2.87E-02	3.56E-02	c	9.77E-06	c
Chlorodibromomethane	124-48-1	0 or 1	b	208.3	NA	1.21E-03	c	1.21E-03	1.96E-02	c	1.05E-05	c
Chlorodifluoromethane	75-45-6	0 or 1	b	86.47	NA	1.68E-01	c	1.68E-01	9.72E-02	c	1.13E-05	c
Chloroethane	75-00-3	0 or 1	b	64.52	NA	1.80E+00	c	1.80E+00	1.27E-01	c	1.53E-06	c
Chloroform	67-66-3	0 or 1	b	119.39	NA	4.03E-03	c	4.03E-03	5.17E-02	c	1.09E-05	c
Chloromethane	74-87-3	0 or 1	b	50.49	NA	4.52E-02	c	4.52E-02	2.13E-01	c	1.39E-05	c
Chloropentafluoroethane	76-15-3	0 or 1	b	154.47	NA	2.28E+02	k	5.57E+00	6.60E-02	e	7.64E-06	e
cis-1,2-Dichloroethene	156-59-2	0 or 1	b	96.94	NA	4.51E-03	c	4.51E-03	7.36E-02	c	1.13E-05	c
cis-1,3-Dichloropropene	10061-01-5	0 or 1	b	110.97	NA	1.11E-01	k	2.70E-03	8.23E-02	e	9.53E-06	e
Cyanogen bromide	506-68-3	0 or 1	b	105.92	NA	1.00E+00	m	2.44E-02	8.49E-02	e	9.83E-06	e
Cyanogen chloride	506-77-4	0 or 1	b	61.471	NA	1.00E+00	m	2.44E-02	1.22E-01	e	1.41E-05	e
Dichlorodifluoromethane	75-71-8	0 or 1	b	120.92	NA	2.58E+00	c	2.58E+00	7.77E-02	c	9.00E-06	c
Dichlorofluoromethane	75-43-4	0 or 1	b	102.92	NA	4.42E-01	k	1.08E-02	8.65E-02	e	1.00E-05	e
Dichloromethane	75-09-2	0 or 1	b	84.94	NA	2.38E-03	c	2.38E-03	8.69E-02	c	1.25E-05	c
Difluorodibromomethane	75-61-6	0 or 1	b	209.82	NA	1.26E+00	k	3.07E-02	5.38E-02	e	6.23E-06	e
Hexafluoroacetone	684-16-2	0 or 1	b	166.02	NA	1.26E-01	k	3.06E-03	6.29E-02	e	7.28E-06	e
Iodomethane	74-88-4	0 or 1	b	141.939	NA	5.55E+02	i	5.49E-03	6.98E-02	e	8.09E-06	e
Methylene bromide	74-95-3	0 or 1	b	173.86	NA	2.64E-02	c	2.64E-02	6.10E-02	c	7.06E-06	c
Pentachloroethane	76-01-7	0 or 1	b	202.29	NA	2.48E+02	i	2.45E-03	5.51E-02	e	6.38E-06	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
1,4-Dichloro-2-butene	764-41-0	1.49E+02	m	1.49E+02	2.60E+00	m	3.98E+02	5.96E+00	e	1.49E+00	e
1-Chloroethene	75-01-4	1.11E+01	h	1.11E+01	1.40E+01	c	1.40E+01	4.44E-01	c	1.11E-01	c
2,2-Dichloropropionic acid	75-99-0	2.74E+00	m	2.74E+00	1.68E+00	m	4.79E+01	1.10E-01	e	2.74E-02	e
2-Chloropropane	75-29-6	NA	e	4.30E+01	1.90E+00	i	7.94E+01	1.72E+00	e	4.30E-01	e
3-Chloropropene (Allyl chloride)	107-05-1	4.38E+01	m	4.38E+01	1.93E+00	m	8.51E+01	1.75E+00	e	4.38E-01	e
Bromochloromethane	74-97-5	NA	e	1.78E+01	1.41E+00	i	2.57E+01	7.13E-01	e	1.78E-01	e
Bromodichloromethane	75-27-4	5.38E+01	c	5.38E+01	1.06E+02	c	1.06E+02	2.15E+00	c	5.38E-01	c
Bromoethene	593-60-2	2.37E+01	m	2.37E+01	1.57E+00	m	3.72E+01	9.50E-01	e	2.37E-01	e
Bromoform	75-25-2	1.26E+02	c	1.26E+02	2.24E+02	c	2.24E+02	5.04E+00	c	1.26E+00	c
Bromomethane	74-83-9	9.00E+00	c	9.00E+00	1.30E+01	c	1.30E+01	3.60E-01	c	9.00E-02	c
Carbon tetrachloride	56-23-5	1.52E+02	c	1.52E+02	5.21E+02	c	5.21E+02	6.08E+00	c	1.52E+00	c
Chlorodibromomethane	124-48-1	7.05E+01	c	7.05E+01	1.50E+02	c	1.50E+02	2.82E+00	c	7.05E-01	c
Chlorodifluoromethane	75-45-6	9.83E+00	c	9.83E+00	1.20E+01	c	1.20E+01	3.93E-01	c	9.83E-02	c
Chloroethane	75-00-3	3.71E+02	c	3.71E+02	1.26E+03	c	1.26E+03	1.48E+01	c	3.71E+00	c
Chloroform	67-66-3	5.30E+01	c	5.30E+01	8.90E+01	c	8.90E+01	2.12E+00	c	5.30E-01	c
Chloromethane	74-87-3	6.00E+00	c	6.00E+00	8.00E+00	c	8.00E+00	2.40E-01	c	6.00E-02	c
Chloropentafluoroethane	76-15-3	7.08E+02	p	7.08E+02	2.10E+00	p	1.26E+02	2.83E+01	e	7.08E+00	e
cis-1,2-Dichloroethene	156-59-2	4.98E+01	h	4.98E+01	9.60E+01	c	9.60E+01	1.99E+00	h	4.98E-01	h
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanogen bromide	506-68-3	NA	e	8.41E-01	-2.90E-01	m	5.13E-01	3.36E-02	e	8.41E-03	e
Cyanogen chloride	506-77-4	4.50E+00	m	4.50E+00	-3.80E-01	m	4.17E-01	1.80E-01	e	4.50E-02	e
Dichlorodifluoromethane	75-71-8	6.85E+00	c	6.85E+00	1.44E+02	c	1.44E+02	2.74E+00	c	6.85E-01	c
Dichlorofluoromethane	75-43-4	3.50E+01	p	3.50E+01	1.55E+00	p	3.55E+01	1.40E+00	e	3.50E-01	e
Dichloromethane	75-09-2	1.00E+01	c	1.00E+01	1.80E+01	c	1.80E+01	4.00E-01	c	1.00E-01	c
Difluorodibromomethane	75-61-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexafluoroacetone	684-16-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iodomethane	74-88-4	NA	e	2.95E+01	1.69E+00	i	4.90E+01	1.18E+00	e	2.95E-01	e
Methylene bromide	74-95-3	2.60E+01	h	2.60E+01	4.17E+01	c	4.17E+01	1.04E+00	c	2.60E-01	c
Pentachloroethane	76-01-7	NA	e	3.39E+02	3.05E+00	i	1.12E+03	1.36E+01	e	3.39E+00	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
1,4-Dichloro-2-butene	764-41-0	1.12E+01	e	1.22E+00	e	1.22E+00	e	1.22E+00
1-Chloroethene	75-01-4	8.32E-01	c	8.42E+00	c	8.42E+00	c	8.42E+00
2,2-Dichloropropionic acid	75-99-0	2.05E-01	e	4.14E+00	e	4.14E+00	e	4.14E+00
2-Chloropropane	75-29-6	3.22E+00	e	3.09E+00	e	3.09E+00	e	3.09E+00
3-Chloropropene (Allyl chloride)	107-05-1	3.28E+00	e	2.97E+00	e	2.97E+00	e	2.97E+00
Bromochloromethane	74-97-5	1.34E+00	e	5.93E+00	e	5.93E+00	e	5.93E+00
Bromodichloromethane	75-27-4	4.03E+00	c	2.61E+00	c	2.61E+00	c	2.61E+00
Bromoethene	593-60-2	1.78E+00	e	4.79E+00	e	4.79E+00	e	4.79E+00
Bromoform	75-25-2	9.45E+00	c	1.70E+00	c	1.70E+00	c	1.70E+00
Bromomethane	74-83-9	6.75E-01	c	8.79E+00	c	8.79E+00	c	8.79E+00
Carbon tetrachloride	56-23-5	1.14E+01	c	1.04E+00	c	1.04E+00	c	1.04E+00
Chlorodibromomethane	124-48-1	5.29E+00	c	2.14E+00	c	2.14E+00	c	2.14E+00
Chlorodifluoromethane	75-45-6	7.38E-01	h	9.21E+00	c	9.21E+00	c	9.21E+00
Chloroethane	75-00-3	2.78E+01	c	6.25E-01	c	6.25E-01	c	6.25E-01
Chloroform	67-66-3	3.98E+00	c	2.89E+00	c	2.89E+00	c	2.89E+00
Chloromethane	74-87-3	4.50E-01	c	1.16E+01	c	1.16E+01	c	1.16E+01
Chloropentafluoroethane	76-15-3	5.31E+01	e	2.37E+00	e	2.37E+00	e	2.37E+00
cis-1,2-Dichloroethene	156-59-2	3.73E+00	h	2.77E+00	c	2.77E+00	c	2.77E+00
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA	NA	NA	NA	NA
Cyanogen bromide	506-68-3	6.31E-02	e	5.70E+01	e	5.70E+01	e	5.70E+01
Cyanogen chloride	506-77-4	3.38E-01	e	6.42E+01	e	6.42E+01	e	6.42E+01
Dichlorodifluoromethane	75-71-8	5.14E+00	c	2.19E+00	c	2.19E+00	c	2.19E+00
Dichlorofluoromethane	75-43-4	2.63E+00	e	4.92E+00	e	4.92E+00	e	4.92E+00
Dichloromethane	75-09-2	7.50E-01	c	7.29E+00	c	7.29E+00	c	7.29E+00
Difluorodibromomethane	75-61-6	NA	NA	NA	NA	NA	NA	NA
Hexafluoroacetone	684-16-2	NA	NA	NA	NA	NA	NA	NA
Iodomethane	74-88-4	2.21E+00	e	4.08E+00	e	4.08E+00	e	4.08E+00
Methylene bromide	74-95-3	1.95E+00	c	4.48E+00	c	4.48E+00	c	4.48E+00
Pentachloroethane	76-01-7	2.54E+01	e	6.68E-01	e	6.68E-01	e	6.68E-01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
1,4-Dichloro-2-butene	764-41-0	1.99E+01	e	3.88E-03	e	3.88E-03	e	2.96E+01	e
1-Chloroethene	75-01-4	7.29E+01	c	2.95E-06	c	2.95E-06	c	8.08E+00	c
2,2-Dichloropropionic acid	75-99-0	3.97E+02	e	5.37E+01	e	5.37E+01	e	1.09E+01	e
2-Chloropropane	75-29-6	3.04E+01	e	3.62E-04	e	3.62E-04	e	1.31E+01	e
3-Chloropropene (Allyl chloride)	107-05-1	3.07E+01	e	5.85E-04	e	5.85E-04	e	1.34E+01	e
Bromochloromethane	74-97-5	5.13E+01	e	1.22E-03	e	1.22E-03	e	9.14E+00	e
Bromodichloromethane	75-27-4	2.74E+01	c	2.53E-03	c	2.53E-03	c	1.47E+01	c
Bromoethene	593-60-2	4.24E+01	e	2.15E-04	e	2.15E-04	e	1.01E+01	e
Bromoform	75-25-2	1.69E+01	c	2.89E-02	c	2.89E-02	c	2.13E+01	c
Bromomethane	74-83-9	8.87E+01	c	6.07E-05	c	6.07E-05	c	7.98E+00	c
Carbon tetrachloride	56-23-5	2.30E+01	c	1.52E-03	c	1.52E-03	c	3.50E+01	c
Chlorodibromomethane	124-48-1	2.45E+01	c	9.59E-03	c	9.59E-03	c	1.73E+01	c
Chlorodifluoromethane	75-45-6	8.01E+01	c	4.69E-06	c	4.69E-06	c	7.88E+00	c
Chloroethane	75-00-3	1.70E+01	c	6.05E-05	c	6.05E-05	c	6.30E+01	c
Chloroform	67-66-3	2.58E+01	c	1.65E-03	c	1.65E-03	c	1.37E+01	c
Chloromethane	74-87-3	1.24E+02	c	1.13E-05	c	1.13E-05	c	7.46E+00	c
Chloropentafluoroethane	76-15-3	2.25E+00	e	1.73E-06	e	1.73E-06	e	1.59E+01	e
cis-1,2-Dichloroethene	156-59-2	2.83E+01	h	1.60E-03	c	1.60E-03	c	1.41E+01	c
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA	NA	NA	NA	NA	NA
Cyanogen bromide	506-68-3	7.67E+02	e	1.13E-06	e	1.13E-06	e	6.45E+00	e
Cyanogen chloride	506-77-4	1.43E+02	e	9.04E-07	e	9.04E-07	e	6.43E+00	e
Dichlorodifluoromethane	75-71-8	2.48E+01	c	4.33E-06	c	4.33E-06	c	1.70E+01	c
Dichlorofluoromethane	75-43-4	2.84E+01	e	2.33E-04	e	2.33E-04	e	9.93E+00	e
Dichloromethane	75-09-2	8.46E+01	c	5.11E-04	c	5.11E-04	c	8.46E+00	c
Difluorodibromomethane	75-61-6	NA	NA	NA	NA	NA	NA	NA	NA
Hexafluoroacetone	684-16-2	NA	NA	NA	NA	NA	NA	NA	NA
Iodomethane	74-88-4	3.72E+01	e	6.44E-04	e	6.44E-04	e	1.10E+01	e
Methylene bromide	74-95-3	4.01E+01	c	1.13E-04	c	1.13E-04	c	1.04E+01	c
Pentachloroethane	76-01-7	1.72E+01	e	4.04E-02	e	4.04E-02	e	5.81E+01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
1,4-Dichloro-2-butene	764-41-0	1.00E-05	e	7.89E-06	e	3.16E-03	e	3.16E-06	e	1.21E-05	e
1-Chloroethene	75-01-4	3.52E-07	c	2.78E-07	c	1.11E-04	c	1.11E-07	c	4.26E-07	c
2,2-Dichloropropionic acid	75-99-0	1.20E-06	e	9.49E-07	e	3.80E-04	e	3.80E-07	e	1.46E-06	e
2-Chloropropane	75-29-6	2.00E-06	e	1.58E-06	e	6.31E-04	e	6.31E-07	e	2.42E-06	e
3-Chloropropene (Allyl chloride)	107-05-1	2.14E-06	e	1.69E-06	e	6.76E-04	e	6.76E-07	e	2.59E-06	e
Bromochloromethane	74-97-5	6.46E-07	e	5.10E-07	e	2.04E-04	e	2.04E-07	e	7.82E-07	e
Bromodichloromethane	75-27-4	2.66E-06	c	2.10E-06	c	8.42E-04	c	8.42E-07	c	3.22E-06	c
Bromoethene	593-60-2	9.33E-07	e	7.37E-07	e	2.95E-04	e	2.95E-07	e	1.13E-06	e
Bromoform	75-25-2	5.63E-06	c	4.44E-06	c	1.78E-03	c	1.78E-06	c	6.81E-06	c
Bromomethane	74-83-9	3.27E-07	c	2.58E-07	c	1.03E-04	c	1.03E-07	c	3.95E-07	c
Carbon tetrachloride	56-23-5	1.30E-05	c	1.05E-05	c	4.14E-03	c	4.14E-06	c	1.58E-05	c
Chlorodibromomethane	124-48-1	3.77E-06	c	2.97E-06	c	1.19E-03	c	1.19E-06	c	4.56E-06	c
Chlorodifluoromethane	75-45-6	3.01E-07	c	2.38E-07	c	9.53E-05	c	9.53E-08	c	3.65E-07	c
Chloroethane	75-00-3	3.16E-05	c	2.50E-05	c	1.00E-02	c	1.00E-05	c	3.83E-05	c
Chloroform	67-66-3	2.23E-06	c	1.76E-06	c	7.07E-04	c	7.07E-07	c	2.71E-06	c
Chloromethane	74-87-3	2.01E-07	c	1.59E-07	c	6.35E-05	c	6.36E-08	c	2.43E-07	c
Chloropentafluoroethane	76-15-3	3.16E-06	e	2.50E-06	e	1.00E-03	e	1.00E-06	e	3.83E-06	e
cis-1,2-Dichloroethene	156-59-2	2.41E-06	c	1.90E-06	c	7.63E-04	c	7.63E-07	c	2.92E-06	c
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanogen bromide	506-68-3	1.29E-08	e	1.02E-08	e	4.07E-06	e	4.07E-09	e	1.56E-08	e
Cyanogen chloride	506-77-4	1.05E-08	e	8.27E-09	e	3.31E-06	e	3.31E-09	e	1.27E-08	e
Dichlorodifluoromethane	75-71-8	3.63E-06	c	2.87E-06	c	1.15E-03	c	1.15E-06	c	4.40E-06	c
Dichlorofluoromethane	75-43-4	8.91E-07	e	7.04E-07	e	2.82E-04	e	2.82E-07	e	1.08E-06	e
Dichloromethane	75-09-2	4.52E-07	c	3.57E-07	c	1.43E-04	c	1.43E-07	c	5.47E-07	c
Difluorodibromomethane	75-61-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexafluoroacetone	684-16-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iodomethane	74-88-4	1.23E-06	e	9.71E-07	e	3.89E-04	e	3.89E-07	e	1.49E-06	e
Methylene bromide	74-95-3	1.05E-06	c	8.27E-07	c	3.31E-04	c	3.31E-07	c	1.27E-06	c
Pentachloroethane	76-01-7	2.82E-05	e	2.23E-05	e	8.91E-03	e	8.91E-06	e	3.41E-05	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
1,4-Dichloro-2-butene	764-41-0	NA	NA	5.57E+01	e	NA	NA	NA	NA
1-Chloroethene	75-01-4	NA	NA	1.81E+00	s	NA	NA	NA	NA
2,2-Dichloropropionic acid	75-99-0	NA	NA	1.11E+01	e	NA	NA	6.00E+01	d
2-Chloropropane	75-29-6	NA	NA	1.64E+01	e	NA	NA	NA	NA
3-Chloropropene (Allyl chloride)	107-05-1	NA	NA	1.73E+01	e	NA	NA	1.40E+01	d
Bromochloromethane	74-97-5	NA	NA	6.94E+00	e	NA	NA	NA	NA
Bromodichloromethane	75-27-4	NA	NA	2.04E+01	c	NA	NA	NA	NA
Bromoethene	593-60-2	NA	NA	9.19E+00	e	NA	NA	1.80E+02	d
Bromoform	75-25-2	NA	NA	3.60E+01	c	NA	NA	NA	NA
Bromomethane	74-83-9	NA	NA	4.14E+00	c	NA	NA	NA	NA
Carbon tetrachloride	56-23-5	NA	NA	3.00E+01	c	NA	NA	NA	NA
Chlorodibromomethane	124-48-1	NA	NA	2.65E+01	c	NA	NA	NA	NA
Chlorodifluoromethane	75-45-6	NA	NA	3.89E+00	c	NA	NA	NA	NA
Chloroethane	75-00-3	NA	NA	1.34E+02	c	NA	NA	NA	NA
Chloroform	67-66-3	NA	NA	3.59E+00	c	NA	NA	NA	NA
Chloromethane	74-87-3	NA	NA	2.86E+00	c	NA	NA	NA	NA
Chloropentafluoroethane	76-15-3	NA	NA	2.32E+01	e	NA	NA	NA	NA
cis-1,2-Dichloroethene	156-59-2	NA	NA	1.89E+01	c	NA	NA	NA	NA
cis-1,3-Dichloropropene	10061-01-5	NA	NA	NA	NA	NA	NA	NA	NA
Cyanogen bromide	506-68-3	NA	NA	3.54E-01	e	NA	NA	NA	NA
Cyanogen chloride	506-77-4	NA	NA	3.03E-01	e	NA	NA	NA	NA
Dichlorodifluoromethane	75-71-8	NA	NA	2.58E+01	c	NA	NA	NA	NA
Dichlorofluoromethane	75-43-4	NA	NA	8.87E+00	e	NA	NA	NA	NA
Dichloromethane	75-09-2	NA	NA	5.30E+00	c	NA	NA	NA	NA
Difluorodibromomethane	75-61-6	NA	NA	NA	NA	NA	NA	NA	NA
Hexafluoroacetone	684-16-2	NA	NA	NA	NA	NA	NA	NA	NA
Iodomethane	74-88-4	NA	NA	1.13E+01	e	NA	NA	2.80E+01	d
Methylene bromide	74-95-3	NA	NA	1.00E+01	c	NA	NA	NA	NA
Pentachloroethane	76-01-7	NA	NA	1.22E+02	e	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
1,4-Dichloro-2-butene	764-41-0	0.0E+00	NA	4.79E-03	3.19E-04	2.39E-04	e	0.0E+00	NA	1.96E+00	1.31E-01	9.80E-02	e
1-Chloroethene	75-01-4	0.0E+00	NA	2.21E-03	1.48E-04	1.11E-04	e	1.41E+00	c	1.22E+01	8.11E-01	6.08E-01	e
2,2-Dichloropropionic acid	75-99-0	0.0E+00	NA	7.98E-04	5.32E-05	3.99E-05	e	4.22E+00	e	1.78E+01	1.18E+00	8.88E-01	e
2-Chloropropane	75-29-6	0.0E+00	NA	3.89E-03	2.59E-04	1.95E-04	e	0.0E+00	NA	5.52E+00	3.68E-01	2.76E-01	e
3-Chloropropene (Allyl chloride)	107-05-1	0.0E+00	NA	3.91E-03	2.61E-04	1.96E-04	e	1.81E+01	e	5.44E+00	3.63E-01	2.72E-01	e
Bromochloromethane	74-97-5	0.0E+00	NA	2.84E-03	1.89E-04	1.42E-04	e	0.0E+00	NA	9.70E+00	6.47E-01	4.85E-01	e
Bromodichloromethane	75-27-4	0.0E+00	NA	4.11E-03	2.74E-04	2.05E-04	e	0.0E+00	NA	4.65E+00	3.10E-01	2.33E-01	e
Bromoethene	593-60-2	0.0E+00	NA	3.21E-03	2.14E-04	1.60E-04	e	1.41E+00	e	8.23E+00	5.49E-01	4.12E-01	e
Bromoform	75-25-2	0.0E+00	NA	4.71E-03	3.14E-04	2.35E-04	e	1.41E+00	c	2.28E+00	1.52E-01	1.14E-01	e
Bromomethane	74-83-9	0.0E+00	NA	1.95E-03	1.30E-04	9.75E-05	e	9.03E+00	c	1.32E+01	8.80E-01	6.60E-01	e
Carbon tetrachloride	56-23-5	0.0E+00	NA	4.80E-03	3.20E-04	2.40E-04	e	7.03E-01	c	1.92E+00	1.28E-01	9.62E-02	e
Chlorodibromomethane	124-48-1	0.0E+00	NA	4.34E-03	2.89E-04	2.17E-04	e	1.41E+00	c	3.75E+00	2.50E-01	1.87E-01	e
Chlorodifluoromethane	75-45-6	0.0E+00	NA	2.06E-03	1.37E-04	1.03E-04	e	0.0E+00	NA	1.28E+01	8.51E-01	6.39E-01	e
Chloroethane	75-00-3	0.0E+00	NA	5.07E-03	3.38E-04	2.54E-04	e	6.72E+02	c	8.33E-01	5.56E-02	4.17E-02	e
Chloroform	67-66-3	0.0E+00	NA	4.10E-03	2.73E-04	2.05E-04	e	1.41E+00	c	4.71E+00	3.14E-01	2.35E-01	e
Chloromethane	74-87-3	0.0E+00	NA	1.48E-03	9.88E-05	7.41E-05	e	9.03E+00	c	1.51E+01	1.00E+00	7.53E-01	e
Chloropentafluoroethane	76-15-3	0.0E+00	NA	5.17E-03	3.45E-04	2.59E-04	e	0.0E+00	NA	4.45E-01	2.97E-02	2.23E-02	e
cis-1,2-Dichloroethene	156-59-2	0.0E+00	NA	4.04E-03	2.69E-04	2.02E-04	e	1.41E+00	c	4.94E+00	3.29E-01	2.47E-01	e
cis-1,3-Dichloropropene	10061-01-5	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Cyanogen bromide	506-68-3	0.0E+00	NA	2.74E-04	1.83E-05	1.37E-05	e	0.0E+00	NA	1.98E+01	1.32E+00	9.92E-01	e
Cyanogen chloride	506-77-4	0.0E+00	NA	1.20E-03	7.97E-05	5.98E-05	e	0.0E+00	NA	1.62E+01	1.08E+00	8.10E-01	e
Dichlorodifluoromethane	75-71-8	0.0E+00	NA	4.32E-03	2.88E-04	2.16E-04	e	1.41E+00	c	3.84E+00	2.56E-01	1.92E-01	e
Dichlorofluoromethane	75-43-4	0.0E+00	NA	3.67E-03	2.45E-04	1.84E-04	e	0.0E+00	NA	6.39E+00	4.26E-01	3.20E-01	e
Dichloromethane	75-09-2	0.0E+00	NA	2.08E-03	1.39E-04	1.04E-04	e	9.03E+00	c	1.27E+01	8.46E-01	6.34E-01	e
Difluorodibromomethane	75-61-6	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Hexafluoroacetone	684-16-2	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Iodomethane	74-88-4	0.0E+00	NA	3.47E-03	2.31E-04	1.74E-04	e	9.03E+00	e	7.18E+00	4.79E-01	3.59E-01	e
Methylene bromide	74-95-3	0.0E+00	NA	3.32E-03	2.21E-04	1.66E-04	e	9.03E+00	c	7.78E+00	5.19E-01	3.89E-01	e
Pentachloroethane	76-01-7	0.0E+00	NA	5.05E-03	3.37E-04	2.53E-04	e	0.0E+00	NA	9.09E-01	6.06E-02	4.55E-02	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
1,4-Dichloro-2-butene	764-41-0	1.17E+00	7.80E-02	5.85E-02	e	1.33E+05	5.90E+02	3.32E+02	f	1.75E-02	aa
1-Chloroethene	75-01-4	7.26E+00	4.84E-01	3.63E-01	e	1.38E+08	6.12E+05	3.44E+05	f	5.60E-03	ab
2,2-Dichloropropionic acid	75-99-0	1.06E+01	7.07E-01	5.31E-01	e	5.01E+01	2.23E-01	1.25E-01	f	3.35E-03	aa
2-Chloropropane	75-29-6	3.30E+00	2.20E-01	1.65E-01	e	1.21E+06	5.38E+03	3.03E+03	f	1.08E-02	aa
3-Chloropropene (Allyl chloride)	107-05-1	3.25E+00	2.17E-01	1.62E-01	e	8.05E+05	3.58E+03	2.01E+03	f	5.40E-03	ab
Bromochloromethane	74-97-5	5.79E+00	3.86E-01	2.90E-01	e	1.19E+05	5.28E+02	2.97E+02	f	2.63E-03	aa
Bromodichloromethane	75-27-4	2.78E+00	1.85E-01	1.39E-01	e	5.39E+04	2.39E+02	1.35E+02	f	4.60E-03	ab
Bromoethene	593-60-2	4.92E+00	3.28E-01	2.46E-01	e	1.34E+06	5.94E+03	3.34E+03	f	4.30E-03	ab
Bromoform	75-25-2	1.36E+00	9.07E-02	6.80E-02	e	2.12E+03	9.40E+00	5.29E+00	f	2.20E-03	ab
Bromomethane	74-83-9	7.89E+00	5.26E-01	3.94E-01	e	3.50E+06	1.56E+04	8.75E+03	f	2.80E-03	ab
Carbon tetrachloride	56-23-5	1.15E+00	7.66E-02	5.74E-02	e	2.06E+05	9.17E+02	5.16E+02	f	1.60E-02	ab
Chlorodibromomethane	124-48-1	2.24E+00	1.49E-01	1.12E-01	e	1.03E+04	4.59E+01	2.58E+01	f	3.20E-03	ab
Chlorodifluoromethane	75-45-6	7.63E+00	5.08E-01	3.81E-01	e	5.10E+07	2.27E+05	1.27E+05	f	2.75E-03	aa
Chloroethane	75-00-3	4.98E-01	3.32E-02	2.49E-02	e	1.89E+07	8.40E+04	4.73E+04	f	6.10E-03	ab
Chloroform	67-66-3	2.81E+00	1.87E-01	1.41E-01	e	1.21E+05	5.36E+02	3.02E+02	f	6.80E-03	ab
Chloromethane	74-87-3	8.99E+00	6.00E-01	4.50E-01	e	4.92E+07	2.19E+05	1.23E+05	f	3.30E-03	ab
Chloropentafluoroethane	76-15-3	2.66E-01	1.77E-02	1.33E-02	e	1.59E+07	7.08E+04	3.98E+04	f	5.52E-03	aa
cis-1,2-Dichloroethene	156-59-2	2.95E+00	1.97E-01	1.48E-01	e	2.05E+05	9.09E+02	5.11E+02	f	9.67E-03	aa
cis-1,3-Dichloropropene	10061-01-5	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Cyanogen bromide	506-68-3	1.19E+01	7.90E-01	5.93E-01	e	7.57E+07	3.36E+05	1.89E+05	f	2.59E-04	aa
Cyanogen chloride	506-77-4	9.67E+00	6.45E-01	4.84E-01	e	2.03E+07	9.03E+04	5.08E+04	f	3.99E-04	aa
Dichlorodifluoromethane	75-71-8	2.29E+00	1.53E-01	1.15E-01	e	8.98E+07	3.99E+05	2.25E+05	f	9.00E-03	ab
Dichlorofluoromethane	75-43-4	3.82E+00	2.54E-01	1.91E-01	e	8.18E+05	3.63E+03	2.04E+03	f	4.59E-03	aa
Dichloromethane	75-09-2	7.58E+00	5.05E-01	3.79E-01	e	6.35E+05	2.82E+03	1.59E+03	f	3.50E-03	ab
Difluorodibromomethane	75-61-6	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Hexafluoroacetone	684-16-2	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Iodomethane	74-88-4	4.29E+00	2.86E-01	2.14E-01	e	4.00E+05	1.78E+03	9.99E+02	f	2.50E-03	ab
Methylene bromide	74-95-3	4.65E+00	3.10E-01	2.32E-01	e	1.90E+06	8.45E+03	4.75E+03	f	2.05E-03	aa
Pentachloroethane	76-01-7	5.43E-01	3.62E-02	2.71E-02	e	1.23E+04	5.45E+01	3.06E+01	f	1.29E-02	aa

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
trans-1,2-Dichloroethylene	156-60-5	0 or 1	b	96.95	NA	7.44E-03	c	7.44E-03	8.16E-02	c	9.75E-06	c
trans-1,3-Dichloropropene	10061-02-6	0 or 1	b	110.97	NA	3.56E-02	k	8.69E-04	8.23E-02	e	9.53E-06	e
Trichloroacetic acid	76-03-9	0 or 1	b	163.39	NA	NA	e	1.80E-07	6.36E-02	e	7.36E-06	e
Trichlorofluoroethane	27154-33-2	0 or 1	b	151.4	NA	5.10E+00	k	1.24E-01	6.69E-02	e	7.74E-06	e
Trichlorofluoromethane	75-69-4	0 or 1	b	137.38	NA	1.37E-01	c	1.37E-01	4.27E-02	c	1.00E-05	c
Trifluorobromomethane	75-63-8	0 or 1	b	148.91	NA	2.04E+01	k	4.98E-01	6.76E-02	e	7.83E-06	e
Dioxin and Furan Compounds (PCDDs/PCDFs)												
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	0 or 1	b	425.31	NA	7.50E-06	c	7.50E-06	1.11E-02	c	3.89E-06	c
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0 or 1	b	409.31	NA	5.30E-05	c	5.30E-05	1.55E-02	c	3.99E-06	c
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0 or 1	b	409.31	NA	5.30E-05	c	5.30E-05	1.55E-02	c	3.99E-06	c
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	0 or 1	b	390.87	NA	1.20E-05	c	1.20E-05	1.15E-02	c	4.12E-06	c
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	0 or 1	b	374.87	NA	1.40E-05	c	1.40E-05	1.62E-02	c	4.23E-06	c
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	0 or 1	b	390.87	NA	1.20E-05	c	1.20E-05	1.15E-02	c	4.12E-06	c
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	0 or 1	b	374.87	NA	6.10E-06	c	6.10E-06	1.62E-02	c	4.23E-06	c
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	0 or 1	b	390.87	NA	1.20E-05	c	1.20E-05	1.15E-02	c	4.12E-06	c
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	0 or 1	b	374.87	NA	1.00E-05	c	1.00E-05	1.62E-02	c	4.23E-06	c
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	0 or 1	b	356.42	NA	2.60E-06	c	2.60E-06	1.21E-02	c	4.38E-06	c
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	0 or 1	b	340.42	NA	6.20E-06	c	6.20E-06	1.70E-02	c	4.51E-06	c
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	0 or 1	b	374.87	NA	1.00E-05	c	1.00E-05	1.62E-02	c	4.23E-06	c
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	0 or 1	b	340.42	NA	6.20E-06	c	6.20E-06	1.70E-02	c	4.51E-06	c
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	0 or 1	b	321.98	NA	1.60E-05	c	1.60E-05	1.27E-02	c	6.81E-06	c
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	0 or 1	b	305.98	NA	8.60E-06	c	8.60E-06	1.79E-02	c	4.85E-06	c
Dibenzofuran	132-64-9	0 or 1	b	168.19	NA	1.30E-05	u	1.30E-05	6.24E-02	e	7.22E-06	e
Octachlorodibenzo(p)dioxin	3268-87-9	0 or 1	b	459.75	NA	7.00E-09	c	7.00E-09	1.06E-02	c	3.69E-07	c
Octachlorodibenzofuran	39001-02-0	0 or 1	b	444.76	NA	1.90E-06	c	1.90E-06	1.48E-02	c	3.78E-06	c
Polychlorinated Biphenyls (PCBs)												
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	0 or 1	b	395.33	NA	1.93E+01	i	1.91E-04	3.53E-02	e	4.08E-06	e
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	0 or 1	b	395.33	NA	3.04E+01	i	3.01E-04	3.53E-02	e	4.08E-06	e
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	0 or 1	b	395.33	NA	3.68E-04	k	8.98E-06	3.53E-02	e	4.08E-06	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
trans-1,2-Dichloroethylene	156-60-5	3.80E+01	c	3.80E+01	9.60E+01	c	9.60E+01	1.52E+00	c	3.80E-01	c
trans-1,3-Dichloropropene	10061-02-6	NA	e	5.73E+01	2.06E+00	t	1.15E+02	2.29E+00	e	5.73E-01	e
Trichloroacetic acid	76-03-9	NA	e	1.54E+01	1.33E+00	i	2.14E+01	6.17E-01	e	1.54E-01	e
Trichlorofluoroethane	27154-33-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	1.34E+02	c	1.34E+02	3.40E+02	c	3.40E+02	5.34E+00	c	1.34E+00	c
Trifluorobromomethane	75-63-8	NA	e	4.00E+01	1.86E+00	o	7.24E+01	1.60E+00	e	4.00E-01	e
Dioxin and Furan Compounds (PCDDs/PCDFs)											
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	9.77E+07	c	9.77E+07	1.58E+08	c	1.58E+08	3.91E+06	c	9.77E+05	c
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	5.13E+07	c	5.13E+07	8.32E+07	c	8.32E+07	2.05E+06	c	5.13E+05	c
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	5.13E+07	c	5.13E+07	8.32E+07	c	8.32E+07	2.05E+06	c	5.13E+05	c
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	3.80E+07	c	3.80E+07	6.17E+07	c	6.17E+07	1.52E+06	c	3.80E+05	c
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	1.10E+07	c	1.10E+07	1.78E+07	c	1.78E+07	4.39E+05	c	1.10E+05	c
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	1.10E+07	c	1.10E+07	1.78E+07	c	1.78E+07	4.39E+05	c	1.10E+05	c
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	1.10E+07	c	1.10E+07	1.78E+07	c	1.78E+07	4.39E+05	c	1.10E+05	c
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	1.10E+07	c	1.10E+07	1.78E+07	c	1.78E+07	4.39E+05	c	1.10E+05	c
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	1.10E+07	c	1.10E+07	1.78E+07	c	1.78E+07	4.39E+05	c	1.10E+05	c
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	2.69E+06	c	2.69E+06	4.37E+06	c	4.37E+06	1.08E+05	c	2.69E+04	c
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	3.80E+06	c	3.80E+06	6.17E+06	c	6.17E+06	1.52E+05	c	3.80E+04	c
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	1.10E+07	c	1.10E+07	1.78E+07	c	1.78E+07	4.39E+05	c	1.10E+05	c
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	5.13E+06	c	5.13E+06	8.32E+06	c	8.32E+06	2.05E+05	c	5.13E+04	c
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	2.69E+06	s	2.69E+06	4.37E+06	c	4.37E+06	1.08E+05	c	2.69E+04	c
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	2.09E+06	c	2.09E+06	3.39E+06	c	3.39E+06	8.36E+04	c	2.09E+04	c
Dibenzofuran	132-64-9	NA	e	1.32E+04	4.33E+00	i	2.14E+04	5.27E+02	e	1.32E+02	e
Octachlorodibenzo(p)dioxin	3268-87-9	2.40E+07	c	2.40E+07	3.89E+07	c	3.89E+07	9.60E+05	c	2.40E+05	c
Octachlorodibenzofuran	39001-02-0	3.72E+08	c	3.72E+08	6.03E+08	c	6.03E+08	1.49E+07	c	3.72E+06	c
Polychlorinated Biphenyls (PCBs)											
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	6.85E+00	i	7.08E+06	7.08E+00	i	1.20E+07	2.83E+05	e	7.08E+04	e
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	6.92E+00	i	8.32E+06	7.12E+00	i	1.32E+07	3.33E+05	e	8.32E+04	e
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
trans-1,2-Dichloroethylene	156-60-5	2.85E+00	c	2.77E+00	c	2.77E+00	c	2.77E+00
trans-1,3-Dichloropropene	10061-02-6	4.29E+00	e	2.50E+00	e	2.50E+00	e	2.50E+00
Trichloroacetic acid	76-03-9	1.16E+00	e	6.60E+00	e	6.60E+00	e	6.60E+00
Trichlorofluoroethane	27154-33-2	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	1.00E+01	c	1.33E+00	c	1.33E+00	c	1.33E+00
Trifluorobromomethane	75-63-8	3.00E+00	e	3.26E+00	e	3.26E+00	e	3.26E+00
Dioxin and Furan Compounds (PCDDs/PCDFs)								
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	7.33E+06	c	7.05E-04	c	7.05E-04	c	7.05E-04
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	3.85E+06	c	1.02E-03	c	1.02E-03	c	1.02E-03
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	3.85E+06	c	1.02E-03	c	1.02E-03	c	1.02E-03
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	2.85E+06	c	1.22E-03	c	1.22E-03	c	1.22E-03
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	8.22E+05	c	2.50E-03	c	2.50E-03	c	2.50E-03
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	8.22E+05	c	2.50E-03	c	2.50E-03	c	2.50E-03
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	8.22E+05	c	2.50E-03	c	2.50E-03	c	2.50E-03
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	8.22E+05	c	2.50E-03	c	2.50E-03	c	2.50E-03
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	8.22E+05	c	2.50E-03	c	2.50E-03	c	2.50E-03
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	2.02E+05	c	5.62E-03	c	5.62E-03	c	5.62E-03
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	2.85E+05	c	4.61E-03	c	4.61E-03	c	4.61E-03
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	8.22E+05	c	2.50E-03	c	2.50E-03	c	2.50E-03
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	3.85E+05	c	3.87E-03	c	3.87E-03	c	3.87E-03
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	2.02E+05	c	5.62E-03	c	5.62E-03	c	5.62E-03
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1.57E+05	c	6.51E-03	c	6.51E-03	c	6.51E-03
Dibenzofuran	132-64-9	9.89E+02	e	1.22E-01	e	1.22E-01	e	1.22E-01
Octachlorodibenzo(p)dioxin	3268-87-9	1.80E+06	c	1.59E-03	c	1.59E-03	c	1.59E-03
Octachlorodibenzofuran	39001-02-0	2.79E+07	c	3.26E-04	c	3.26E-04	c	3.26E-04
Polychlorinated Biphenyls (PCBs)								
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	5.31E+05	e	3.13E-03	e	3.13E-03	e	3.13E-03
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	6.24E+05	e	2.97E-03	e	2.97E-03	e	2.97E-03
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
trans-1,2-Dichloroethylene	156-60-5	3.71E+01	c	9.70E-04	c	9.70E-04	c	1.41E+01	c
trans-1,3-Dichloropropene	10061-02-6	2.67E+01	e	1.01E-02	e	1.01E-02	e	1.53E+01	e
Trichloroacetic acid	76-03-9	5.68E+01	e	8.14E+00	e	8.14E+00	e	8.76E+00	e
Trichlorofluoroethane	27154-33-2	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	2.02E+00	c	2.02E-04	c	2.02E-04	c	2.70E+01	c
Trifluorobromomethane	75-63-8	3.15E+01	e	1.08E-05	e	1.08E-05	e	1.26E+01	e
Dioxin and Furan Compounds (PCDDs/PCDFs)									
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	4.90E-01	c	9.10E+05	s	3.50E+05	s	4.79E+05	c
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	5.68E-01	c	8.30E+05	s	8.30E+05	s	2.91E+05	c
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	5.68E-01	c	8.30E+05	s	8.30E+05	s	2.91E+05	c
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	6.09E-01	c	5.20E+05	s	5.20E+05	s	2.31E+05	c
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	8.10E-01	c	1.62E+05	s	1.62E+05	s	8.88E+04	c
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	8.10E-01	c	5.20E+05	s	5.20E+05	s	8.88E+04	c
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	8.10E-01	c	1.62E+05	s	1.62E+05	s	8.88E+04	c
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	8.10E-01	c	5.20E+05	s	5.20E+05	s	8.88E+04	c
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	8.10E-01	c	1.62E+05	s	1.62E+05	s	8.88E+04	c
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	1.12E+00	c	2.39E+05	s	2.39E+05	s	3.01E+04	c
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1.03E+00	c	9.75E+04	s	9.75E+04	s	3.93E+04	c
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	8.10E-01	c	1.62E+05	s	1.62E+05	s	8.88E+04	c
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	9.65E-01	c	9.75E+04	s	9.75E+04	s	4.95E+04	c
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	1.12E+00	c	6.55E+04	s	6.55E+04	s	3.01E+04	c
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1.19E+00	c	4.57E+04	s	4.57E+04	s	2.48E+04	c
Dibenzofuran	132-64-9	3.85E+00	e	1.76E+02	e	1.76E+02	e	5.08E+02	e
Octachlorodibenzo(p)dioxin	3268-87-9	6.77E-01	c	2.36E+06	s	2.36E+06	s	1.62E+05	c
Octachlorodibenzofuran	39001-02-0	3.60E-01	c	2.28E+06	s	2.28E+06	s	1.34E+06	c
Polychlorinated Biphenyls (PCBs)									
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	9.28E-01	e	1.02E+04	e	1.02E+04	e	6.57E+04	e
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	8.48E-01	e	7.13E+03	e	7.13E+03	e	7.05E+04	e
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
trans-1,2-Dichloroethylene	156-60-5	2.41E-06	c	1.90E-06	c	7.63E-04	c	7.63E-07	c	2.92E-06	c
trans-1,3-Dichloropropene	10061-02-6	2.88E-06	e	2.28E-06	e	9.12E-04	e	9.12E-07	e	3.49E-06	e
Trichloroacetic acid	76-03-9	5.37E-07	e	4.24E-07	e	1.70E-04	e	1.70E-07	e	6.50E-07	e
Trichlorofluoroethane	27154-33-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	8.54E-06	c	6.74E-06	c	2.70E-03	c	2.70E-06	c	1.03E-05	c
Trifluorobromomethane	75-63-8	1.82E-06	e	1.44E-06	e	5.75E-04	e	5.75E-07	e	2.20E-06	e
Dioxin and Furan Compounds (PCDDs/PCDFs)											
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	5.40E-03	c	1.20E+00	s	5.05E+00	s	1.00E-03	c	6.57E-03	c
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	5.43E-03	c	9.00E-01	s	3.30E+00	s	1.00E-03	c	6.57E-03	c
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	1.63E-02	c	8.00E-01	s	2.40E+00	s	3.00E-03	c	1.97E-02	c
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	3.26E-02	c	3.35E+00	s	6.65E+00	s	6.00E-03	c	3.94E-02	c
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	3.80E-02	c	4.30E+00	s	8.35E+00	s	7.00E-03	c	4.60E-02	c
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	2.71E-02	c	5.05E+00	s	9.75E+00	s	5.00E-03	c	3.29E-02	c
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	3.26E-02	c	4.65E+00	s	8.65E+00	s	6.00E-03	c	3.94E-02	c
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	2.71E-02	c	2.20E+00	s	4.95E+00	s	5.00E-03	c	3.29E-02	c
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	3.26E-02	c	NA	NA	NA	NA	6.00E-03	c	3.94E-02	c
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	5.43E-02	c	6.05E+00	s	6.30E+00	s	1.00E-02	c	6.57E-02	c
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	1.09E-02	c	1.65E+01	s	2.24E+01	s	2.00E-03	c	1.31E-02	c
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	2.71E-02	c	1.90E+00	s	2.90E+00	s	5.00E-03	c	3.29E-02	c
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	4.89E-02	c	6.60E+00	s	9.60E+00	s	9.00E-03	c	5.91E-02	c
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	5.43E-02	c	1.66E+01	s	1.36E+01	s	1.00E-02	c	6.57E-02	c
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	1.63E-02	c	3.05E+00	s	2.55E+00	s	3.00E-03	c	1.97E-02	c
Dibenzofuran	132-64-9	5.37E-04	e	4.24E-04	e	1.70E-01	e	1.70E-04	e	1.12E-03	e
Octachlorodibenzo(p)dioxin	3268-87-9	5.43E-03	c	2.50E-01	s	4.00E+00	s	1.00E-03	c	6.57E-03	c
Octachlorodibenzofuran	39001-02-0	5.43E-03	c	3.00E-01	s	1.45E+00	s	1.00E-03	c	6.57E-03	c
Polychlorinated Biphenyls (PCBs)											
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	3.02E-01	e	2.38E-01	e	9.55E+01	e	9.55E-02	e	3.66E-01	e
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	3.31E-01	e	2.61E-01	e	1.05E+02	e	1.05E-01	e	4.01E-01	e
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
trans-1,2-Dichloroethylene	156-60-5	NA	NA	1.89E+01	c	NA	NA	NA	NA
trans-1,3-Dichloropropene	10061-02-6	NA	NA	2.17E+01	e	NA	NA	NA	NA
Trichloroacetic acid	76-03-9	NA	NA	6.04E+00	e	NA	NA	NA	NA
Trichlorofluoroethane	27154-33-2	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	75-69-4	NA	NA	4.94E+01	c	NA	NA	NA	NA
Trifluorobromomethane	75-63-8	NA	NA	1.53E+01	e	NA	NA	NA	NA
Dioxin and Furan Compounds (PCDDs/PCDFs)									
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	NA	NA	NA	NA	5.00E-03	c	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	NA	NA	NA	NA	5.00E-03	c	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	NA	NA	NA	NA	5.00E-03	c	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	NA	NA	NA	NA	4.00E-02	c	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	NA	NA	NA	NA	4.00E-02	c	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	NA	NA	NA	NA	4.00E-02	c	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	NA	NA	NA	NA	4.00E-02	c	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	NA	NA	NA	NA	4.00E-02	c	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	NA	NA	NA	NA	4.00E-02	c	NA	NA
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	NA	NA	NA	NA	9.00E-02	c	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	NA	NA	NA	NA	9.00E-02	c	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	NA	NA	NA	NA	4.00E-02	c	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	NA	NA	NA	NA	9.00E-02	c	NA	NA
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	NA	NA	NA	NA	9.00E-02	c	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	NA	NA	NA	NA	9.00E-02	c	NA	NA
Dibenzofuran	132-64-9	NA	NA	NA	NA	2.51E+02	v	2.80E+01	d
Octachlorodibenzo(p)dioxin	3268-87-9	NA	NA	NA	NA	1.00E-04	c	NA	NA
Octachlorodibenzofuran	39001-02-0	NA	NA	NA	NA	1.00E-04	c	NA	NA
Polychlorinated Biphenyls (PCBs)									
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	NA	NA	NA	NA	NA	NA	NA	NA
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
trans-1,2-Dichloroethylene	156-60-5	0.0E+00	NA	3.76E-03	2.51E-04	1.88E-04	e	1.41E+00	c	6.03E+00	4.02E-01	3.02E-01	e
trans-1,3-Dichloropropene	10061-02-6	0.0E+00	NA	4.17E-03	2.78E-04	2.08E-04	e	0.0E+00	NA	4.43E+00	2.96E-01	2.22E-01	e
Trichloroacetic acid	76-03-9	0.0E+00	NA	2.65E-03	1.76E-04	1.32E-04	e	0.0E+00	NA	1.05E+01	6.97E-01	5.23E-01	e
Trichlorofluoroethane	27154-33-2	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Trichlorofluoromethane	75-69-4	0.0E+00	NA	4.74E-03	3.16E-04	2.37E-04	e	7.03E-01	c	2.16E+00	1.44E-01	1.08E-01	e
Trifluorobromomethane	75-63-8	0.0E+00	NA	3.82E-03	2.54E-04	1.91E-04	e	0.00E+00	NA	5.82E+00	3.88E-01	2.91E-01	e
Dioxin and Furan Compounds (PCDDs/PCDFs)													
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	3.30E-06	2.20E-07	1.65E-07	e
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	6.28E-06	4.18E-07	3.14E-07	e
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	6.28E-06	4.18E-07	3.14E-07	e
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	8.47E-06	5.65E-07	4.24E-07	e
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	2.93E-05	1.95E-06	1.46E-06	e
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	2.93E-05	1.95E-06	1.46E-06	e
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	2.93E-05	1.95E-06	1.46E-06	e
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	2.93E-05	1.95E-06	1.46E-06	e
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	2.93E-05	1.95E-06	1.46E-06	e
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	1.20E-04	7.98E-06	5.99E-06	e
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	8.47E-05	5.65E-06	4.24E-06	e
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	2.93E-05	1.95E-06	1.46E-06	e
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	6.28E-05	4.18E-06	3.14E-06	e
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	1.20E-04	7.98E-06	5.99E-06	e
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	1.54E-04	1.03E-05	7.70E-06	e
Dibenzofuran	132-64-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	9.03E+00	e	2.44E-02	1.63E-03	1.22E-03	e
Octachlorodibenzo(p)dioxin	3268-87-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	1.34E-05	8.95E-07	6.71E-07	e
Octachlorodibenzofuran	39001-02-0	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-02	s	8.66E-07	5.77E-08	4.33E-08	e
Polychlorinated Biphenyls (PCBs)													
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	4.55E-05	3.03E-06	2.27E-06	e
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	3.87E-05	2.58E-06	1.94E-06	e
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
trans-1,2-Dichloroethylene	156-60-5	3.60E+00	2.40E-01	1.80E-01	e	4.90E+05	2.18E+03	1.23E+03	f	7.70E-03	ab
trans-1,3-Dichloropropene	10061-02-6	2.65E+00	1.76E-01	1.32E-01	e	3.83E+04	1.70E+02	9.59E+01	f	9.09E-03	aa
Trichloroacetic acid	76-03-9	6.24E+00	4.16E-01	3.12E-01	e	2.27E+01	1.01E-01	5.68E-02	f	1.50E-03	aa
Trichlorofluoroethane	27154-33-2	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Trichlorofluoromethane	75-69-4	1.29E+00	8.58E-02	6.44E-02	e	1.34E+06	5.95E+03	3.35E+03	f	1.30E-02	ab
Trifluorobromomethane	75-63-8	3.47E+00	2.32E-01	1.74E-01	e	2.59E+07	1.15E+05	6.46E+04	f	4.10E-03	aa
Dioxin and Furan Compounds (PCDDs/PCDFs)											
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	35822-46-9	1.97E-06	1.31E-07	9.84E-08	e	2.62E-05	1.16E-07	6.54E-08	f	2.05E+00	aa
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	3.75E-06	2.50E-07	1.87E-07	e	4.91E-04	2.18E-06	1.23E-06	f	1.64E+00	aa
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	3.75E-06	2.50E-07	1.87E-07	e	4.91E-04	2.18E-06	1.23E-06	f	1.64E+00	aa
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	39227-28-6	5.06E-06	3.37E-07	2.53E-07	e	1.11E-04	4.95E-07	2.79E-07	f	1.70E+00	aa
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	1.75E-05	1.17E-06	8.74E-07	e	6.33E-04	2.81E-06	1.58E-06	f	9.09E-01	aa
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	57653-85-7	1.75E-05	1.17E-06	8.74E-07	e	3.85E-04	1.71E-06	9.63E-07	f	7.39E-01	aa
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	1.75E-05	1.17E-06	8.74E-07	e	2.76E-04	1.23E-06	6.89E-07	f	9.09E-01	aa
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	19408-74-3	1.75E-05	1.17E-06	8.74E-07	e	3.85E-04	1.71E-06	9.63E-07	f	7.39E-01	aa
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	1.75E-05	1.17E-06	8.74E-07	e	4.52E-04	2.01E-06	1.13E-06	f	9.09E-01	aa
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	40321-76-4	7.15E-05	4.77E-06	3.57E-06	e	3.59E-04	1.60E-06	8.97E-07	f	4.50E-01	aa
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	5.06E-05	3.37E-06	2.53E-06	e	8.51E-04	3.78E-06	2.13E-06	f	6.97E-01	aa
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	1.75E-05	1.17E-06	8.74E-07	e	4.52E-04	2.01E-06	1.13E-06	f	9.09E-01	aa
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	3.75E-05	2.50E-06	1.87E-06	e	6.31E-04	2.80E-06	1.58E-06	f	8.51E-01	aa
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1746-01-6	7.15E-05	4.77E-06	3.57E-06	e	2.32E-03	1.03E-05	5.80E-06	f	8.10E-01	ab
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	9.20E-05	6.13E-06	4.60E-06	e	2.26E-03	1.00E-05	5.65E-06	f	7.27E-01	aa
Dibenzofuran	132-64-9	1.46E-02	9.71E-04	7.29E-04	e	1.89E+00	8.39E-03	4.72E-03	f	1.44E-01	aa
Octachlorodibenzo(p)dioxin	3268-87-9	8.01E-06	5.34E-07	4.01E-07	e	9.49E-08	4.22E-10	2.37E-10	f	5.14E-01	aa
Octachlorodibenzofuran	39001-02-0	5.17E-07	3.45E-08	2.58E-08	e	2.32E-06	1.03E-08	5.80E-09	f	3.91E+00	aa
Polychlorinated Biphenyls (PCBs)											
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	2.72E-05	1.81E-06	1.36E-06	e	2.91E-02	1.30E-04	7.29E-05	f	5.37E-01	aa
2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	2.31E-05	1.54E-06	1.16E-06	e	3.92E-02	1.74E-04	9.79E-05	f	5.71E-01	aa
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	0 or 1	b	360.88	NA	2.80E-03	k	6.84E-05	3.75E-02	e	4.34E-06	e
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	0 or 1	b	360.88	NA	5.85E-03	k	1.43E-04	3.75E-02	e	4.34E-06	e
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	0 or 1	b	326.44	NA	3.38E-02	k	8.23E-04	4.01E-02	e	4.64E-06	e
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	0 or 1	b	360.88	NA	2.80E-03	k	6.84E-05	3.75E-02	e	4.34E-06	e
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	0 or 1	b	326.44	NA	1.18E-02	k	2.87E-04	4.01E-02	e	4.64E-06	e
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	0 or 1	b	326.44	NA	1.18E-02	k	2.87E-04	4.01E-02	e	4.64E-06	e
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	0 or 1	b	326.44	NA	1.18E-02	k	2.87E-04	4.01E-02	e	4.64E-06	e
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	0 or 1	b	360.88	NA	5.98E+00	i	5.92E-05	3.75E-02	e	4.34E-06	e
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	0 or 1	b	326.44	NA	1.18E-02	k	2.87E-04	4.01E-02	e	4.64E-06	e
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	0 or 1	b	291.99	NA	3.85E-04	k	9.38E-06	4.32E-02	e	5.00E-06	e
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	0 or 1	b	291.99	NA	3.85E-04	k	9.38E-06	4.32E-02	e	5.00E-06	e
Polychlorinated biphenyls (PCBs)	1336-36-3	0 or 1	b	NA	NA	1.40E-02	m	3.42E-04	1.75E-02	j	8.00E-06	j
Phthalates												
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	0 or 1	b	390.54	NA	8.37E-06	h	8.37E-06	1.32E-02	c	4.22E-06	c
Butylbenzyl phthalate	85-68-7	0 or 1	b	312.39	NA	1.91E-06	c	1.91E-06	1.65E-02	c	5.17E-06	c
Dibutyl phthalate	84-74-2	0 or 1	b	278.34	NA	1.43E-06	c	1.43E-06	4.38E-02	c	7.86E-06	c
Diethyl phthalate	84-66-2	0 or 1	b	222.24	NA	5.48E-07	c	5.48E-07	2.56E-02	c	6.35E-06	c
Dimethyl phthalate	131-11-3	0 or 1	b	194.19	NA	1.01E-07	c	1.01E-07	2.96E-02	c	7.13E-06	c
n-Dioctyl phthalate	117-84-0	0 or 1	b	390.56	NA	7.65E-07	h	7.65E-07	1.32E-02	c	4.20E-06	c
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)												
2-Chloronaphthalene	91-58-7	0 or 1	b	162.61	NA	1.43E-04	c	1.43E-04	3.64E-02	c	8.24E-06	c
2-Methyl naphthalene	91-57-6	0 or 1	b	142.2	NA	4.05E+01	i	4.01E-04	6.97E-02	e	8.08E-06	e
5-Nitroacenaphthene	602-87-9	0 or 1	b	199.21	NA	4.54E-05	k	1.11E-06	5.57E-02	e	6.45E-06	e
Acenaphthene	83-32-9	0 or 1	b	154.21	NA	1.84E-04	h	1.84E-04	4.21E-02	c	7.19E-06	c
Acenaphthylene	208-96-8	0 or 1	b	152.21	NA	1.19E+01	i	1.18E-04	4.39E-02	j	7.53E-06	j
Anthracene	120-12-7	0 or 1	b	178.22	NA	1.11E-04	c	1.11E-04	3.24E-02	c	7.74E-06	c
Fluorene	86-73-7	0 or 1	b	166.22	NA	7.30E-05	h	7.30E-05	3.63E-02	c	7.88E-06	c
Indene	95-13-6	0 or 1	b	116.16	NA	6.51E-02	k	1.59E-03	7.98E-02	e	9.24E-06	e
Naphthalene	91-20-3	0 or 1	b	128.16	NA	4.82E-04	c	4.82E-04	5.26E-02	c	8.92E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	NA	e	9.98E+06	7.12E+00	l	1.32E+07	3.99E+05	e	9.98E+04	e
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	6.60E+00	i	3.98E+06	7.41E+00	i	2.56E+07	1.59E+05	e	3.98E+04	e
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	4.48E+04	m	4.48E+04	6.29E+00	m	1.95E+06	1.79E+03	e	4.48E+02	e
Phthalates											
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	1.11E+05	h	1.11E+05	1.60E+05	c	1.60E+05	4.44E+03	c	1.11E+03	c
Butylbenzyl phthalate	85-68-7	1.37E+04	c	1.37E+04	2.59E+04	c	2.59E+04	5.50E+02	c	1.37E+02	c
Dibutyl phthalate	84-74-2	1.57E+03	c	1.57E+03	5.25E+04	c	5.25E+04	6.27E+01	c	1.57E+01	c
Diethyl phthalate	84-66-2	8.20E+01	c	8.20E+01	2.73E+04	c	2.73E+04	3.28E+00	c	8.20E-01	c
Dimethyl phthalate	131-11-3	3.09E+01	h	3.09E+01	4.30E+01	c	4.30E+01	1.06E+01	c	3.09E-01	h
n-Dioctyl phthalate	117-84-0	9.03E+08	c	9.03E+08	2.14E+09	c	2.14E+09	3.61E+07	c	9.03E+06	c
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)											
2-Chloronaphthalene	91-58-7	7.14E+03	c	7.14E+03	1.17E+04	c	1.17E+04	2.86E+02	c	7.14E+01	c
2-Methyl naphthalene	91-57-6	NA	e	4.47E+03	3.86E+00	i	7.24E+03	1.79E+02	e	4.47E+01	e
5-Nitroacenaphthene	602-87-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	4.90E+03	c	4.90E+03	9.22E+03	c	9.22E+03	1.96E+02	c	4.90E+01	c
Acenaphthylene	208-96-8	3.83E+00	i	6.76E+03	4.07E+00	i	1.17E+04	2.70E+02	e	6.76E+01	e
Anthracene	120-12-7	2.35E+04	c	2.35E+04	2.95E+04	c	2.95E+04	9.40E+02	c	2.35E+02	c
Fluorene	86-73-7	7.71E+03	c	7.71E+03	1.47E+04	c	1.47E+04	3.08E+02	c	7.71E+01	c
Indene	95-13-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	1.19E+03	c	1.19E+03	2.36E+03	c	2.36E+03	4.76E+01	c	1.19E+01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	NA	NA	NA	NA	NA	NA	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	NA	NA	NA	NA	NA	NA	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	7.49E+05	e	2.97E-03	e	2.97E-03	e	2.97E-03
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	2.99E+05	e	2.02E-03	e	2.02E-03	e	2.02E-03
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	NA	NA	NA	NA	NA	NA	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	NA	NA	NA	NA	NA	NA	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	3.36E+03	e	8.96E-03	e	8.96E-03	e	8.96E-03
Phthalates								
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	8.33E+03	c	3.80E-02	c	3.80E-02	c	3.80E-02
Butylbenzyl phthalate	85-68-7	1.03E+03	c	1.09E-01	c	1.09E-01	c	1.09E-01
Dibutyl phthalate	84-74-2	1.18E+02	c	7.24E-02	c	7.24E-02	c	7.24E-02
Diethyl phthalate	84-66-2	6.15E+00	c	1.06E-01	c	1.06E-01	c	1.06E-01
Dimethyl phthalate	131-11-3	2.00E+01	c	4.40E+00	c	4.40E+00	c	4.40E+00
n-Dioctyl phthalate	117-84-0	6.78E+07	c	1.57E-04	c	1.57E-04	c	1.57E-04
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)								
2-Chloronaphthalene	91-58-7	5.36E+02	c	1.72E-01	c	1.72E-01	c	1.72E-01
2-Methyl naphthalene	91-57-6	3.35E+02	e	2.27E-01	e	2.27E-01	e	2.27E-01
5-Nitroacenaphthene	602-87-9	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	3.67E+02	c	1.98E-01	c	1.98E-01	c	1.98E-01
Acenaphthylene	208-96-8	5.07E+02	e	1.72E-01	e	1.72E-01	e	1.72E-01
Anthracene	120-12-7	1.76E+03	c	1.01E-01	c	1.01E-01	c	1.01E-01
Fluorene	86-73-7	5.78E+02	c	1.51E-01	c	1.51E-01	c	1.51E-01
Indene	95-13-6	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	8.93E+01	c	4.35E-01	c	4.35E-01	c	4.35E-01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	NA	NA	NA	NA	NA	NA	NA	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	7.07E-01	e	7.46E+03	e	7.46E+03	e	7.05E+04	e
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	2.95E+00	e	7.34E+04	e	7.34E+04	e	1.18E+05	e
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	NA	NA	NA	NA	NA	NA	NA	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	NA	NA	NA	NA	NA	NA	NA	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	3.61E+01	e	8.19E+02	e	8.19E+02	e	1.62E+04	e
Phthalates									
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	2.13E+00	c	2.33E+03	h	2.33E+03	h	2.37E+03	c
Butylbenzyl phthalate	85-68-7	4.27E+00	c	1.46E+03	c	1.46E+03	c	5.87E+02	c
Dibutyl phthalate	84-74-2	6.43E+01	c	4.16E+03	c	4.16E+03	c	1.01E+03	c
Diethyl phthalate	84-66-2	7.46E+02	c	5.42E+03	c	5.42E+03	c	6.12E+02	c
Dimethyl phthalate	131-11-3	3.40E+01	h	3.05E+01	c	3.05E+01	c	1.05E+01	c
n-Dioctyl phthalate	117-84-0	3.93E-01	c	6.30E+08	h	6.30E+08	h	3.55E+06	c
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)									
2-Chloronaphthalene	91-58-7	4.51E+00	c	8.46E+00	c	8.46E+00	c	3.23E+02	c
2-Methyl naphthalene	91-57-6	5.02E+00	e	1.80E+00	e	1.80E+00	e	2.24E+02	e
5-Nitroacenaphthene	602-87-9	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	5.48E+00	c	5.07E+00	h	5.07E+00	h	2.69E+02	c
Acenaphthylene	208-96-8	4.77E+00	e	1.03E+01	e	1.03E+01	e	3.23E+02	e
Anthracene	120-12-7	2.76E+00	c	2.90E+01	c	2.90E+01	c	6.49E+02	c
Fluorene	86-73-7	4.96E+00	c	2.10E+01	h	2.10E+01	h	3.83E+02	c
Indene	95-13-6	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	8.23E+00	c	4.52E-01	c	4.52E-01	c	9.81E+01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	3.31E-01	e	2.61E-01	e	1.05E+02	e	1.05E-01	e	4.01E-01	e
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	6.43E-01	e	5.07E-01	e	2.03E+02	e	2.03E-01	e	7.78E-01	e
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	4.90E-02	e	3.87E-02	e	1.55E+01	e	1.55E-02	e	5.93E-02	e
Phthalates											
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	4.03E-03	c	3.18E-03	c	1.27E+00	c	1.27E-03	c	4.88E-03	c
Butylbenzyl phthalate	85-68-7	6.50E-04	c	5.13E-04	c	2.06E-01	c	2.06E-04	c	7.87E-04	c
Dibutyl phthalate	84-74-2	1.32E-03	c	1.04E-03	c	4.17E-01	c	4.17E-04	c	1.60E-03	c
Diethyl phthalate	84-66-2	6.87E-04	c	5.42E-04	c	2.17E-01	c	2.17E-04	c	8.31E-04	c
Dimethyl phthalate	131-11-3	1.08E-06	c	8.53E-07	c	3.42E-04	c	3.42E-07	c	1.31E-06	c
n-Dioctyl phthalate	117-84-0	5.37E+01	c	4.24E+01	c	1.70E+04	c	1.70E+01	c	6.50E+01	c
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)											
2-Chloronaphthalene	91-58-7	2.95E-04	c	2.33E-04	c	9.33E-02	c	9.33E-05	c	3.57E-04	c
2-Methyl naphthalene	91-57-6	1.82E-04	e	1.44E-04	e	5.75E-02	e	5.75E-05	e	2.20E-04	e
5-Nitroacenaphthene	602-87-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	2.31E-04	c	1.83E-04	c	7.32E-02	c	7.32E-05	c	2.80E-04	c
Acenaphthylene	208-96-8	2.95E-04	e	2.33E-04	e	9.33E-02	e	9.33E-05	e	3.57E-04	e
Anthracene	120-12-7	7.41E-04	c	5.85E-04	c	2.34E-01	c	2.34E-04	c	8.98E-04	c
Fluorene	86-73-7	3.70E-04	c	2.92E-04	c	1.17E-01	c	1.17E-04	c	4.48E-04	c
Indene	95-13-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	5.92E-05	c	4.67E-05	c	1.87E-02	c	1.87E-05	c	7.16E-05	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	NA	NA	NA	NA	NA	NA	NA	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	NA	NA	NA	NA	NA	NA	NA	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	NA	NA	NA	NA	NA	NA	NA	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	NA	NA	NA	NA	4.84E+04	v	NA	NA
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	NA	NA	NA	NA	8.34E+04	v	NA	NA
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	NA	NA	NA	NA	NA	NA	NA	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	NA	NA	NA	NA	NA	NA	NA	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	NA	NA	NA	NA	NA	NA	NA	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	NA	NA	NA	NA	5.30E-01	w	NA	NA
Phthalates									
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	3.36E+02	s	NA	NA	NA	NA	NA	NA
Butylbenzyl phthalate	85-68-7	2.35E+03	c	NA	NA	NA	NA	NA	NA
Dibutyl phthalate	84-74-2	5.58E+03	c	NA	NA	NA	NA	NA	NA
Diethyl phthalate	84-66-2	2.45E+03	c	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	131-11-3	NA	NA	1.03E+01	c	NA	NA	NA	NA
n-Dioctyl phthalate	117-84-0	1.40E+04	s	NA	NA	NA	NA	NA	NA
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)									
2-Chloronaphthalene	91-58-7	9.60E+02	c	NA	NA	NA	NA	NA	NA
2-Methyl naphthalene	91-57-6	NA	NA	5.05E+02	e	NA	NA	NA	NA
5-Nitroacenaphthene	602-87-9	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	83-32-9	NA	NA	6.07E+02	c	NA	NA	NA	NA
Acenaphthylene	208-96-8	2.16E+02	m	NA	NA	NA	NA	6.00E+01	d
Anthracene	120-12-7	2.60E+03	c	NA	NA	NA	NA	NA	NA
Fluorene	86-73-7	1.20E+03	c	NA	NA	NA	NA	6.00E+01	d
Indene	95-13-6	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	91-20-3	NA	NA	2.15E+02	c	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	3.23E-05	2.15E-06	1.61E-06	e
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	8.09E-05	5.39E-06	4.04E-06	e
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	7.18E-03	4.79E-04	3.59E-04	e
Phthalates													
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.10E+01	c	2.90E-03	1.93E-04	1.45E-04	e
Butylbenzyl phthalate	85-68-7	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	3.61E+01	c	2.35E-02	1.57E-03	1.17E-03	e
Dibutyl phthalate	84-74-2	0.0E+00	NA	5.23E-03	3.49E-04	2.62E-04	e	1.11E+01	c	2.03E-01	1.35E-02	1.02E-02	e
Diethyl phthalate	84-66-2	0.0E+00	NA	4.45E-03	2.97E-04	2.22E-04	e	4.52E+00	c	3.31E+00	2.20E-01	1.65E-01	e
Dimethyl phthalate	131-11-3	0.0E+00	NA	3.53E-03	2.35E-04	1.76E-04	e	3.61E+01	c	6.96E+00	4.64E-01	3.48E-01	e
n-Dioctyl phthalate	117-84-0	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	9.03E+00	c	3.57E-07	2.38E-08	1.78E-08	e
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)													
2-Chloronaphthalene	91-58-7	0.0E+00	NA	5.27E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	4.50E-02	3.00E-03	2.25E-03	e
2-Methyl naphthalene	91-57-6	0.0E+00	NA	5.27E-03	3.51E-04	2.63E-04	e	0.0E+00	NA	7.18E-02	4.79E-03	3.59E-03	e
5-Nitroacenaphthene	602-87-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Acenaphthene	83-32-9	0.0E+00	NA	5.27E-03	3.51E-04	2.63E-04	e	2.48E+00	c	6.55E-02	4.37E-03	3.28E-03	e
Acenaphthylene	208-96-8	0.0E+00	NA	5.27E-03	3.51E-04	2.64E-04	e	4.22E+00	e	4.75E-02	3.17E-03	2.38E-03	e
Anthracene	120-12-7	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	5.50E-01	c	1.37E-02	9.13E-04	6.85E-04	e
Fluorene	86-73-7	0.0E+00	NA	5.27E-03	3.52E-04	2.64E-04	e	4.22E+00	c	4.17E-02	2.78E-03	2.08E-03	e
Indene	95-13-6	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Naphthalene	91-20-3	0.0E+00	NA	5.22E-03	3.48E-04	2.61E-04	e	5.27E+00	c	2.67E-01	1.78E-02	1.34E-02	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	1.93E-05	1.28E-06	9.63E-07	e	3.54E-02	1.57E-04	8.86E-05	f	1.39E+00	aa
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	4.83E-05	3.22E-06	2.42E-06	e	1.71E-02	7.60E-05	4.28E-05	f	1.39E+00	aa
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Polychlorinated biphenyls (PCBs)	1336-36-3	4.29E-03	2.86E-04	2.14E-04	e	4.10E+00	1.82E-02	1.02E-02	f	NA	NA
Phthalates											
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	1.73E-03	1.15E-04	8.66E-05	e	3.05E-02	1.36E-04	7.64E-05	f	2.50E-02	ab
Butylbenzyl phthalate	85-68-7	1.40E-02	9.35E-04	7.01E-04	e	7.06E-02	3.14E-04	1.76E-04	f	2.56E-02	aa
Dibutyl phthalate	84-74-2	1.21E-01	8.09E-03	6.07E-03	e	1.22E+00	5.44E-03	3.06E-03	f	2.40E-02	ab
Diethyl phthalate	84-66-2	1.97E+00	1.32E-01	9.87E-02	e	5.25E+00	2.33E-02	1.31E-02	f	3.90E-03	ab
Dimethyl phthalate	131-11-3	4.15E+00	2.77E-01	2.08E-01	e	2.97E+00	1.32E-02	7.42E-03	f	1.40E-03	ab
n-Dioctyl phthalate	117-84-0	2.13E-07	1.42E-08	1.06E-08	e	3.43E-07	1.53E-09	8.58E-10	f	1.84E+01	aa
Light Polycyclic Aromatic Hydrocarbons (MW<200 g/mole)											
2-Chloronaphthalene	91-58-7	2.69E-02	1.79E-03	1.34E-03	e	2.24E+01	9.94E-02	5.59E-02	f	1.04E-01	aa
2-Methyl naphthalene	91-57-6	4.29E-02	2.86E-03	2.14E-03	e	1.92E+02	8.54E-01	4.80E-01	f	9.77E-02	aa
5-Nitroacenaphthene	602-87-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Acenaphthene	83-32-9	3.91E-02	2.61E-03	1.96E-03	e	4.85E+01	2.16E-01	1.21E-01	f	9.84E-02	aa
Acenaphthylene	208-96-8	2.84E-02	1.89E-03	1.42E-03	e	2.35E+01	1.04E-01	5.87E-02	f	1.19E-01	aa
Anthracene	120-12-7	8.18E-03	5.45E-04	4.09E-04	e	4.70E+00	2.09E-02	1.17E-02	f	1.57E-01	aa
Fluorene	86-73-7	2.49E-02	1.66E-03	1.24E-03	e	1.05E+01	4.69E-02	2.64E-02	f	1.15E-01	aa
Indene	95-13-6	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Naphthalene	91-20-3	1.60E-01	1.06E-02	7.98E-03	e	6.54E+02	2.91E+00	1.63E+00	f	4.70E-02	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW (g/mol)	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source			H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Phenanthrene	85-01-8	0 or 1	b	178.22	NA	1.88E-01	c	1.88E-01	3.33E-02	c	7.47E-06	c
Pyrene	129-00-0	0 or 1	b	202.24	NA	8.25E-06	h	8.25E-06	2.72E-02	c	7.14E-06	c
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)												
3-Methylcholanthrene	56-49-5	0 or 1	b	268.36	NA	NA	e	1.24E-07	4.57E-02	e	5.29E-06	e
5-Methylchrysene	3697-24-3	0 or 1	b	242.32	NA	2.26E-04	k	5.52E-06	4.89E-02	e	5.66E-06	e
Benzo[a]anthracene	56-55-3	0 or 1	b	228.28	NA	3.62E-06	c	3.62E-06	2.47E-02	c	6.21E-06	c
Benzo[a]pyrene	50-32-8	0 or 1	b	252.3	NA	8.36E-07	c	8.36E-07	2.18E-02	c	5.85E-06	c
Benzo[a,i]pyrene	191-30-0	0 or 1	b	302.37	NA	5.77E-07	k	1.41E-08	4.22E-02	e	4.88E-06	e
Benzo[b]fluoranthene	205-99-2	0 or 1	b	252.32	NA	6.18E-06	c	6.18E-06	2.28E-02	c	5.49E-06	c
Benzo[e]pyrene	192-97-2	0 or 1	b	252.31	NA	NA	e	4.62E-07	4.76E-02	e	5.51E-06	e
Benzo[g,h,i]perylene	191-24-2	0 or 1	b	276.34	NA	7.09E-01	i	7.02E-06	4.48E-02	e	5.19E-06	e
Benzo[j]fluoranthene	205-82-3	0 or 1	b	252.31	NA	8.31E-06	k	2.03E-07	4.76E-02	e	5.51E-06	e
Benzo[k]fluoranthene	207-08-9	0 or 1	b	252.32	NA	4.15E-07	c	4.15E-07	2.28E-02	c	5.49E-06	c
Chrysene	218-01-9	0 or 1	b	228.28	NA	1.21E-06	c	1.21E-06	2.48E-02	c	6.21E-06	c
Dibenz[a,h]acridine	226-36-8	0 or 1	b	279.34	NA	7.78E-08	k	1.90E-09	4.45E-02	e	5.15E-06	e
Dibenz[a,h]anthracene	53-70-3	0 or 1	b	278.33	NA	1.12E-08	c	1.12E-08	1.80E-02	c	6.01E-06	c
Dibenz[a,j]acridine	224-42-0	0 or 1	b	279.34	NA	7.78E-08	k	1.90E-09	4.45E-02	e	5.15E-06	e
Dibenzo[a,e]fluoranthene	5385-75-1	0 or 1	b	302.37	NA	NA	NA	NA	4.22E-02	e	4.88E-06	e
Dibenzo[a,e]pyrene	192-65-4	0 or 1	b	302.37	NA	5.77E-07	k	1.41E-08	4.22E-02	e	4.88E-06	e
Dibenzo[a,h]fluoranthene	No CAS #	0 or 1	b	302.37	NA	NA	NA	NA	4.22E-02	e	4.88E-06	e
Dibenzo[a,h]pyrene	189-64-0	0 or 1	b	302.37	NA	5.77E-07	k	1.41E-08	4.22E-02	e	4.88E-06	e
Dibenzo[a,i]pyrene	189-55-9	0 or 1	b	302.37	NA	5.77E-07	k	1.41E-08	4.22E-02	e	4.88E-06	e
Fluoranthene	206-44-0	0 or 1	b	202.26	NA	9.33E-06	c	9.33E-06	2.75E-02	c	7.18E-06	c
Hexachloronaphthalene	1335-87-1	0 or 1	b	334.84	NA	3.56E-03	k	8.68E-05	3.94E-02	e	4.56E-06	e
Indeno[1,2,3-cd]pyrene	193-39-5	0 or 1	b	276.34	NA	4.86E-09	c	4.86E-09	1.90E-02	c	5.66E-06	c
Octachloronaphthalene	2234-13-1	0 or 1	b	403.73	NA	4.17E-03	k	1.02E-04	3.48E-02	e	4.03E-06	e
Pentachloronaphthalene	1321-64-8	0 or 1	b	300.4	NA	4.83E-03	k	1.18E-04	4.24E-02	e	4.90E-06	e
Tetrachloronaphthalene	1335-88-2	0 or 1	b	265.95	NA	6.51E-03	k	1.59E-04	4.59E-02	e	5.32E-06	e
Trichloronaphthalene	1321-65-9	0 or 1	b	231.51	NA	8.76E-03	k	2.14E-04	5.04E-02	e	5.84E-06	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Phenanthrene	85-01-8	2.09E+04	h	2.09E+04	3.55E+04	c	3.55E+04	8.35E+02	h	2.09E+02	h
Pyrene	129-00-0	6.80E+04	c	6.80E+04	1.00E+05	c	1.00E+05	2.72E+03	c	6.80E+02	c
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)											
3-Methylcholanthrene	56-49-5	6.18E+00	i	1.51E+06	7.11E+00	i	1.29E+07	6.05E+04	e	1.51E+04	e
5-Methylchrysene	3697-24-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	56-55-3	2.60E+05	c	2.60E+05	4.77E+05	c	4.77E+05	1.04E+04	c	2.60E+03	c
Benzo[a]pyrene	50-32-8	9.69E+05	c	9.69E+05	1.35E+06	c	1.35E+06	3.87E+04	c	9.69E+03	c
Benzo[a,i]pyrene	191-30-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	205-99-2	8.36E+05	c	8.36E+05	1.59E+06	c	1.59E+06	3.34E+04	c	8.36E+03	c
Benzo[e]pyrene	192-97-2	7.20E+00	i	1.58E+07	7.40E+00	i	2.51E+07	6.34E+05	e	1.58E+05	e
Benzo[g,h,i]perylene	191-24-2	6.26E+00	i	1.82E+06	7.10E+00	i	1.26E+07	7.28E+04	e	1.82E+04	e
Benzo[j]fluoranthene	205-82-3	NA	e	1.42E+06	6.44E+00	i	2.75E+06	5.69E+04	e	1.42E+04	e
Benzo[k]fluoranthene	207-08-9	8.32E+05	h	8.32E+05	1.56E+06	c	1.56E+06	3.33E+04	c	8.32E+03	c
Chrysene	218-01-9	2.97E+05	c	2.97E+05	5.48E+05	c	5.48E+05	1.19E+04	c	2.97E+03	c
Dibenz[a,h]acridine	226-36-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	53-70-3	1.79E+06	c	1.79E+06	3.53E+06	c	3.53E+06	7.16E+04	c	1.79E+04	c
Dibenz[a,j]acridine	224-42-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]fluoranthene	5385-75-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]pyrene	192-65-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]fluoranthene	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]pyrene	189-64-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,i]pyrene	189-55-9	NA	e	9.49E+06	7.29E+00	l	1.95E+07	3.80E+05	e	9.49E+04	e
Fluoranthene	206-44-0	4.91E+04	c	4.91E+04	1.21E+05	c	1.21E+05	1.96E+03	c	4.91E+02	c
Hexachloronaphthalene	1335-87-1	NA	e	1.85E+07	7.59E+00	l	3.89E+07	7.42E+05	e	1.85E+05	e
Indeno[1,2,3-cd]pyrene	193-39-5	4.11E+06	c	4.11E+06	8.22E+06	c	8.22E+06	1.64E+05	c	4.11E+04	c
Octachloronaphthalene	2234-13-1	NA	e	1.36E+06	6.42E+00	l	2.63E+06	5.44E+04	e	1.36E+04	e
Pentachloronaphthalene	1321-64-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloronaphthalene	1335-88-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloronaphthalene	1321-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Phenanthrene	85-01-8	1.57E+03	h	9.08E-02	c	9.08E-02	c	9.08E-02
Pyrene	129-00-0	5.10E+03	c	4.98E-02	c	4.98E-02	c	4.98E-02
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)								
3-Methylcholanthrene	56-49-5	1.14E+05	e	3.01E-03	e	3.01E-03	e	3.01E-03
5-Methylchrysene	3697-24-3	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	56-55-3	1.95E+04	c	2.02E-02	c	2.02E-02	c	2.02E-02
Benzo[a]pyrene	50-32-8	7.27E+04	c	1.11E-02	c	1.11E-02	c	1.11E-02
Benzo[a,i]pyrene	191-30-0	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	205-99-2	6.27E+04	c	1.01E-02	c	1.01E-02	c	1.01E-02
Benzo[e]pyrene	192-97-2	1.19E+06	e	2.05E-03	e	2.05E-03	e	2.05E-03
Benzo[g,h,i]perylene	191-24-2	1.36E+05	e	3.05E-03	e	3.05E-03	e	3.05E-03
Benzo[j]fluoranthene	205-82-3	1.07E+05	e	7.34E-03	e	7.34E-03	e	7.34E-03
Benzo[k]fluoranthene	207-08-9	6.24E+04	c	1.01E-02	c	1.01E-02	c	1.01E-02
Chrysene	218-01-9	2.23E+04	c	1.87E-02	c	1.87E-02	c	1.87E-02
Dibenz[a,h]acridine	226-36-8	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	53-70-3	1.34E+05	c	6.36E-03	c	6.36E-03	c	6.36E-03
Dibenz[a,j]acridine	224-42-0	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]fluoranthene	5385-75-1	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]pyrene	192-65-4	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]fluoranthene	No CAS #	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]pyrene	189-64-0	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,i]pyrene	189-55-9	7.12E+05	e	2.37E-03	e	2.37E-03	e	2.37E-03
Fluoranthene	206-44-0	3.68E+03	c	4.46E-02	c	4.46E-02	c	4.46E-02
Hexachloronaphthalene	1335-87-1	1.39E+06	e	1.59E-03	e	1.59E-03	e	1.59E-03
Indeno[1,2,3-cd]pyrene	193-39-5	3.08E+05	c	3.90E-03	c	3.90E-03	c	3.90E-03
Octachloronaphthalene	2234-13-1	1.02E+05	e	7.54E-03	e	7.54E-03	e	7.54E-03
Pentachloronaphthalene	1321-64-8	NA	NA	NA	NA	NA	NA	NA
Tetrachloronaphthalene	1335-88-2	NA	NA	NA	NA	NA	NA	NA
Trichloronaphthalene	1321-65-9	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Phenanthrene	85-01-8	3.58E+00	h	2.08E-02	c	2.08E-02	c	7.47E+02	c
Pyrene	129-00-0	2.44E+00	c	1.44E+03	h	1.44E+03	h	1.66E+03	c
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)									
3-Methylcholanthrene	56-49-5	4.58E+00	e	1.68E+07	e	1.68E+07	e	6.93E+04	e
5-Methylchrysene	3697-24-3	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	56-55-3	2.11E+00	c	1.72E+04	c	1.72E+04	c	5.48E+03	c
Benzo[a]pyrene	50-32-8	1.26E+00	c	2.25E+05	c	2.25E+05	c	1.22E+04	c
Benzo[a,i]pyrene	191-30-0	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	205-99-2	1.66E+00	c	3.65E+04	c	3.65E+04	c	1.39E+04	c
Benzo[e]pyrene	192-97-2	7.31E-01	e	9.22E+06	e	9.22E+06	e	1.16E+05	e
Benzo[g,h,i]perylene	191-24-2	3.74E+00	e	2.91E+05	e	2.91E+05	e	6.81E+04	e
Benzo[j]fluoranthene	205-82-3	1.49E+00	e	2.00E+06	e	2.00E+06	e	2.11E+04	e
Benzo[k]fluoranthene	207-08-9	1.66E+00	c	5.40E+05	c	5.40E+05	c	1.38E+04	c
Chrysene	218-01-9	2.05E+00	c	5.97E+04	c	5.97E+04	c	6.10E+03	c
Dibenz[a,h]acridine	226-36-8	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	53-70-3	1.43E+00	h	4.68E+07	c	4.68E+07	c	2.56E+04	c
Dibenz[a,j]acridine	224-42-0	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]fluoranthene	5385-75-1	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]pyrene	192-65-4	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]fluoranthene	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]pyrene	189-64-0	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,i]pyrene	189-55-9	1.00E+00	e	2.31E+08	e	2.31E+08	e	9.54E+04	e
Fluoranthene	206-44-0	3.90E+00	c	1.56E+03	c	1.56E+03	c	1.92E+03	c
Hexachloronaphthalene	1335-87-1	8.75E-01	e	7.82E+04	e	7.82E+04	e	1.62E+05	e
Indeno[1,2,3-cd]pyrene	193-39-5	1.19E+00	c	2.67E+08	c	2.67E+08	c	4.91E+04	c
Octachloronaphthalene	2234-13-1	1.50E+00	e	3.79E+03	e	3.79E+03	e	2.04E+04	e
Pentachloronaphthalene	1321-64-8	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloronaphthalene	1335-88-2	NA	NA	NA	NA	NA	NA	NA	NA
Trichloronaphthalene	1321-65-9	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Phenanthrene	85-01-8	8.92E-04	c	7.04E-04	c	2.82E-01	c	2.82E-04	c	1.08E-03	c
Pyrene	129-00-0	2.52E-03	c	1.99E-03	c	7.98E-01	c	7.98E-04	c	3.06E-03	c
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)											
3-Methylcholanthrene	56-49-5	3.24E-01	e	2.55E-01	e	1.02E+02	e	1.02E-01	e	3.92E-01	e
5-Methylchrysene	3697-24-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	56-55-3	1.20E-02	c	9.46E-03	c	3.79E+00	c	3.79E-03	c	1.45E-02	c
Benzo[a]pyrene	50-32-8	3.38E-02	c	2.67E-02	c	1.07E+01	c	1.07E-02	c	4.10E-02	c
Benzo[a,i]pyrene	191-30-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	205-99-2	4.00E-02	c	3.16E-02	c	1.27E+01	c	1.27E-02	c	4.84E-02	c
Benzo[e]pyrene	192-97-2	6.31E-01	e	4.98E-01	e	2.00E+02	e	2.00E-01	e	7.64E-01	e
Benzo[g,h,i]perylene	191-24-2	3.16E-01	e	2.50E-01	e	1.00E+02	e	1.00E-01	e	3.83E-01	e
Benzo[j]fluoranthene	205-82-3	6.92E-02	e	5.46E-02	e	2.19E+01	e	2.19E-02	e	8.37E-02	e
Benzo[k]fluoranthene	207-08-9	3.98E-02	c	3.14E-02	c	1.26E+01	c	1.26E-02	c	4.82E-02	c
Chrysene	218-01-9	1.38E-02	c	1.09E-02	c	4.35E+00	c	4.36E-03	c	1.67E-02	c
Dibenz[a,h]acridine	226-36-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	53-70-3	8.86E-02	c	7.00E-02	c	2.80E+01	c	2.80E-02	c	1.07E-01	c
Dibenz[a,j]acridine	224-42-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]fluoranthene	5385-75-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]pyrene	192-65-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]fluoranthene	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]pyrene	189-64-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,i]pyrene	189-55-9	4.90E-01	e	3.87E-01	e	1.55E+02	e	1.55E-01	e	5.93E-01	e
Fluoranthene	206-44-0	3.05E-03	c	2.41E-03	c	9.65E-01	c	9.65E-04	c	3.69E-03	c
Hexachloronaphthalene	1335-87-1	9.77E-01	e	7.72E-01	e	3.09E+02	e	3.09E-01	e	1.18E+00	e
Indeno[1,2,3-cd]pyrene	193-39-5	2.07E-01	c	1.63E-01	c	6.53E+01	c	6.53E-02	c	2.50E-01	c
Octachloronaphthalene	2234-13-1	6.61E-02	e	5.22E-02	e	2.09E+01	e	2.09E-02	e	8.00E-02	e
Pentachloronaphthalene	1321-64-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloronaphthalene	1335-88-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloronaphthalene	1321-65-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Phenanthrene	85-01-8	3.30E+03	c	NA	NA	NA	NA	NA	NA
Pyrene	129-00-0	1.19E+04	c	NA	NA	NA	NA	NA	NA
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)									
3-Methylcholanthrene	56-49-5	NA	NA	NA	NA	NA	NA	1.40E+03	d
5-Methylchrysene	3697-24-3	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]anthracene	56-55-3	5.10E+03	c	NA	NA	NA	NA	NA	NA
Benzo[a]pyrene	50-32-8	9.95E+03	c	NA	NA	NA	NA	NA	NA
Benzo[a,i]pyrene	191-30-0	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	205-99-2	9.95E+03	c	NA	NA	NA	NA	NA	NA
Benzo[e]pyrene	192-97-2	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[g,h,i]perylene	191-24-2	2.54E+04	m	NA	NA	NA	NA	6.50E+02	d
Benzo[j]fluoranthene	205-82-3	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	207-08-9	9.95E+03	c	NA	NA	NA	NA	NA	NA
Chrysene	218-01-9	6.03E+03	c	NA	NA	NA	NA	NA	NA
Dibenz[a,h]acridine	226-36-8	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	53-70-3	1.28E+04	c	NA	NA	NA	NA	NA	NA
Dibenz[a,j]acridine	224-42-0	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]fluoranthene	5385-75-1	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,e]pyrene	192-65-4	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]fluoranthene	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,h]pyrene	189-64-0	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzo[a,i]pyrene	189-55-9	NA	NA	NA	NA	NA	NA	3.61E+02	d
Fluoranthene	206-44-0	1.57E+04	c	NA	NA	NA	NA	NA	NA
Hexachloronaphthalene	1335-87-1	NA	NA	NA	NA	NA	NA	3.65E+02	d
Indeno[1,2,3-cd]pyrene	193-39-5	1.31E+04	c	NA	NA	NA	NA	NA	NA
Octachloronaphthalene	2234-13-1	NA	NA	NA	NA	NA	NA	3.65E+02	d
Pentachloronaphthalene	1321-64-8	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloronaphthalene	1335-88-2	NA	NA	NA	NA	NA	NA	NA	NA
Trichloronaphthalene	1321-65-9	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Phenanthrene	85-01-8	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.26E+00	c	1.54E-02	1.03E-03	7.70E-04	e
Pyrene	129-00-0	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.33E-01	c	4.73E-03	3.16E-04	2.37E-04	e
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)													
3-Methylcholanthrene	56-49-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.81E-01	e	2.13E-04	1.42E-05	1.06E-05	e
5-Methylchrysene	3697-24-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Benzo[a]anthracene	56-55-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	3.72E-01	c	1.24E-03	8.26E-05	6.19E-05	e
Benzo[a]pyrene	50-32-8	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	4.77E-01	c	3.32E-04	2.22E-05	1.66E-05	e
Benzo[a,i]pyrene	191-30-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Benzo[b]fluoranthene	205-99-2	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	4.15E-01	c	3.85E-04	2.57E-05	1.93E-05	e
Benzo[e]pyrene	192-97-2	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	2.03E-05	1.35E-06	1.02E-06	e
Benzo[g,h,i]perylene	191-24-2	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	3.89E-01	e	1.77E-04	1.18E-05	8.85E-06	e
Benzo[j]fluoranthene	205-82-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	2.27E-04	1.51E-05	1.13E-05	e
Benzo[k]fluoranthene	207-08-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.18E-01	c	3.87E-04	2.58E-05	1.94E-05	e
Chrysene	218-01-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	2.53E-01	c	1.08E-03	7.23E-05	5.42E-05	e
Dibenz[a,h]acridine	226-36-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dibenz[a,h]anthracene	53-70-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	2.69E-01	c	1.80E-04	1.20E-05	9.00E-06	e
Dibenz[a,j]acridine	224-42-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dibenzo[a,e]fluoranthene	5385-75-1	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dibenzo[a,e]pyrene	192-65-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dibenzo[a,h]fluoranthene	No CAS #	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dibenzo[a,h]pyrene	189-64-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dibenzo[a,i]pyrene	189-55-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	7.01E-01	e	3.39E-05	2.26E-06	1.70E-06	e
Fluoranthene	206-44-0	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	5.75E-01	c	6.56E-03	4.37E-04	3.28E-04	e
Hexachloronaphthalene	1335-87-1	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-01	e	1.74E-05	1.16E-06	8.68E-07	e
Indeno[1,2,3-cd]pyrene	193-39-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	3.47E-01	c	7.84E-05	5.22E-06	3.92E-06	e
Octachloronaphthalene	2234-13-1	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-01	e	2.37E-04	1.58E-05	1.18E-05	e
Pentachloronaphthalene	1321-64-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Tetrachloronaphthalene	1335-88-2	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Trichloronaphthalene	1321-65-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g] ks$_r$ (year)$^{-1}$ 1 cm	15 cm	20 cm	Source	ks$_v$ (year)$^{-1}$ 1 cm	15 cm	20 cm	Source	Kp (cm/hr)	Source
Phenanthrene	85-01-8	9.19E-03	6.13E-04	4.60E-04	e	9.19E+03	4.09E+01	2.30E+01	f	1.40E-01	ab
Pyrene	129-00-0	2.83E-03	1.88E-04	1.41E-04	e	1.01E-01	4.50E-04	2.53E-04	f	2.61E-01	aa
Heavy Polycyclic Aromatic Hydrocarbons (MW>200 g/mole)											
3-Methylcholanthrene	56-49-5	1.27E-04	8.47E-06	6.35E-06	e	1.15E-04	5.12E-07	2.88E-07	f	2.89E+00	aa
5-Methylchrysene	3697-24-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Benzo[a]anthracene	56-55-3	7.40E-04	4.93E-05	3.70E-05	e	1.06E-02	4.69E-05	2.64E-05	f	4.70E-01	ab
Benzo[a]pyrene	50-32-8	1.98E-04	1.32E-05	9.92E-06	e	5.77E-04	2.57E-06	1.44E-06	f	7.00E-01	ab
Benzo[a,i]pyrene	191-30-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Benzo[b]fluoranthene	205-99-2	2.30E-04	1.53E-05	1.15E-05	e	5.17E-03	2.30E-05	1.29E-05	f	7.00E-01	ab
Benzo[e]pyrene	192-97-2	1.21E-05	8.09E-07	6.07E-07	e	4.26E-05	1.89E-07	1.06E-07	f	5.56E+00	aa
Benzo[g,h,i]perylene	191-24-2	1.06E-04	7.05E-06	5.28E-06	e	5.30E-03	2.36E-05	1.33E-05	f	2.57E+00	aa
Benzo[j]fluoranthene	205-82-3	1.35E-04	9.02E-06	6.76E-06	e	2.08E-04	9.25E-07	5.20E-07	f	1.26E+00	aa
Benzo[k]fluoranthene	207-08-9	2.31E-04	1.54E-05	1.16E-05	e	3.49E-04	1.55E-06	8.73E-07	f	8.64E-01	aa
Chrysene	218-01-9	6.47E-04	4.32E-05	3.24E-05	e	3.10E-03	1.38E-05	7.75E-06	f	4.70E-01	ab
Dibenz[a,h]acridine	226-36-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dibenz[a,h]anthracene	53-70-3	1.07E-04	7.16E-06	5.37E-06	e	3.46E-06	1.54E-08	8.64E-09	f	1.50E+00	ab
Dibenz[a,j]acridine	224-42-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dibenzo[a,e]fluoranthene	5385-75-1	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dibenzo[a,e]pyrene	192-65-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dibenzo[a,h]fluoranthene	No CAS #	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dibenzo[a,h]pyrene	189-64-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dibenzo[a,i]pyrene	189-55-9	2.03E-05	1.35E-06	1.01E-06	e	1.92E-06	8.53E-09	4.80E-09	f	2.46E+00	aa
Fluoranthene	206-44-0	3.92E-03	2.61E-04	1.96E-04	e	1.60E-01	7.13E-04	4.01E-04	f	2.20E-01	ab
Hexachloronaphthalene	1335-87-1	1.04E-05	6.91E-07	5.18E-07	e	5.66E-03	2.52E-05	1.42E-05	f	2.57E+00	aa
Indeno[1,2,3-cd]pyrene	193-39-5	4.68E-05	3.12E-06	2.34E-06	e	6.90E-07	3.06E-09	1.72E-09	f	1.00E+00	ab
Octachloronaphthalene	2234-13-1	1.41E-04	9.43E-06	7.07E-06	e	7.99E-02	3.55E-04	2.00E-04	f	1.74E-01	aa
Pentachloronaphthalene	1321-64-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Tetrachloronaphthalene	1335-88-2	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Trichloronaphthalene	1321-65-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Light Substituted Benzene Compounds (MW<200 g/mole)												
1,2,3-Trichlorobenzene	87-61-6	0 or 1	b	181.46	NA	2.84E-03	c	2.84E-03	3.02E-02	c	8.15E-06	c
1,2,4-Trichlorobenzene	120-82-1	0 or 1	b	181.46	NA	2.61E-03	c	2.61E-03	3.00E-02	c	8.23E-06	c
1,2,4-Trimethyl benzene	95-63-6	0 or 1	b	120.19	NA	5.81E+02	i	5.75E-03	7.80E-02	e	9.03E-06	e
1,2-Dichlorobenzene	95-50-1	0 or 1	b	147.01	NA	2.11E-03	c	2.11E-03	4.11E-02	c	8.93E-06	c
1,3,5-Trimethyl benzene	108-67-8	0 or 1	b	120.19	NA	7.81E-03	c	7.81E-03	6.48E-02	c	7.86E-06	c
1,3-Dichlorobenzene	541-73-1	0 or 1	b	147.01	NA	1.11E+02	c	1.11E+02	4.14E-02	c	8.85E-06	c
1,3-Dinitrobenzene	99-65-0	0 or 1	b	168.11	NA	1.25E-07	c	1.25E-07	3.18E-02	c	9.15E-06	c
1,4-Dichlorobenzene	106-46-7	0 or 1	b	147.01	NA	2.80E-03	c	2.80E-03	4.14E-02	c	8.85E-06	c
1,4-Dinitrobenzene	100-25-4	0 or 1	b	168.11	NA	3.43E-06	k	8.37E-08	6.24E-02	e	7.22E-06	e
2,4,5-Trichlorophenol	95-95-4	0 or 1	b	197.46	7	5.64E-06	c	5.64E-06	2.91E-02	c	7.03E-06	c
2,4,6-Trichlorophenol	88-06-2	0 or 1	b	197.46	7	4.06E-06	c	4.06E-06	2.62E-02	c	8.08E-06	c
2,4-Dichlorophenol	120-83-2	0 or 1	b	163.01	7	2.38E-07	c	2.38E-07	2.69E-02	c	7.79E-06	c
2,4-Dimethylphenol	105-67-9	0 or 1	b	122.17	7	3.24E-06	h	3.24E-06	5.84E-02	c	8.69E-06	c
2,4-Dinitrophenol	51-28-5	0 or 1	b	184.11	7	4.82E-09	c	4.82E-09	2.73E-02	c	9.06E-06	c
2,4-Dinitrotoluene	121-14-2	0 or 1	b	182.14	NA	1.46E-07	c	1.46E-07	3.09E-02	c	7.86E-06	c
2,6-Dinitrotoluene	606-20-2	0 or 1	b	182.15	NA	1.30E-07	c	1.30E-07	3.11E-02	c	7.76E-06	c
2-Chlorophenol	95-57-8	0 or 1	b	128.56	NA	1.66E-05	c	1.66E-05	5.01E-02	c	9.46E-06	c
2-Chlorotoluene	95-49-8	0 or 1	b	126.59	NA	6.41E-02	n	6.35E-04	7.54E-02	e	8.73E-06	e
2-Nitrophenol	88-75-5	0 or 1	b	139.11	NA	1.46E-05	c	1.46E-05	4.44E-02	c	9.19E-06	c
4,6-Dinitro-o-cresol	534-52-1	0 or 1	b	198.13	NA	5.72E-05	m	1.40E-06	2.93E-02	j	6.91E-06	j
4-Chlorotoluene	106-43-4	0 or 1	b	126.59	NA	NA	NA	NA	7.54E-02	e	8.73E-06	e
4-Nitrophenol	100-02-7	0 or 1	b	139.11	NA	7.32E-09	c	7.32E-09	4.30E-02	c	9.61E-06	c
alpha-Methylstyrene	98-83-9	0 or 1	b	118.18	NA	1.04E-01	m	2.54E-03	2.64E-01	j	1.14E-05	j
Aniline	62-53-3	0 or 1	b	93.12	NA	2.28E-06	c	2.28E-06	8.56E-01	c	1.01E-05	c
Benzotrichloride	98-07-7	0 or 1	b	195.47	NA	1.06E-02	m	2.59E-04	2.75E-02	j	7.77E-06	j
Benzyl chloride	100-44-7	0 or 1	b	126.58	NA	4.13E-04	c	4.13E-04	5.43E-02	c	8.80E-06	c
Bromobenzene	108-86-1	0 or 1	b	157.01	NA	2.11E+02	i	2.09E-03	6.53E-02	e	7.56E-06	e
Chlorobenzene	108-90-7	0 or 1	b	112.56	NA	4.38E-03	c	4.38E-03	6.35E-02	c	9.49E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Light Substituted Benzene Compounds (MW<200 g/mole)											
1,2,3-Trichlorobenzene	87-61-6	2.02E+03	h	2.02E+03	1.11E+04	c	1.11E+04	8.10E+01	h	2.02E+01	h
1,2,4-Trichlorobenzene	120-82-1	1.66E+03	c	1.66E+03	9.73E+03	c	9.73E+03	6.64E+01	c	1.66E+01	c
1,2,4-Trimethyl benzene	95-63-6	NA	e	9.95E+02	3.65E+00	i	4.47E+03	3.98E+01	e	9.95E+00	e
1,2-Dichlorobenzene	95-50-1	3.79E+02	c	3.79E+02	2.79E+03	c	2.79E+03	1.52E+01	c	3.79E+00	c
1,3,5-Trimethyl benzene	108-67-8	1.67E+03	c	1.67E+03	2.63E+03	c	2.63E+03	6.69E+01	c	1.67E+01	c
1,3-Dichlorobenzene	541-73-1	8.03E+02	h	8.03E+02	3.39E+03	c	3.39E+03	3.21E+01	h	8.03E+00	h
1,3-Dinitrobenzene	99-65-0	2.06E+01	c	2.06E+01	3.10E+01	c	3.10E+01	8.25E-01	c	2.06E-01	c
1,4-Dichlorobenzene	106-46-7	6.16E+02	c	6.16E+02	2.58E+03	c	2.58E+03	2.46E+01	c	6.16E+00	c
1,4-Dinitrobenzene	100-25-4	2.20E+02	m	2.20E+02	1.46E+00	m	2.88E+01	8.80E+00	e	2.20E+00	e
2,4,5-Trichlorophenol	95-95-4	1.13E+03	c	1.13E+03	7.41E+03	c	7.41E+03	4.51E+01	c	1.13E+01	c
2,4,6-Trichlorophenol	88-06-2	2.26E+02	c	2.26E+02	5.15E+03	c	5.15E+03	9.05E+00	c	2.26E+00	c
2,4-Dichlorophenol	120-83-2	1.39E+02	c	1.39E+02	1.09E+03	c	1.09E+03	5.58E+00	c	1.40E+00	c
2,4-Dimethylphenol	105-67-9	1.26E+02	c	1.26E+02	2.29E+02	c	2.29E+02	5.04E+00	c	1.26E+00	c
2,4-Dinitrophenol	51-28-5	1.00E-02	c	1.00E-02	3.30E+01	c	3.30E+01	4.00E-04	c	1.00E-04	c
2,4-Dinitrotoluene	121-14-2	5.10E+01	c	5.10E+01	9.90E+01	c	9.90E+01	2.04E+00	c	5.10E-01	c
2,6-Dinitrotoluene	606-20-2	4.19E+01	c	4.19E+01	7.70E+01	c	7.70E+01	1.68E+00	c	4.19E-01	c
2-Chlorophenol	95-57-8	3.87E+02	c	3.87E+02	1.45E+02	c	1.45E+02	1.55E+01	c	3.87E+00	c
2-Chlorotoluene	95-49-8	4.43E+02	m	4.43E+02	3.42E+00	m	2.63E+03	1.77E+01	e	4.43E+00	e
2-Nitrophenol	88-75-5	3.53E+01	h	3.53E+01	6.17E+01	c	6.17E+01	1.41E+00	h	3.53E-01	h
4,6-Dinitro-o-cresol	534-52-1	6.02E+02	m	6.02E+02	2.12E+00	m	1.32E+02	2.41E+01	e	6.02E+00	e
4-Chlorotoluene	106-43-4	NA	e	5.60E+02	3.33E+00	o	2.14E+03	2.24E+01	e	5.60E+00	e
4-Nitrophenol	100-02-7	4.37E+01	h	4.37E+01	8.13E+01	c	8.13E+01	1.75E+00	h	4.37E-01	h
alpha-Methylstyrene	98-83-9	8.17E+02	m	8.17E+02	3.48E+00	m	3.02E+03	3.27E+01	e	8.17E+00	e
Aniline	62-53-3	8.23E+00	c	8.23E+00	9.55E+00	c	9.55E+00	3.29E-01	c	8.23E-02	c
Benzotrichloride	98-07-7	1.18E+03	m	1.18E+03	2.92E+00	p	8.32E+02	4.72E+01	e	1.18E+01	e
Benzyl chloride	100-44-7	8.83E+01	h	8.83E+01	2.00E+02	h	2.00E+02	3.53E+00	h	8.83E-01	h
Bromobenzene	108-86-1	2.65E+00	i	4.47E+02	2.99E+00	i	9.77E+02	1.79E+01	e	4.47E+00	e
Chlorobenzene	108-90-7	2.24E+02	c	2.24E+02	6.16E+02	c	6.16E+02	8.96E+00	c	2.24E+00	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Light Substituted Benzene Compounds (MW<200 g/mole)								
1,2,3-Trichlorobenzene	87-61-6	1.52E+02	h	1.78E-01	c	1.78E-01	c	1.78E-01
1,2,4-Trichlorobenzene	120-82-1	1.24E+02	c	1.92E-01	c	1.92E-01	c	1.92E-01
1,2,4-Trimethyl benzene	95-63-6	7.47E+01	e	3.01E-01	e	3.01E-01	e	3.01E-01
1,2-Dichlorobenzene	95-50-1	2.84E+01	c	3.95E-01	c	3.95E-01	c	3.95E-01
1,3,5-Trimethyl benzene	108-67-8	1.25E+02	c	4.09E-01	c	4.09E-01	c	4.09E-01
1,3-Dichlorobenzene	541-73-1	6.02E+01	h	3.53E-01	c	3.53E-01	c	3.53E-01
1,3-Dinitrobenzene	99-65-0	1.55E+00	c	5.32E+00	c	5.32E+00	c	5.32E+00
1,4-Dichlorobenzene	106-46-7	4.62E+01	c	4.13E-01	c	4.13E-01	c	4.13E-01
1,4-Dinitrobenzene	100-25-4	1.65E+01	e	5.55E+00	e	5.55E+00	e	5.55E+00
2,4,5-Trichlorophenol	95-95-4	8.45E+01	c	2.24E-01	c	2.24E-01	c	2.24E-01
2,4,6-Trichlorophenol	88-06-2	1.70E+01	c	2.77E-01	c	2.77E-01	c	2.77E-01
2,4-Dichlorophenol	120-83-2	1.05E+01	c	6.82E-01	c	6.82E-01	c	6.82E-01
2,4-Dimethylphenol	105-67-9	9.44E+00	c	1.68E+00	c	1.68E+00	c	1.68E+00
2,4-Dinitrophenol	51-28-5	7.50E-04	c	5.13E+00	c	5.13E+00	c	5.13E+00
2,4-Dinitrotoluene	121-14-2	3.83E+00	c	2.72E+00	c	2.72E+00	c	2.72E+00
2,6-Dinitrotoluene	606-20-2	3.14E+00	c	3.15E+00	c	3.15E+00	c	3.15E+00
2-Chlorophenol	95-57-8	2.90E+01	c	2.18E+00	c	2.18E+00	c	2.18E+00
2-Chlorotoluene	95-49-8	3.32E+01	e	4.09E-01	e	4.09E-01	e	4.09E-01
2-Nitrophenol	88-75-5	2.65E+00	h	3.57E+00	c	3.57E+00	c	3.57E+00
4,6-Dinitro-o-cresol	534-52-1	4.51E+01	e	2.30E+00	e	2.30E+00	e	2.30E+00
4-Chlorotoluene	106-43-4	4.20E+01	e	4.61E-01	e	4.61E-01	e	4.61E-01
4-Nitrophenol	100-02-7	3.28E+00	h	3.05E+00	c	3.05E+00	c	3.05E+00
alpha-Methylstyrene	98-83-9	6.13E+01	e	3.77E-01	e	3.77E-01	e	3.77E-01
Aniline	62-53-3	6.17E-01	c	1.05E+01	c	1.05E+01	c	1.05E+01
Benzotrichloride	98-07-7	8.86E+01	e	7.95E-01	e	7.95E-01	e	7.95E-01
Benzyl chloride	100-44-7	6.62E+00	h	1.81E+00	h	1.81E+00	h	1.81E+00
Bromobenzene	108-86-1	3.35E+01	e	7.24E-01	e	7.24E-01	e	7.24E-01
Chlorobenzene	108-90-7	1.68E+01	c	9.45E-01	c	9.45E-01	c	9.45E-01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Light Substituted Benzene Compounds (MW<200 g/mole)									
1,2,3-Trichlorobenzene	87-61-6	1.53E+01	h	4.01E-01	c	4.01E-01	c	3.09E+02	c
1,2,4-Trichlorobenzene	120-82-1	1.69E+01	c	3.78E-01	c	3.78E-01	c	2.80E+02	c
1,2,4-Trimethyl benzene	95-63-6	1.57E+01	e	7.52E-02	e	7.52E-02	e	1.56E+02	e
1,2-Dichlorobenzene	95-50-1	2.92E+01	c	1.24E-01	c	1.24E-01	c	1.11E+02	c
1,3,5-Trimethyl benzene	108-67-8	6.35E+00	c	3.14E-02	c	3.14E-02	c	1.06E+02	c
1,3-Dichlorobenzene	541-73-1	1.59E+01	h	8.02E-02	c	8.02E-02	c	1.28E+02	c
1,3-Dinitrobenzene	99-65-0	4.64E+01	c	1.74E+01	c	1.74E+01	c	9.58E+00	c
1,4-Dichlorobenzene	106-46-7	1.70E+01	c	8.60E-02	c	8.60E-02	c	1.05E+02	c
1,4-Dinitrobenzene	100-25-4	4.27E+00	e	2.40E+01	e	2.40E+01	e	9.40E+00	e
2,4,5-Trichlorophenol	95-95-4	2.02E+01	c	1.31E+02	c	1.31E+02	c	2.28E+02	c
2,4,6-Trichlorophenol	88-06-2	7.69E+01	c	1.23E+02	c	1.23E+02	c	1.74E+01	c
2,4-Dichlorophenol	120-83-2	4.07E+01	c	4.01E+02	c	4.01E+02	c	5.68E+01	c
2,4-Dimethylphenol	105-67-9	1.71E+01	c	5.62E+00	h	5.62E+00	h	2.16E+01	c
2,4-Dinitrophenol	51-28-5	9.74E+04	c	4.80E+02	c	4.80E+02	c	9.74E+00	c
2,4-Dinitrotoluene	121-14-2	2.80E+01	c	5.10E+01	c	5.10E+01	c	1.43E+01	c
2,6-Dinitrotoluene	606-20-2	3.08E+01	c	4.41E+01	c	4.41E+01	c	1.29E+01	c
2-Chlorophenol	95-57-8	4.40E+00	c	6.76E-01	c	6.76E-01	c	1.70E+01	c
2-Chlorotoluene	95-49-8	2.40E+01	e	3.88E-01	e	3.88E-01	e	1.06E+02	e
2-Nitrophenol	88-75-5	3.36E+01	h	3.08E-01	c	3.08E-01	c	1.19E+01	c
4,6-Dinitro-o-cresol	534-52-1	2.71E+00	e	7.27E+00	e	7.27E+00	e	1.63E+01	e
4-Chlorotoluene	106-43-4	1.63E+01	e	NA	NA	NA	NA	9.15E+01	e
4-Nitrophenol	100-02-7	3.01E+01	h	8.26E+02	c	8.26E+02	c	1.32E+01	c
alpha-Methylstyrene	98-83-9	1.44E+01	e	1.12E-01	e	1.12E-01	e	1.17E+02	e
Aniline	62-53-3	9.27E+01	c	2.72E-01	c	2.72E-01	c	7.63E+00	c
Benzotrichloride	98-07-7	4.02E+00	e	2.78E-01	e	2.78E-01	e	4.75E+01	e
Benzyl chloride	100-44-7	2.27E+01	h	3.82E-02	h	3.82E-02	h	2.00E+01	h
Bromobenzene	108-86-1	1.18E+01	e	4.10E-02	e	4.10E-02	e	5.29E+01	e
Chlorobenzene	108-90-7	1.74E+01	c	1.19E-02	c	1.19E-02	c	3.90E+01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Light Substituted Benzene Compounds (MW<200 g/mole)											
1,2,3-Trichlorobenzene	87-61-6	2.79E-04	c	2.20E-04	c	8.82E-02	c	8.82E-05	c	3.38E-04	c
1,2,4-Trichlorobenzene	120-82-1	2.45E-04	c	1.93E-04	c	7.73E-02	c	7.73E-05	c	2.96E-04	c
1,2,4-Trimethyl benzene	95-63-6	1.12E-04	e	8.86E-05	e	3.55E-02	e	3.55E-05	e	1.36E-04	e
1,2-Dichlorobenzene	95-50-1	7.00E-05	c	5.53E-05	c	2.21E-02	c	2.21E-05	c	8.48E-05	c
1,3,5-Trimethyl benzene	108-67-8	6.61E-05	c	5.22E-05	c	2.09E-02	c	2.09E-05	c	8.00E-05	c
1,3-Dichlorobenzene	541-73-1	8.52E-05	c	6.72E-05	c	2.69E-02	c	2.69E-05	c	1.03E-04	c
1,3-Dinitrobenzene	99-65-0	7.79E-07	c	6.15E-07	c	2.46E-04	c	2.46E-07	c	9.43E-07	c
1,4-Dichlorobenzene	106-46-7	6.49E-05	c	5.12E-05	c	2.05E-02	c	2.05E-05	c	7.86E-05	c
1,4-Dinitrobenzene	100-25-4	7.24E-07	e	5.72E-07	e	2.29E-04	e	2.29E-07	e	8.77E-07	e
2,4,5-Trichlorophenol	95-95-4	1.86E-04	c	1.47E-04	c	5.89E-02	c	5.89E-05	c	2.25E-04	c
2,4,6-Trichlorophenol	88-06-2	1.29E-04	c	1.02E-04	c	4.09E-02	c	4.09E-05	c	1.57E-04	c
2,4-Dichlorophenol	120-83-2	2.73E-05	c	2.15E-05	c	8.62E-03	c	8.62E-06	c	3.30E-05	c
2,4-Dimethylphenol	105-67-9	5.75E-06	c	4.54E-06	c	1.82E-03	c	1.82E-06	c	6.96E-06	c
2,4-Dinitrophenol	51-28-5	8.29E-07	c	6.54E-07	c	2.62E-04	c	2.62E-07	c	1.00E-06	c
2,4-Dinitrotoluene	121-14-2	2.49E-06	c	1.96E-06	c	7.86E-04	c	7.86E-07	c	3.01E-06	c
2,6-Dinitrotoluene	606-20-2	1.93E-06	c	1.53E-06	c	6.12E-04	c	6.12E-07	c	2.34E-06	c
2-Chlorophenol	95-57-8	3.64E-06	c	2.88E-06	c	1.15E-03	c	1.15E-06	c	4.41E-06	c
2-Chlorotoluene	95-49-8	6.61E-05	e	5.22E-05	e	2.09E-02	e	2.09E-05	e	8.00E-05	e
2-Nitrophenol	88-75-5	1.55E-06	c	1.22E-06	c	4.90E-04	c	4.90E-07	c	1.88E-06	c
4,6-Dinitro-o-cresol	534-52-1	3.31E-06	e	2.61E-06	e	1.05E-03	e	1.05E-06	e	4.01E-06	e
4-Chlorotoluene	106-43-4	5.37E-05	e	4.24E-05	e	1.70E-02	e	1.70E-05	e	6.50E-05	e
4-Nitrophenol	100-02-7	2.04E-06	c	1.61E-06	c	6.46E-04	c	6.46E-07	c	2.47E-06	c
alpha-Methylstyrene	98-83-9	7.59E-05	e	5.99E-05	e	2.40E-02	e	2.40E-05	e	9.18E-05	e
Aniline	62-53-3	2.40E-07	c	1.89E-07	c	7.59E-05	c	7.59E-08	c	2.90E-07	c
Benzotrichloride	98-07-7	2.09E-05	e	1.65E-05	e	6.61E-03	e	6.61E-06	e	2.53E-05	e
Benzyl chloride	100-44-7	5.02E-06	h	4.02E-06	h	1.59E-03	h	1.59E-06	h	6.03E-06	h
Bromobenzene	108-86-1	2.45E-05	e	1.94E-05	e	7.76E-03	e	7.76E-06	e	2.97E-05	e
Chlorobenzene	108-90-7	1.55E-05	c	1.22E-05	c	4.89E-03	c	4.89E-06	c	1.87E-05	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Light Substituted Benzene Compounds (MW<200 g/mole)									
1,2,3-Trichlorobenzene	87-61-6	8.76E+02	c	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	120-82-1	NA	NA	6.33E+02	c	NA	NA	NA	NA
1,2,4-Trimethyl benzene	95-63-6	NA	NA	3.50E+02	e	NA	NA	2.80E+01	d
1,2-Dichlorobenzene	95-50-1	NA	NA	2.45E+02	c	NA	NA	NA	NA
1,3,5-Trimethyl benzene	108-67-8	NA	NA	2.34E+02	c	NA	NA	NA	NA
1,3-Dichlorobenzene	541-73-1	NA	NA	2.84E+02	c	NA	NA	NA	NA
1,3-Dinitrobenzene	99-65-0	NA	NA	7.40E+01	c	NA	NA	NA	NA
1,4-Dichlorobenzene	106-46-7	NA	NA	2.31E+02	c	NA	NA	NA	NA
1,4-Dinitrobenzene	100-25-4	NA	NA	7.58E+00	e	NA	NA	NA	NA
2,4,5-Trichlorophenol	95-95-4	NA	NA	5.14E+02	c	NA	NA	NA	NA
2,4,6-Trichlorophenol	88-06-2	NA	NA	3.90E+02	c	NA	NA	NA	NA
2,4-Dichlorophenol	120-83-2	NA	NA	1.19E+02	c	NA	NA	NA	NA
2,4-Dimethylphenol	105-67-9	NA	NA	3.66E+01	c	NA	NA	NA	NA
2,4-Dinitrophenol	51-28-5	NA	NA	8.40E+00	c	NA	NA	NA	NA
2,4-Dinitrotoluene	121-14-2	NA	NA	5.92E+00	c	NA	NA	NA	NA
2,6-Dinitrotoluene	606-20-2	NA	NA	5.92E+00	c	NA	NA	NA	NA
2-Chlorophenol	95-57-8	NA	NA	2.59E+01	c	NA	NA	NA	NA
2-Chlorotoluene	95-49-8	NA	NA	2.34E+02	e	NA	NA	NA	NA
2-Nitrophenol	88-75-5	NA	NA	1.35E+01	c	NA	NA	NA	NA
4,6-Dinitro-o-cresol	534-52-1	NA	NA	2.41E+01	e	NA	NA	2.10E+01	d
4-Chlorotoluene	106-43-4	NA	NA	2.00E+02	e	NA	NA	NA	NA
4-Nitrophenol	100-02-7	NA	NA	1.67E+01	c	NA	NA	NA	NA
alpha-Methylstyrene	98-83-9	NA	NA	2.60E+02	e	NA	NA	NA	NA
Aniline	62-53-3	NA	NA	3.27E+00	c	NA	NA	NA	NA
Benzotrichloride	98-07-7	NA	NA	9.75E+01	e	NA	NA	2.08E-03	d
Benzyl chloride	100-44-7	NA	NA	3.30E+01	h	NA	NA	NA	NA
Bromobenzene	108-86-1	NA	NA	1.10E+02	e	NA	NA	NA	NA
Chlorobenzene	108-90-7	NA	NA	7.76E+01	c	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Light Substituted Benzene Compounds (MW<200 g/mole)													
1,2,3-Trichlorobenzene	87-61-6	0.0E+00	NA	5.24E-03	3.50E-04	2.62E-04	e	1.41E+00	c	1.58E-01	1.05E-02	7.91E-03	e
1,2,4-Trichlorobenzene	120-82-1	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	1.41E+00	c	1.92E-01	1.28E-02	9.61E-03	e
1,2,4-Trimethyl benzene	95-63-6	0.0E+00	NA	5.20E-03	3.47E-04	2.60E-04	e	9.03E+00	e	3.19E-01	2.12E-02	1.59E-02	e
1,2-Dichlorobenzene	95-50-1	0.0E+00	NA	5.08E-03	3.39E-04	2.54E-04	e	1.41E+00	c	8.17E-01	5.44E-02	4.08E-02	e
1,3,5-Trimethyl benzene	108-67-8	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	3.16E+01	c	1.91E-01	1.27E-02	9.55E-03	e
1,3-Dichlorobenzene	541-73-1	0.0E+00	NA	5.19E-03	3.46E-04	2.59E-04	e	1.41E+00	c	3.93E-01	2.62E-02	1.97E-02	e
1,3-Dinitrobenzene	99-65-0	0.0E+00	NA	3.03E-03	2.02E-04	1.51E-04	e	1.41E+00	c	8.95E+00	5.97E-01	4.47E-01	e
1,4-Dichlorobenzene	106-46-7	0.0E+00	NA	5.16E-03	3.44E-04	2.58E-04	e	1.41E+00	c	5.10E-01	3.40E-02	2.55E-02	e
1,4-Dinitrobenzene	100-25-4	0.0E+00	NA	4.94E-03	3.29E-04	2.47E-04	e	0.0E+00	NA	1.37E+00	9.12E-02	6.84E-02	e
2,4,5-Trichlorophenol	95-95-4	0.0E+00	NA	5.21E-03	3.48E-04	2.61E-04	e	3.67E-01	c	2.81E-01	1.87E-02	1.41E-02	e
2,4,6-Trichlorophenol	88-06-2	0.0E+00	NA	4.95E-03	3.30E-04	2.47E-04	e	3.61E+00	c	1.33E+00	8.89E-02	6.67E-02	e
2,4-Dichlorophenol	120-83-2	0.0E+00	NA	4.76E-03	3.17E-04	2.38E-04	e	3.61E+00	c	2.07E+00	1.38E-01	1.04E-01	e
2,4-Dimethylphenol	105-67-9	0.0E+00	NA	4.71E-03	3.14E-04	2.35E-04	e	3.61E+01	c	2.28E+00	1.52E-01	1.14E-01	e
2,4-Dinitrophenol	51-28-5	0.0E+00	NA	3.43E-06	2.29E-07	1.72E-07	e	9.62E-01	c	2.09E+01	1.39E+00	1.05E+00	e
2,4-Dinitrotoluene	121-14-2	0.0E+00	NA	4.06E-03	2.71E-04	2.03E-04	e	1.41E+00	c	4.85E+00	3.23E-01	2.43E-01	e
2,6-Dinitrotoluene	606-20-2	0.0E+00	NA	3.87E-03	2.58E-04	1.93E-04	e	1.41E+00	c	5.62E+00	3.75E-01	2.81E-01	e
2-Chlorophenol	95-57-8	0.0E+00	NA	5.08E-03	3.39E-04	2.54E-04	e	0.0E+00	NA	8.00E-01	5.34E-02	4.00E-02	e
2-Chlorotoluene	95-49-8	0.0E+00	NA	5.11E-03	3.40E-04	2.55E-04	e	0.0E+00	NA	7.02E-01	4.68E-02	3.51E-02	e
2-Nitrophenol	88-75-5	0.0E+00	NA	3.68E-03	2.45E-04	1.84E-04	e	9.03E+00	c	6.35E+00	4.24E-01	3.18E-01	e
4,6-Dinitro-o-cresol	534-52-1	0.0E+00	NA	5.15E-03	3.44E-04	2.58E-04	e	1.20E+01	e	5.22E-01	3.48E-02	2.61E-02	e
4-Chlorotoluene	106-43-4	0.0E+00	NA	5.14E-03	3.43E-04	2.57E-04	e	0.0E+00	NA	5.59E-01	3.73E-02	2.80E-02	e
4-Nitrophenol	100-02-7	0.0E+00	NA	3.91E-03	2.61E-04	1.95E-04	e	2.09E+02	c	5.45E+00	3.63E-01	2.73E-01	e
alpha-Methylstyrene	98-83-9	0.0E+00	NA	5.19E-03	3.46E-04	2.59E-04	e	0.0E+00	NA	3.87E-01	2.58E-02	1.93E-02	e
Aniline	62-53-3	0.0E+00	NA	1.84E-03	1.23E-04	9.21E-05	e	3.20E+01	c	1.36E+01	9.09E-01	6.82E-01	e
Benzotrichloride	98-07-7	0.0E+00	NA	5.22E-03	3.48E-04	2.61E-04	e	1.21E+05	e	2.69E-01	1.79E-02	1.35E-02	e
Benzyl chloride	100-44-7	0.0E+00	NA	4.50E-03	3.00E-04	2.25E-04	e	2.09E+01	c	3.11E+00	2.07E-01	1.55E-01	e
Bromobenzene	108-86-1	0.0E+00	NA	5.11E-03	3.41E-04	2.55E-04	e	0.0E+00	NA	6.97E-01	4.65E-02	3.48E-02	e
Chlorobenzene	108-90-7	0.0E+00	NA	4.94E-03	3.30E-04	2.47E-04	e	1.69E+00	c	1.35E+00	8.97E-02	6.73E-02	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
Light Substituted Benzene Compounds (MW<200 g/mole)											
1,2,3-Trichlorobenzene	87-61-6	9.45E-02	6.30E-03	4.72E-03	e	1.30E+03	5.79E+00	3.26E+00	f	7.84E-02	aa
1,2,4-Trichlorobenzene	120-82-1	1.15E-01	7.65E-03	5.74E-03	e	1.45E+03	6.43E+00	3.62E+00	f	6.60E-02	ab
1,2,4-Trimethyl benzene	95-63-6	1.90E-01	1.27E-02	9.51E-03	e	1.38E+04	6.15E+01	3.46E+01	f	9.39E-02	aa
1,2-Dichlorobenzene	95-50-1	4.88E-01	3.25E-02	2.44E-02	e	7.02E+03	3.12E+01	1.76E+01	f	4.10E-02	ab
1,3,5-Trimethyl benzene	108-67-8	1.14E-01	7.61E-03	5.71E-03	e	9.30E+03	4.13E+01	2.33E+01	f	6.58E-02	aa
1,3-Dichlorobenzene	541-73-1	2.35E-01	1.57E-02	1.17E-02	e	1.76E+08	7.81E+05	4.39E+05	f	5.80E-02	ab
1,3-Dinitrobenzene	99-65-0	5.34E+00	3.56E-01	2.67E-01	e	5.92E+00	2.63E-02	1.48E-02	f	1.81E-03	aa
1,4-Dichlorobenzene	106-46-7	3.05E-01	2.03E-02	1.52E-02	e	5.78E+03	2.57E+01	1.44E+01	f	4.20E-02	ab
1,4-Dinitrobenzene	100-25-4	8.17E-01	5.44E-02	4.08E-02	e	7.28E-01	3.24E-03	1.82E-03	f	1.72E-03	aa
2,4,5-Trichlorophenol	95-95-4	1.68E-01	1.12E-02	8.39E-03	e	4.46E+00	1.98E-02	1.11E-02	f	4.86E-02	aa
2,4,6-Trichlorophenol	88-06-2	7.97E-01	5.31E-02	3.98E-02	e	1.44E+01	6.42E-02	3.61E-02	f	3.50E-02	ab
2,4-Dichlorophenol	120-83-2	1.24E+00	8.25E-02	6.19E-02	e	1.40E+00	6.24E-03	3.51E-03	f	2.10E-02	ab
2,4-Dimethylphenol	105-67-9	1.36E+00	9.07E-02	6.80E-02	e	4.61E+01	2.05E-01	1.15E-01	f	1.10E-02	ab
2,4-Dinitrophenol	51-28-5	1.25E+01	8.33E-01	6.25E-01	e	4.04E+02	1.79E+00	1.01E+00	f	1.50E-03	ab
2,4-Dinitrotoluene	121-14-2	2.90E+00	1.93E-01	1.45E-01	e	2.71E+00	1.21E-02	6.79E-03	f	3.10E-03	ab
2,6-Dinitrotoluene	606-20-2	3.36E+00	2.24E-01	1.68E-01	e	2.96E+00	1.32E-02	7.40E-03	f	2.10E-03	ab
2-Chlorophenol	95-57-8	4.78E-01	3.19E-02	2.39E-02	e	6.60E+01	2.93E-01	1.65E-01	f	8.00E-03	ab
2-Chlorotoluene	95-49-8	4.19E-01	2.80E-02	2.10E-02	e	3.31E+03	1.47E+01	8.28E+00	f	6.06E-02	aa
2-Nitrophenol	88-75-5	3.79E+00	2.53E-01	1.90E-01	e	5.64E+02	2.50E+00	1.41E+00	f	4.00E-03	ab
4,6-Dinitro-o-cresol	534-52-1	3.12E-01	2.08E-02	1.56E-02	e	2.09E+00	9.28E-03	5.22E-03	f	3.10E-03	ab
4-Chlorotoluene	106-43-4	3.34E-01	2.23E-02	1.67E-02	e	0.00E+00	0.00E+00	0.00E+00	NA	5.27E-02	aa
4-Nitrophenol	100-02-7	3.25E+00	2.17E-01	1.63E-01	e	2.21E-01	9.82E-04	5.53E-04	f	4.80E-03	ab
alpha-Methylstyrene	98-83-9	2.31E-01	1.54E-02	1.15E-02	e	2.52E+04	1.12E+02	6.30E+01	f	7.41E-02	aa
Aniline	62-53-3	8.14E+00	5.43E-01	4.07E-01	e	7.28E+03	3.23E+01	1.82E+01	f	1.90E-03	ab
Benzotrichloride	98-07-7	1.61E-01	1.07E-02	8.04E-03	e	1.85E+02	8.23E-01	4.63E-01	f	1.10E-02	ab
Benzyl chloride	100-44-7	1.85E+00	1.24E-01	9.27E-02	e	7.79E+03	3.46E+01	1.95E+01	f	1.00E-02	ab
Bromobenzene	108-86-1	4.16E-01	2.77E-02	2.08E-02	e	9.37E+03	4.16E+01	2.34E+01	f	2.11E-02	aa
Chlorobenzene	108-90-7	8.03E-01	5.36E-02	4.02E-02	e	3.81E+04	1.69E+02	9.53E+01	f	2.80E-02	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW (g/mol)	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source			H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Cumene	98-82-8	0 or 1	b	120.19	NA	1.29E-02	c	1.29E-02	6.50E-02	c	7.83E-06	c
m-Cresol	108-39-4	0 or 1	b	108.13	NA	8.93E-07	c	8.93E-07	6.93E-02	c	9.30E-06	c
n-Butyl benzene	104-51-8	0 or 1	b	134.22	NA	1.30E+03	i	1.29E-02	7.25E-02	e	8.39E-06	e
Nitrobenzene	98-95-3	0 or 1	b	123.11	NA	2.06E-05	c	2.06E-05	5.43E-02	c	9.43E-06	c
n-Propyl benzene	103-65-1	0 or 1	b	120.19	NA	1.11E+03	i	1.10E-02	7.80E-02	e	9.03E-06	e
o-Cresol	95-48-7	0 or 1	b	108.13	NA	1.62E-06	c	1.62E-06	6.88E-02	c	9.41E-06	c
o-Dinitrobenzene	528-29-0	0 or 1	b	168.11	NA	1.51E-05	m	3.69E-07	6.24E-02	e	7.22E-06	e
o-Nitroaniline	88-74-4	0 or 1	b	138.12	NA	1.17E-06	c	1.17E-06	4.29E-02	c	9.81E-06	c
o-Toluidine	95-53-4	0 or 1	b	107.15	NA	2.43E-06	c	2.43E-06	7.14E-02	c	9.12E-06	c
p-Chloroaniline	106-47-8	0 or 1	b	127.57	NA	1.17E-06	c	1.17E-06	4.80E-02	c	1.02E-05	c
p-Cresol	106-44-5	0 or 1	b	108.13	NA	7.99E-07	c	7.99E-07	6.93E-02	c	9.30E-06	c
Phenol	108-95-2	0 or 1	b	94.11	7	5.95E-07	c	5.95E-07	8.27E-02	c	1.03E-05	c
p-Nitrochlorobenzene	100-00-5	0 or 1	b	157.56	7	2.00E-04	k	4.88E-06	6.51E-02	e	7.54E-06	e
p-Toluidine	106-49-0	0 or 1	b	107.17	NA	6.56E-01	i	6.50E-06	6.98E-02	j	9.43E-06	j
sec-Butyl benzene	135-98-8	0 or 1	b	134.22	NA	1.40E+03	i	1.39E-02	7.25E-02	e	8.39E-06	e
tert-Butyl benzene	98-06-6	0 or 1	b	134.22	NA	1.20E+03	i	1.19E-02	7.25E-02	e	8.39E-06	e
Toluene-2,6-diamine	823-40-5	0 or 1	b	122.17	NA	3.89E-08	m	9.49E-10	5.59E-02	j	9.23E-06	j
Trimethyl benzene	25551-13-7	0 or 1	b	120.19	NA	2.96E-01	k	7.23E-03	7.80E-02	e	9.03E-06	e
Other Light Semivolatile Compounds (MW<200 g/mole)												
1,1'-Biphenyl	92-52-4	0 or 1	b	154.21	NA	2.80E+01	i	2.77E-04	6.61E-02	e	7.65E-06	e
1,1-Dimethylhydrazine	57-14-7	0 or 1	b	60.099	NA	2.84E-06	m	6.93E-08	1.06E-01	j	1.09E-05	j
1,2-Dimethylhydrazine	540-73-8	0 or 1	b	60.099	NA	2.84E-06	m	6.93E-08	1.24E-01	e	1.43E-05	e
1,2-Diphenylhydrazine	122-66-7	0 or 1	b	184.24	NA	1.28E-07	c	1.28E-07	2.95E-02	c	7.24E-06	c
1,3-Propane sultone	1120-71-4	0 or 1	b	122.1	NA	NA	NA	NA	7.72E-02	e	8.94E-06	e
2,4-Toluene diisocyanate	584-84-9	0 or 1	b	174.16	NA	NA	NA	NA	6.09E-02	e	7.05E-06	e
2-Chloroacetophenone	532-27-4	0 or 1	b	154.6	NA	1.41E-04	m	3.45E-06	3.83E-02	j	8.71E-06	j
2-Propenoic acid	79-10-7	0 or 1	b	72.06	NA	4.20E-02	i	4.16E-07	9.80E-02	j	1.06E-05	j
4,4'-Methylenedianiline	101-77-9	0 or 1	b	198.27	NA	6.46E-10	m	1.58E-11	3.56E-02	j	5.39E-06	j
Acetophenone	98-86-2	0 or 1	b	120.5	NA	1.03E-05	h	1.03E-05	6.00E-02	c	8.73E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Cumene	98-82-8	9.31E+02	h	9.31E+02	4.10E+03	c	4.10E+03	3.72E+01	h	9.31E+00	h
m-Cresol	108-39-4	4.78E+01	c	4.78E+01	9.10E+01	c	9.10E+01	1.91E+00	c	4.78E-01	c
n-Butyl benzene	104-51-8	3.40E+00	i	2.51E+03	4.28E+00	i	1.91E+04	1.00E+02	e	2.51E+01	e
Nitrobenzene	98-95-3	1.19E+02	c	1.19E+02	6.80E+01	c	6.80E+01	4.76E+04	c	1.19E+00	c
n-Propyl benzene	103-65-1	2.86E+00	i	7.24E+02	3.69E+00	i	4.90E+03	2.90E+01	e	7.24E+00	e
o-Cresol	95-48-7	5.34E+01	c	5.34E+01	1.05E+02	c	1.05E+02	2.14E+00	c	5.34E-01	c
o-Dinitrobenzene	528-29-0	2.25E+02	m	2.25E+02	1.69E+00	m	4.90E+01	8.98E+00	e	2.25E+00	e
o-Nitroaniline	88-74-4	3.93E+01	h	3.93E+01	7.08E+01	c	7.08E+01	1.57E+00	h	3.93E-01	h
o-Toluidine	95-53-4	1.57E+01	c	1.57E+01	2.19E+01	c	2.19E+01	6.28E-01	c	1.57E-01	c
p-Chloroaniline	106-47-8	4.10E+01	c	4.10E+01	7.40E+01	c	7.40E+01	1.63E+00	c	4.06E-01	c
p-Cresol	106-44-5	4.61E+01	c	4.61E+01	8.70E+01	c	8.70E+01	1.84E+00	c	4.61E-01	c
Phenol	108-95-2	2.20E+01	c	2.20E+01	3.00E+01	c	3.00E+01	8.79E-01	c	2.20E-01	c
p-Nitrochlorobenzene	100-00-5	NA	e	1.04E+02	2.39E+00	l	2.45E+02	4.14E+00	e	1.04E+00	e
p-Toluidine	106-49-0	NA	e	1.75E+01	1.40E+00	i	2.51E+01	7.00E-01	e	1.75E-01	e
sec-Butyl benzene	135-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butyl benzene	98-06-6	NA	e	2.27E+03	4.11E+00	i	1.29E+04	9.10E+01	e	2.27E+01	e
Toluene-2,6-diamine	823-40-5	1.22E+02	m	1.22E+02	1.60E-01	m	1.45E+00	4.90E+00	e	1.22E+00	e
Trimethyl benzene	25551-13-7	7.03E+02	m	7.03E+02	3.42E+00	m	2.63E+03	2.81E+01	e	7.03E+00	e
Other Light Semivolatile Compounds (MW<200 g/mole)											
1,1'-Biphenyl	92-52-4	3.40E+00	i	2.51E+03	3.90E+00	i	7.94E+03	1.00E+02	e	2.51E+01	e
1,1-Dimethylhydrazine	57-14-7	1.98E+01	m	1.98E+01	-1.19E+00	m	6.46E-02	7.91E-01	e	1.98E-01	e
1,2-Dimethylhydrazine	540-73-8	NA	e	1.21E-01	-1.37E+00	l	4.29E-02	4.85E-03	e	1.21E-03	e
1,2-Diphenylhydrazine	122-66-7	2.78E+02	c	2.78E+02	8.71E+02	c	8.71E+02	1.11E+01	c	2.78E+00	c
1,3-Propane sultone	1120-71-4	NA	e	5.53E-01	-5.23E-01	l	3.00E-01	2.21E-02	e	5.53E-03	e
2,4-Toluene diisocyanate	584-84-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroacetophenone	532-27-4	8.93E+01	m	8.93E+01	1.93E+00	m	8.51E+01	3.57E+00	e	8.93E-01	e
2-Propenoic acid	79-10-7	NA	e	3.06E+00	4.30E-01	i	2.69E+00	1.23E-01	e	3.06E-02	e
4,4'-Methylenedianiline	101-77-9	4.95E+03	m	4.95E+03	1.59E+00	m	3.89E+01	1.98E+02	e	4.95E+01	e
Acetophenone	98-86-2	2.69E+01	c	2.69E+01	4.37E+01	c	4.37E+01	1.08E+00	c	2.69E-01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Cumene	98-82-8	6.98E+01	h	3.16E-01	c	3.16E-01	c	3.16E-01
m-Cresol	108-39-4	3.58E+00	c	2.86E+00	c	2.86E+00	c	2.86E+00
n-Butyl benzene	104-51-8	1.88E+02	e	1.30E-01	e	1.30E-01	e	1.30E-01
Nitrobenzene	98-95-3	8.93E+00	c	3.38E+00	c	3.38E+00	c	3.38E+00
n-Propyl benzene	103-65-1	5.43E+01	e	2.85E-01	e	2.85E-01	e	2.85E-01
o-Cresol	95-48-7	4.00E+00	c	2.63E+00	c	2.63E+00	c	2.63E+00
o-Dinitrobenzene	528-29-0	1.68E+01	e	4.08E+00	e	4.08E+00	e	4.08E+00
o-Nitroaniline	88-74-4	2.95E+00	h	3.30E+00	c	3.30E+00	c	3.30E+00
o-Toluidine	95-53-4	1.18E+00	c	6.51E+00	c	6.51E+00	c	6.51E+00
p-Chloroaniline	106-47-8	3.05E+00	c	3.22E+00	c	3.22E+00	c	3.22E+00
p-Cresol	106-44-5	3.46E+00	c	2.93E+00	c	2.93E+00	c	2.93E+00
Phenol	108-95-2	1.65E+00	c	5.42E+00	c	5.42E+00	c	5.42E+00
p-Nitrochlorobenzene	100-00-5	7.77E+00	e	1.61E+00	e	1.61E+00	e	1.61E+00
p-Toluidine	106-49-0	1.31E+00	e	6.01E+00	e	6.01E+00	e	6.01E+00
sec-Butyl benzene	135-98-8	NA	NA	NA	NA	NA	NA	NA
tert-Butyl benzene	98-06-6	1.71E+02	e	1.63E-01	e	1.63E-01	e	1.63E-01
Toluene-2,6-diamine	823-40-5	9.18E+00	e	3.13E+01	e	3.13E+01	e	3.13E+01
Trimethyl benzene	25551-13-7	5.27E+01	e	4.09E-01	e	4.09E-01	e	4.09E-01
Other Light Semivolatile Compounds (MW<200 g/mole)								
1,1'-Biphenyl	92-52-4	1.88E+02	e	2.16E-01	e	2.16E-01	e	2.16E-01
1,1-Dimethylhydrazine	57-14-7	1.48E+00	e	1.89E+02	e	1.89E+02	e	1.89E+02
1,2-Dimethylhydrazine	540-73-8	9.10E-03	e	2.39E+02	e	2.39E+02	e	2.39E+02
1,2-Diphenylhydrazine	122-66-7	2.09E+01	c	7.74E-01	c	7.74E-01	c	7.74E-01
1,3-Propane sultone	1120-71-4	4.15E-02	e	7.77E+01	e	7.77E+01	e	7.77E+01
2,4-Toluene diisocyanate	584-84-9	NA	NA	NA	NA	NA	NA	NA
2-Chloroacetophenone	532-27-4	6.69E+00	e	2.97E+00	e	2.97E+00	e	2.97E+00
2-Propenoic acid	79-10-7	2.30E-01	e	2.19E+01	e	2.19E+01	e	2.19E+01
4,4'-Methylenedianiline	101-77-9	3.71E+02	e	4.67E+00	e	4.67E+00	e	4.67E+00
Acetophenone	98-86-2	2.02E+00	c	4.37E+00	c	4.37E+00	c	4.37E+00

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Cumene	98-82-8	1.58E+01	h	3.06E-02	c	3.06E-02	c	1.47E+02	c
m-Cresol	108-39-4	2.89E+01	c	7.64E+00	c	7.64E+00	c	1.38E+01	c
n-Butyl benzene	104-51-8	1.85E+01	e	1.57E-01	e	1.57E-01	e	4.65E+02	e
Nitrobenzene	98-95-3	1.03E+01	c	2.43E-01	c	2.43E-01	c	1.23E+01	c
n-Propyl benzene	103-65-1	2.31E+01	e	4.34E-02	e	4.34E-02	e	1.68E+02	e
o-Cresol	95-48-7	2.75E+01	c	4.89E+00	c	4.89E+00	c	1.47E+01	c
o-Dinitrobenzene	528-29-0	4.88E+00	e	9.58E+00	e	9.58E+00	e	1.10E+01	e
o-Nitroaniline	88-74-4	3.18E+01	h	4.47E+00	c	4.47E+00	c	1.25E+01	c
o-Toluidine	95-53-4	5.61E+01	c	6.16E-01	c	6.16E-01	c	8.81E+00	c
p-Chloroaniline	106-47-8	3.12E+01	c	4.66E+00	c	4.66E+00	c	1.27E+01	c
p-Cresol	106-44-5	2.94E+01	c	8.13E+00	c	8.13E+00	c	1.35E+01	c
Phenol	108-95-2	4.32E+01	c	3.52E+00	c	3.52E+00	c	9.50E+00	c
p-Nitrochlorobenzene	100-00-5	2.16E+01	e	4.03E+00	e	4.03E+00	e	2.24E+01	e
p-Toluidine	106-49-0	5.19E+01	e	2.67E-01	e	2.67E-01	e	9.09E+00	e
sec-Butyl benzene	135-98-8	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butyl benzene	98-06-6	1.52E+01	e	1.12E-01	e	1.12E-01	e	3.46E+02	e
Toluene-2,6-diamine	823-40-5	5.41E+00	e	8.74E+01	e	8.74E+01	e	6.62E+00	e
Trimethyl benzene	25551-13-7	1.51E+01	e	3.40E-02	e	3.40E-02	e	1.06E+02	e
Other Light Semivolatile Compounds (MW<200 g/mole)									
1,1'-Biphenyl	92-52-4	9.56E+00	e	2.88E+00	e	2.88E+00	e	2.40E+02	e
1,1-Dimethylhydrazine	57-14-7	3.20E+01	e	4.37E-02	e	4.37E-02	e	6.34E+00	e
1,2-Dimethylhydrazine	540-73-8	5.22E+03	e	2.82E-02	e	2.82E-02	e	6.33E+00	e
1,2-Diphenylhydrazine	122-66-7	1.76E+01	c	5.89E+02	c	5.89E+02	c	4.90E+01	c
1,3-Propane sultone	1120-71-4	1.16E+03	e	NA	NA	NA	NA	6.40E+00	e
2,4-Toluene diisocyanate	584-84-9	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroacetophenone	532-27-4	1.50E+01	e	1.85E+00	e	1.85E+00	e	1.34E+01	e
2-Propenoic acid	79-10-7	2.22E+02	e	3.87E-01	e	3.87E-01	e	6.81E+00	e
4,4'-Methylenedianiline	101-77-9	2.06E-01	e	1.76E+05	e	1.76E+05	e	1.02E+01	e
Acetophenone	98-86-2	3.92E+01	c	3.04E-01	c	3.04E-01	c	1.06E+01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Cumene	98-82-8	1.03E-04	c	8.13E-05	c	3.26E-02	c	3.26E-05	c	1.25E-04	c
m-Cresol	108-39-4	2.29E-06	c	1.86E-06	c	7.23E-04	c	7.23E-07	c	2.77E-06	c
n-Butyl benzene	104-51-8	4.79E-04	e	3.78E-04	e	1.51E-01	e	1.51E-04	e	5.79E-04	e
Nitrobenzene	98-95-3	1.71E-06	c	1.35E-06	c	5.40E-04	c	5.40E-07	c	2.07E-06	c
n-Propyl benzene	103-65-1	1.23E-04	e	9.71E-05	e	3.89E-02	e	3.89E-05	e	1.49E-04	e
o-Cresol	95-48-7	2.64E-06	c	2.08E-06	c	8.34E-04	c	8.34E-07	c	3.19E-06	c
o-Dinitrobenzene	528-29-0	1.23E-06	e	9.71E-07	e	3.89E-04	e	3.89E-07	e	1.49E-06	e
o-Nitroaniline	88-74-4	1.78E-06	c	1.40E-06	c	5.62E-04	c	5.62E-07	c	2.15E-06	c
o-Toluidine	95-53-4	5.50E-07	c	4.34E-07	c	1.74E-04	c	1.74E-07	c	6.65E-07	c
p-Chloroaniline	106-47-8	1.86E-06	c	1.47E-06	c	5.88E-04	c	5.88E-07	c	2.25E-06	c
p-Cresol	106-44-5	2.19E-06	c	1.73E-06	c	6.91E-04	c	6.91E-07	c	2.65E-06	c
Phenol	108-95-2	7.54E-07	c	5.95E-07	c	2.38E-04	c	2.38E-07	c	9.12E-07	c
p-Nitrochlorobenzene	100-00-5	6.17E-06	e	4.87E-06	e	1.95E-03	e	1.95E-06	e	7.46E-06	e
p-Toluidine	106-49-0	6.31E-07	e	4.98E-07	e	2.00E-04	e	2.00E-07	e	7.64E-07	e
sec-Butyl benzene	135-98-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butyl benzene	98-06-6	3.24E-04	e	2.55E-04	e	1.02E-01	e	1.02E-04	e	3.92E-04	e
Toluene-2,6-diamine	823-40-5	3.63E-08	e	2.87E-08	e	1.15E-05	e	1.15E-08	e	4.40E-08	e
Trimethyl benzene	25551-13-7	6.61E-05	e	5.22E-05	e	2.09E-02	e	2.09E-05	e	8.00E-05	e
Other Light Semivolatile Compounds (MW<200 g/mole)											
1,1'-Biphenyl	92-52-4	2.00E-04	e	1.58E-04	e	6.31E-02	e	6.31E-05	e	2.42E-04	e
1,1-Dimethylhydrazine	57-14-7	1.62E-09	e	1.28E-09	e	5.13E-07	e	5.13E-10	e	1.96E-09	e
1,2-Dimethylhydrazine	540-73-8	1.08E-09	e	8.50E-10	e	3.40E-07	e	3.40E-10	e	1.30E-09	e
1,2-Diphenylhydrazine	122-66-7	2.19E-05	c	1.73E-05	c	6.92E-03	c	6.92E-06	c	2.65E-05	c
1,3-Propane sultone	1120-71-4	7.53E-09	e	5.95E-09	e	2.38E-06	e	2.38E-09	e	9.12E-09	e
2,4-Toluene diisocyanate	584-84-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroacetophenone	532-27-4	2.14E-06	e	1.69E-06	e	6.76E-04	e	6.76E-07	e	2.59E-06	e
2-Propenoic acid	79-10-7	6.76E-08	e	5.34E-08	e	2.14E-05	e	2.14E-08	e	8.18E-08	e
4,4'-Methylenedianiline	101-77-9	9.77E-07	e	7.72E-07	e	3.09E-04	e	3.09E-07	e	1.18E-06	e
Acetophenone	98-86-2	1.10E-06	c	8.66E-07	c	3.47E-04	c	3.47E-07	c	1.33E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Cumene	98-82-8	NA	NA	3.28E+02	c	NA	NA	NA	NA
m-Cresol	108-39-4	NA	NA	1.81E+01	c	NA	NA	NA	NA
n-Butyl benzene	104-51-8	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	98-95-3	NA	NA	5.92E+00	c	NA	NA	NA	NA
n-Propyl benzene	103-65-1	NA	NA	3.75E+02	e	NA	NA	NA	NA
o-Cresol	95-48-7	NA	NA	2.02E+01	c	NA	NA	NA	NA
o-Dinitrobenzene	528-29-0	NA	NA	1.13E+01	e	NA	NA	NA	NA
o-Nitroaniline	88-74-4	NA	NA	1.50E+01	c	NA	NA	NA	NA
o-Toluidine	95-53-4	NA	NA	6.14E+00	c	NA	NA	NA	NA
p-Chloroaniline	106-47-8	NA	NA	1.55E+01	c	NA	NA	NA	NA
p-Cresol	106-44-5	NA	NA	1.75E+01	c	NA	NA	NA	NA
Phenol	108-95-2	NA	NA	7.81E+00	c	NA	NA	NA	NA
p-Nitrochlorobenzene	100-00-5	NA	NA	3.86E+01	e	NA	NA	NA	NA
p-Toluidine	106-49-0	NA	NA	6.82E+00	e	NA	NA	NA	NA
sec-Butyl benzene	135-98-8	NA	NA	NA	NA	NA	NA	NA	NA
tert-Butyl benzene	98-06-6	NA	NA	NA	NA	NA	NA	NA	NA
Toluene-2,6-diamine	823-40-5	NA	NA	7.79E-01	e	NA	NA	NA	NA
Trimethyl benzene	25551-13-7	NA	NA	2.34E+02	e	NA	NA	NA	NA
Other Light Semivolatile Compounds (MW<200 g/mole)									
1,1'-Biphenyl	92-52-4	NA	NA	5.42E+02	e	NA	NA	7.00E+00	d
1,1-Dimethylhydrazine	57-14-7	NA	NA	7.34E-02	e	NA	NA	2.20E+01	d
1,2-Dimethylhydrazine	540-73-8	NA	NA	5.37E-02	e	NA	NA	2.80E+01	d
1,2-Diphenylhydrazine	122-66-7	NA	NA	1.01E+02	c	NA	NA	NA	NA
1,3-Propane sultone	1120-71-4	NA	NA	2.36E-01	e	NA	NA	2.80E+01	d
2,4-Toluene diisocyanate	584-84-9	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroacetophenone	532-27-4	NA	NA	1.73E+01	e	NA	NA	2.80E+01	d
2-Propenoic acid	79-10-7	NA	NA	1.25E+00	e	NA	NA	7.00E+00	d
4,4'-Methylenedianiline	101-77-9	NA	NA	9.51E+00	e	NA	NA	7.00E+00	d
Acetophenone	98-86-2	NA	NA	1.04E+01	c	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Cumene	98-82-8	0.0E+00	NA	5.20E-03	3.47E-04	2.60E-04	e	3.16E+01	c	3.40E-01	2.27E-02	1.70E-02	e
m-Cresol	108-39-4	0.0E+00	NA	4.00E-03	2.67E-04	2.00E-04	e	8.72E+00	c	5.10E+00	3.40E-01	2.55E-01	e
n-Butyl benzene	104-51-8	0.0E+00	NA	5.25E-03	3.50E-04	2.63E-04	e	0.0E+00	NA	1.27E-01	8.49E-03	6.37E-03	e
Nitrobenzene	98-95-3	0.0E+00	NA	4.68E-03	3.12E-04	2.34E-04	e	1.28E+00	c	2.40E+00	1.60E-01	1.20E-01	e
n-Propyl benzene	103-65-1	0.0E+00	NA	5.17E-03	3.45E-04	2.59E-04	e	0.0E+00	NA	4.35E-01	2.90E-02	2.18E-02	e
o-Cresol	95-48-7	0.0E+00	NA	4.10E-03	2.73E-04	2.05E-04	e	3.61E+01	c	4.68E+00	3.12E-01	2.34E-01	e
o-Dinitrobenzene	528-29-0	0.0E+00	NA	4.95E-03	3.30E-04	2.47E-04	e	0.0E+00	NA	1.34E+00	8.95E-02	6.71E-02	e
o-Nitroaniline	88-74-4	0.0E+00	NA	3.80E-03	2.53E-04	1.90E-04	e	0.0E+00	NA	5.89E+00	3.93E-01	2.94E-01	e
o-Toluidine	95-53-4	0.0E+00	NA	2.67E-03	1.78E-04	1.33E-04	e	3.61E+01	c	1.04E+01	6.91E-01	5.18E-01	e
p-Chloroaniline	106-47-8	0.0E+00	NA	3.83E-03	2.55E-04	1.92E-04	e	0.0E+00	NA	5.75E+00	3.83E-01	2.88E-01	e
p-Cresol	106-44-5	0.0E+00	NA	3.96E-03	2.64E-04	1.98E-04	e	3.79E+02	c	5.24E+00	3.49E-01	2.62E-01	e
Phenol	108-95-2	0.0E+00	NA	3.11E-03	2.07E-04	1.55E-04	e	2.53E+01	c	8.61E+00	5.74E-01	4.31E-01	e
p-Nitrochlorobenzene	100-00-5	0.0E+00	NA	4.60E-03	3.07E-04	2.30E-04	e	0.0E+00	NA	2.71E+00	1.80E-01	1.35E-01	e
p-Toluidine	106-49-0	0.0E+00	NA	2.81E-03	1.87E-04	1.41E-04	e	0.0E+00	NA	9.79E+00	6.53E-01	4.90E-01	e
sec-Butyl benzene	135-98-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
tert-Butyl benzene	98-06-6	0.0E+00	NA	5.25E-03	3.50E-04	2.62E-04	e	0.0E+00	NA	1.41E-01	9.38E-03	7.03E-03	e
Toluene-2,6-diamine	823-40-5	0.0E+00	NA	4.69E-03	3.13E-04	2.35E-04	e	0.0E+00	NA	2.34E+00	1.56E-01	1.17E-01	e
Trimethyl benzene	25551-13-7	0.0E+00	NA	5.17E-03	3.45E-04	2.59E-04	e	0.0E+00	NA	4.48E-01	2.99E-02	2.24E-02	e
Other Light Semivolatile Compounds (MW<200 g/mole)													
1,1'-Biphenyl	92-52-4	0.0E+00	NA	5.25E-03	3.50E-04	2.63E-04	e	3.61E+01	e	1.27E-01	8.49E-03	6.37E-03	e
1,1-Dimethylhydrazine	57-14-7	0.0E+00	NA	2.97E-03	1.98E-04	1.49E-04	e	1.15E+01	e	9.16E+00	6.11E-01	4.58E-01	e
1,2-Dimethylhydrazine	540-73-8	0.0E+00	NA	4.13E-05	2.76E-06	2.07E-06	e	9.03E+00	e	2.08E+01	1.38E+00	1.04E+00	e
1,2-Diphenylhydrazine	122-66-7	0.0E+00	NA	5.01E-03	3.34E-04	2.50E-04	e	1.41E+00	c	1.10E+00	7.32E-02	5.49E-02	e
1,3-Propane sultone	1120-71-4	0.0E+00	NA	1.83E-04	1.22E-05	9.17E-06	e	9.03E+00	e	2.02E+01	1.35E+00	1.01E+00	e
2,4-Toluene diisocyanate	584-84-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
2-Chloroacetophenone	532-27-4	0.0E+00	NA	4.51E-03	3.01E-04	2.25E-04	e	9.03E+00	e	3.08E+00	2.05E-01	1.54E-01	e
2-Propenoic acid	79-10-7	0.0E+00	NA	8.78E-04	5.85E-05	4.39E-05	e	3.61E+01	e	1.75E+01	1.16E+00	8.73E-01	e
4,4'-Methylenedianiline	101-77-9	0.0E+00	NA	5.27E-03	3.51E-04	2.63E-04	e	3.61E+01	e	6.49E-02	4.32E-03	3.24E-03	e
Acetophenone	98-86-2	0.0E+00	NA	3.36E-03	2.24E-04	1.68E-04	e	0.0E+00	NA	7.62E+00	5.08E-01	3.81E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
Cumene	98-82-8	2.03E-01	1.35E-02	1.02E-02	e	2.76E+04	1.23E+02	6.91E+01	f	8.86E-02	aa
m-Cresol	108-39-4	3.04E+00	2.03E-01	1.52E-01	e	3.97E+01	1.77E-01	9.93E-02	f	7.80E-03	ab
n-Butyl benzene	104-51-8	7.61E-02	5.07E-03	3.80E-03	e	1.14E+04	5.07E+01	2.85E+01	f	2.07E-01	aa
Nitrobenzene	98-95-3	1.43E+00	9.54E-02	7.16E-02	e	2.88E+02	1.28E+00	7.21E-01	f	5.47E-03	aa
n-Propyl benzene	103-65-1	2.60E-01	1.73E-02	1.30E-02	e	3.63E+04	1.61E+02	9.07E+01	f	9.98E-02	aa
o-Cresol	95-48-7	2.80E+00	1.86E-01	1.40E-01	e	6.41E+01	2.85E-01	1.60E-01	f	7.70E-03	ab
o-Dinitrobenzene	528-29-0	8.01E-01	5.34E-02	4.01E-02	e	3.14E+00	1.40E-02	7.86E-03	f	2.46E-03	aa
o-Nitroaniline	88-74-4	3.52E+00	2.34E-01	1.76E-01	e	3.92E+01	1.74E-01	9.80E-02	f	4.64E-03	aa
o-Toluidine	95-53-4	6.19E+00	4.12E-01	3.09E-01	e	3.39E+02	1.51E+00	8.48E-01	f	3.00E-03	ab
p-Chloroaniline	106-47-8	3.44E+00	2.29E-01	1.72E-01	e	4.25E+01	1.89E-01	1.06E-01	f	5.47E-03	aa
p-Cresol	106-44-5	3.13E+00	2.09E-01	1.56E-01	e	3.69E+01	1.64E-01	9.22E-02	f	7.70E-03	ab
Phenol	108-95-2	5.14E+00	3.43E-01	2.57E-01	e	6.86E+01	3.05E-01	1.72E-01	f	4.30E-03	ab
p-Nitrochlorobenzene	100-00-5	1.62E+00	1.08E-01	8.08E-02	e	9.42E+01	4.19E-01	2.36E-01	f	8.30E-03	aa
p-Toluidine	106-49-0	5.85E+00	3.90E-01	2.92E-01	e	7.95E+02	3.53E+00	1.99E+00	f	3.45E-03	aa
sec-Butyl benzene	135-98-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
tert-Butyl benzene	98-06-6	8.40E-02	5.60E-03	4.20E-03	e	1.16E+04	5.17E+01	2.91E+01	f	1.59E-01	aa
Toluene-2,6-diamine	823-40-5	1.40E+00	9.30E-02	6.98E-02	e	1.33E-02	5.91E-05	3.33E-05	f	4.20E-04	aa
Trimethyl benzene	25551-13-7	2.68E-01	1.78E-02	1.34E-02	e	2.46E+04	1.09E+02	6.15E+01	f	6.58E-02	aa
Other Light Semivolatile Compounds (MW<200 g/mole)											
1,1'-Biphenyl	92-52-4	7.61E-02	5.07E-03	3.80E-03	e	2.24E+02	9.95E-01	5.59E-01	f	8.90E-02	aa
1,1-Dimethylhydrazine	57-14-7	5.47E+00	3.65E-01	2.73E-01	e	1.14E+01	5.07E-02	2.85E-02	f	7.30E-05	ab
1,2-Dimethylhydrazine	540-73-8	1.24E+01	8.27E-01	6.20E-01	e	2.17E+03	9.65E+00	5.43E+00	f	8.85E-05	aa
1,2-Diphenylhydrazine	122-66-7	6.55E-01	4.37E-02	3.28E-02	e	4.17E-01	1.85E-03	1.04E-03	f	1.30E-02	ab
1,3-Propane sultone	1120-71-4	1.21E+01	8.04E-01	6.03E-01	e	0.0E+00	0.0E+00	0.0E+00	NA	1.46E-04	aa
2,4-Toluene diisocyanate	584-84-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
2-Chloroacetophenone	532-27-4	1.84E+00	1.23E-01	9.19E-02	e	4.54E+01	2.02E-01	1.14E-01	f	4.24E-03	aa
2-Propenoic acid	79-10-7	1.04E+01	6.95E-01	5.21E-01	e	4.08E+02	1.81E+00	1.02E+00	f	1.21E-03	aa
4,4'-Methylenedianiline	101-77-9	3.87E-02	2.58E-03	1.94E-03	e	3.48E-06	1.55E-08	8.69E-09	f	1.40E-03	ab
Acetophenone	98-86-2	4.55E+00	3.03E-01	2.27E-01	e	7.05E+02	3.13E+00	1.76E+00	f	4.21E-03	aa

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW (g/mol)	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source			H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Benzoic acid	65-85-0	0 or 1	b	122.13	7	3.34E-07	h	3.34E-07	5.36E-02	j	7.97E-06	j
Bis(2-chloroethoxy)methane	111-91-1	0 or 1	b	173.04	NA	6.91E-06	m	1.69E-07	6.12E-02	e	7.08E-06	e
Bis(2-chloroethyl) ether	111-44-4	0 or 1	b	143.02	NA	2.13E-05	c	2.13E-05	4.40E-02	c	8.70E-06	c
Chlorocyclopentadiene	41851-50-7	0 or 1	b	100.55	NA	9.16E-01	m	2.23E-02	8.79E-02	e	1.02E-05	e
Cyclohexanol	108-93-0	0 or 1	b	100.16	NA	5.81E-01	i	5.75E-06	8.81E-02	e	1.02E-05	e
Dichloroisopropyl ether	108-60-1	0 or 1	b	171.07	NA	1.14E+01	i	1.13E-04	3.50E-02	j	7.36E-06	j
Dichloromethyl ether	542-88-1	0 or 1	b	114.96	NA	8.42E-03	m	2.05E-04	8.04E-02	e	9.31E-06	e
Dichloropentadiene	61626-71-9	0 or 1	b	137.01	NA	NA	NA	NA	7.15E-02	e	8.28E-06	e
Dimethyl sulfate	77-78-1	0 or 1	b	126.14	NA	1.64E-04	m	3.99E-06	5.14E-02	j	9.57E-06	j
Dimethylaniline	121-69-7	0 or 1	b	121.18	NA	2.32E-03	m	5.66E-05	1.53E-01	j	1.41E-05	j
di-n-Propylnitrosamine	621-64-7	0 or 1	b	130.19	NA	4.13E-05	h	4.13E-05	5.67E-02	c	7.75E-06	c
Diphenyl ether	101-84-8	0 or 1	b	170.21	NA	2.51E+01	i	2.49E-04	6.19E-02	e	7.16E-06	e
Epichlorohydrin	106-89-8	0 or 1	b	92.53	NA	3.08E-05	c	3.08E-05	8.13E-02	c	1.10E-05	c
Ethyl carbamate (Urethane)	51-79-6	0 or 1	b	89.094	NA	NA	NA	NA	9.52E-02	e	1.10E-05	e
Ethyl methanesulfonate	62-50-0	0 or 1	b	124.15	NA	8.87E-08	c	8.87E-08	7.63E-02	c	8.84E-06	c
Ethylene dibromide	106-93-4	0 or 1	b	187.88	NA	4.47E-04	c	4.47E-04	2.17E-02	c	1.19E-05	c
Ethylene glycol	107-21-1	0 or 1	b	62.08	NA	2.45E-06	m	5.98E-08	1.08E-01	j	1.22E-05	j
Ethylene glycol monobutyl ether	111-76-2	0 or 1	b	118	NA	6.54E-05	m	1.60E-06	6.51E-02	j	8.15E-06	j
Ethylene glycol monoethyl ether acetate	111-15-9	0 or 1	b	148.17	NA	1.31E-04	m	3.19E-06	4.58E-02	j	7.56E-06	j
Ethylene thiourea	96-45-7	0 or 1	b	102.17	NA	1.37E-05	m	3.35E-07	7.15E-02	j	1.02E-05	j
Furfural	98-01-1	0 or 1	b	96.08	NA	3.75E-01	i	3.71E-06	8.72E-02	j	1.04E-05	j
Maleic hydrazide	123-33-1	0 or 1	b	112.09	NA	1.08E-09	m	2.64E-11	8.17E-02	e	9.46E-06	e
Malononitrile	109-77-3	0 or 1	b	66.062	NA	5.19E-07	m	1.27E-08	1.16E-01	e	1.35E-05	e
Methyl styrene (mixed isomers)	25013-15-4	0 or 1	b	118.18	NA	3.21E-01	m	7.84E-03	5.46E-02	j	8.08E-06	j
Methylhydrazine	60-34-4	0 or 1	b	46.072	NA	1.24E-04	k	3.03E-06	1.48E-01	e	1.71E-05	e
N,N-Diphenylamine	122-39-4	0 or 1	b	169.23	NA	3.50E-02	i	3.47E-07	6.21E-02	e	7.19E-06	e
Nitric acid, propyl ester	627-13-4	0 or 1	b	105.09	NA	5.20E-02	k	1.27E-03	8.53E-02	e	9.88E-06	e
N-Nitrosodi-n-butylamine	924-16-3	0 or 1	b	158.2	NA	5.47E-05	c	5.47E-05	6.50E-02	c	7.52E-06	c
N-Nitrosomorpholine	59-89-2	0 or 1	b	116.12	NA	1.00E-06	k	2.45E-08	7.98E-02	e	9.24E-06	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Benzoic acid	65-85-0	5.50E-01	c	5.50E-01	1.87E+00	m	7.41E+01	2.20E-02	c	5.50E-03	c
Bis(2-chloroethoxy)methane	111-91-1	2.77E+00	m	2.77E+00	1.30E+00	m	2.00E+01	1.11E-01	e	2.77E-02	e
Bis(2-chloroethyl) ether	111-44-4	7.60E+01	c	7.60E+01	2.00E+01	c	2.00E+01	3.04E+00	c	7.60E-01	c
Chlorocyclopentadiene	41851-50-7	1.45E+02	m	1.45E+02	2.43E+00	m	2.69E+02	5.81E+00	e	1.45E+00	e
Cyclohexanol	108-93-0	1.11E+00	i	1.30E+01	1.23E+00	i	1.70E+01	5.20E-01	e	1.30E-01	e
Dichloroisopropyl ether	108-60-1	1.79E+00	i	6.10E+01	2.58E+00	i	3.80E+02	2.44E+00	e	6.10E-01	e
Dichloromethyl ether	542-88-1	4.40E+00	m	4.40E+00	5.80E-01	m	3.80E+00	1.76E-01	e	4.40E-02	e
Dichloropentadiene	61626-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl sulfate	77-78-1	2.42E+01	m	2.42E+01	1.60E-01	m	1.45E+00	9.67E-01	e	2.42E-01	e
Dimethylaniline	121-69-7	7.71E+01	m	7.71E+01	2.31E+00	m	2.04E+02	3.08E+00	e	7.71E-01	e
di-n-Propylnitrosamine	621-64-7	1.70E+01	c	1.70E+01	2.40E+01	c	2.40E+01	6.80E-01	c	1.70E-01	c
Diphenyl ether	101-84-8	NA	e	2.72E+03	4.21E+00	i	1.62E+04	1.09E+02	e	2.72E+01	e
Epichlorohydrin	106-89-8	2.22E+00	c	2.22E+00	1.78E+00	c	1.78E+00	8.88E-02	c	2.22E-02	c
Ethyl carbamate (Urethane)	51-79-6	NA	e	1.08E+00	-1.50E-01	l	7.08E-01	4.33E-02	e	1.08E-02	e
Ethyl methanesulfonate	62-50-0	1.55E+00	c	1.55E+00	1.12E+00	c	1.12E+00	6.19E-02	c	1.55E-02	c
Ethylene dibromide	106-93-4	3.28E+01	c	3.28E+01	5.62E+01	c	5.62E+01	1.31E+00	c	3.28E-01	c
Ethylene glycol	107-21-1	1.00E+00	m	1.00E+00	-1.36E+00	m	4.37E-02	4.00E-02	e	1.00E-02	e
Ethylene glycol monobutyl ether	111-76-2	1.00E+00	m	1.00E+00	8.30E-01	m	6.76E+00	4.00E-02	e	1.00E-02	e
Ethylene glycol monoethyl ether acetate	111-15-9	2.09E+00	m	2.09E+00	5.90E-01	m	3.89E+00	8.37E-02	e	2.09E-02	e
Ethylene thiourea	96-45-7	6.51E+00	m	6.51E+00	-6.60E-01	m	2.19E-01	2.60E-01	e	6.51E-02	e
Furfural	98-01-1	NA	e	7.94E+00	9.60E-01	i	9.12E+00	3.18E-01	e	7.94E-02	e
Maleic hydrazide	123-33-1	1.04E+01	m	1.04E+01	-8.40E-01	m	1.45E-01	4.14E-01	e	1.04E-01	e
Malononitrile	109-77-3	1.53E+01	m	1.53E+01	-6.00E-01	m	2.51E-01	6.12E-01	e	1.53E-01	e
Methyl styrene (mixed isomers)	25013-15-4	8.17E+02	m	8.17E+02	3.48E+00	m	3.02E+03	3.27E+01	e	8.17E+00	e
Methylhydrazine	60-34-4	NA	e	2.15E-01	-1.05E+00	l	8.91E-02	8.59E-03	e	2.15E-03	e
N,N-Diphenylamine	122-39-4	2.54E+00	i	3.47E+02	3.50E+00	i	3.16E+03	1.39E+01	e	3.47E+00	e
Nitric acid, propyl ester	627-13-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-butylamine	924-16-3	1.07E+02	c	1.07E+02	2.57E+02	c	2.57E+02	4.29E+00	c	1.07E+00	c
N-Nitrosomorpholine	59-89-2	NA	e	8.24E+00	-4.40E-01	l	9.56E+00	3.29E-01	e	8.24E-02	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Benzoic acid	65-85-0	4.13E-02	c	3.17E+00	c	3.17E+00	c	3.17E+00
Bis(2-chloroethoxy)methane	111-91-1	2.08E-01	e	6.86E+00	e	6.86E+00	e	6.86E+00
Bis(2-chloroethyl) ether	111-44-4	5.70E+00	c	6.85E+00	c	6.85E+00	c	6.85E+00
Chlorocyclopentadiene	41851-50-7	1.09E+01	e	1.53E+00	e	1.53E+00	e	1.53E+00
Cyclohexanol	108-93-0	9.75E-01	e	7.53E+00	e	7.53E+00	e	7.53E+00
Dichloroisopropyl ether	108-60-1	4.57E+00	e	1.25E+00	e	1.25E+00	e	1.25E+00
Dichloromethyl ether	542-88-1	3.30E-01	e	1.79E+01	e	1.79E+01	e	1.79E+01
Dichloropentadiene	61626-71-9	NA	NA	NA	NA	NA	NA	NA
Dimethyl sulfate	77-78-1	1.81E+00	e	3.13E+01	e	3.13E+01	e	3.13E+01
Dimethylaniline	121-69-7	5.78E+00	e	1.79E+00	e	1.79E+00	e	1.79E+00
di-n-Propylnitrosamine	621-64-7	1.28E+00	c	6.17E+00	c	6.17E+00	c	6.17E+00
Diphenyl ether	101-84-8	2.04E+02	e	1.43E-01	e	1.43E-01	e	1.43E-01
Epichlorohydrin	106-89-8	1.66E-01	c	2.77E+01	c	2.77E+01	c	2.77E+01
Ethyl carbamate (Urethane)	51-79-6	8.11E-02	e	4.73E+01	e	4.73E+01	e	4.73E+01
Ethyl methanesulfonate	62-50-0	1.16E-01	c	3.63E+01	c	3.63E+01	c	3.63E+01
Ethylene dibromide	106-93-4	2.46E+00	c	3.77E+00	c	3.77E+00	c	3.77E+00
Ethylene glycol	107-21-1	7.50E-02	e	2.37E+02	e	2.37E+02	e	2.37E+02
Ethylene glycol monobutyl ether	111-76-2	7.50E-02	e	1.28E+01	e	1.28E+01	e	1.28E+01
Ethylene glycol monoethyl ether acetate	111-15-9	1.57E-01	e	1.77E+01	e	1.77E+01	e	1.77E+01
Ethylene thiourea	96-45-7	4.88E-01	e	9.32E+01	e	9.32E+01	e	9.32E+01
Furfural	98-01-1	5.95E-01	e	1.08E+01	e	1.08E+01	e	1.08E+01
Maleic hydrazide	123-33-1	7.76E-01	e	1.18E+02	e	1.18E+02	e	1.18E+02
Malononitrile	109-77-3	1.15E+00	e	8.61E+01	e	8.61E+01	e	8.61E+01
Methyl styrene (mixed isomers)	25013-15-4	6.13E+01	e	3.77E-01	e	3.77E-01	e	3.77E-01
Methylhydrazine	60-34-4	1.61E-02	e	1.57E+02	e	1.57E+02	e	1.57E+02
N,N-Diphenylamine	122-39-4	2.60E+01	e	3.67E-01	e	3.67E-01	e	3.67E-01
Nitric acid, propyl ester	627-13-4	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-butylamine	924-16-3	8.05E+00	c	1.57E+00	c	1.57E+00	c	1.57E+00
N-Nitrosomorpholine	59-89-2	6.18E-01	e	1.05E+01	e	1.05E+01	e	1.05E+01

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Benzoic acid	65-85-0	2.33E+03	c	1.68E+01	h	1.68E+01	h	1.28E+01	c
Bis(2-chloroethoxy)methane	111-91-1	3.12E+02	e	8.06E+00	e	8.06E+00	e	8.64E+00	e
Bis(2-chloroethyl) ether	111-44-4	1.14E+01	c	6.37E-02	c	6.37E-02	c	8.64E+00	c
Chlorocyclopentadiene	41851-50-7	1.62E+01	e	9.72E-04	e	9.72E-04	e	2.36E+01	e
Cyclohexanol	108-93-0	6.43E+01	e	1.99E-01	e	1.99E-01	e	8.36E+00	e
Dichloroisopropyl ether	108-60-1	4.73E+01	e	2.78E-01	e	2.78E-01	e	2.88E+01	e
Dichloromethyl ether	542-88-1	1.58E+02	e	1.13E-03	e	1.13E-03	e	6.96E+00	e
Dichloropentadiene	61626-71-9	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl sulfate	77-78-1	2.74E+01	e	2.08E-02	e	2.08E-02	e	6.62E+00	e
Dimethylaniline	121-69-7	2.63E+01	e	2.86E-01	e	2.86E-01	e	2.03E+01	e
di-n-Propylnitrosamine	621-64-7	5.29E+01	c	4.00E-02	h	4.00E-02	h	8.99E+00	c
Diphenyl ether	101-84-8	1.51E+01	e	6.87E+00	e	6.87E+00	e	4.12E+02	e
Epichlorohydrin	106-89-8	3.00E+02	c	3.35E-03	c	3.35E-03	c	6.67E+00	c
Ethyl carbamate (Urethane)	51-79-6	6.00E+02	e	NA	NA	NA	NA	6.49E+00	e
Ethyl methanesulfonate	62-50-0	4.24E+02	c	7.11E-01	c	7.11E-01	c	6.56E+00	c
Ethylene dibromide	106-93-4	3.50E+01	c	9.13E-03	c	9.13E-03	c	1.15E+01	c
Ethylene glycol	107-21-1	6.33E+02	e	3.34E-02	e	3.34E-02	e	6.33E+00	e
Ethylene glycol monobutyl ether	111-76-2	7.32E+02	e	2.69E-01	e	2.69E-01	e	7.32E+00	e
Ethylene glycol monoethyl ether acetate	111-15-9	3.33E+02	e	7.47E-02	e	7.47E-02	e	6.97E+00	e
Ethylene thiourea	96-45-7	9.80E+01	e	3.32E-02	e	3.32E-02	e	6.38E+00	e
Furfural	98-01-1	9.55E+01	e	1.59E-01	e	1.59E-01	e	7.58E+00	e
Maleic hydrazide	123-33-1	6.15E+01	e	2.70E+02	e	2.70E+02	e	6.36E+00	e
Malononitrile	109-77-3	4.17E+01	e	1.02E+00	e	1.02E+00	e	6.39E+00	e
Methyl styrene (mixed isomers)	25013-15-4	1.44E+01	e	3.64E-02	e	3.64E-02	e	1.17E+02	e
Methylhydrazine	60-34-4	2.95E+03	e	1.41E-03	e	1.41E-03	e	6.34E+00	e
N,N-Diphenylamine	122-39-4	3.50E+01	e	8.64E+02	e	8.64E+02	e	1.21E+02	e
Nitric acid, propyl ester	627-13-4	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-butylamine	924-16-3	2.14E+01	c	3.77E-01	c	3.77E-01	c	2.30E+01	c
N-Nitrosomorpholine	59-89-2	9.26E+01	e	2.54E+01	e	2.54E+01	e	7.63E+00	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Benzoic acid	65-85-0	1.91E-06	c	1.51E-06	c	6.04E-04	c	6.04E-07	c	2.31E-06	c
Bis(2-chloroethoxy)methane	111-91-1	5.01E-07	e	3.96E-07	e	1.58E-04	e	1.58E-07	e	6.07E-07	e
Bis(2-chloroethyl) ether	111-44-4	5.02E-07	c	3.97E-07	c	1.59E-04	c	1.59E-07	c	6.08E-07	c
Chlorocyclopentadiene	41851-50-7	6.76E-06	e	5.34E-06	e	2.14E-03	e	2.14E-06	e	8.18E-06	e
Cyclohexanol	108-93-0	4.27E-07	e	3.37E-07	e	1.35E-04	e	1.35E-07	e	5.16E-07	e
Dichloroisopropyl ether	108-60-1	9.55E-06	e	7.54E-06	e	3.02E-03	e	3.02E-06	e	1.16E-05	e
Dichloromethyl ether	542-88-1	9.55E-08	e	7.54E-08	e	3.02E-05	e	3.02E-08	e	1.16E-07	e
Dichloropentadiene	61626-71-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl sulfate	77-78-1	3.63E-08	e	2.87E-08	e	1.15E-05	e	1.15E-08	e	4.40E-08	e
Dimethylaniline	121-69-7	5.13E-06	e	4.05E-06	e	1.62E-03	e	1.62E-06	e	6.21E-06	e
di-n-Propylnitrosamine	621-64-7	6.03E-07	c	4.76E-07	c	1.91E-04	c	1.91E-07	c	7.30E-07	c
Diphenyl ether	101-84-8	4.07E-04	e	3.22E-04	e	1.29E-01	e	1.29E-04	e	4.93E-04	e
Epichlorohydrin	106-89-8	4.47E-08	c	3.53E-08	c	1.41E-05	c	1.41E-08	c	5.41E-08	c
Ethyl carbamate (Urethane)	51-79-6	1.78E-08	e	1.40E-08	e	5.62E-06	e	5.62E-09	e	2.15E-08	e
Ethyl methanesulfonate	62-50-0	2.81E-08	c	2.22E-08	c	8.90E-06	c	8.90E-09	c	3.41E-08	c
Ethylene dibromide	106-93-4	1.41E-06	c	1.12E-06	c	4.47E-04	c	4.47E-07	c	1.71E-06	c
Ethylene glycol	107-21-1	1.10E-09	e	8.66E-10	e	3.47E-07	e	3.47E-10	e	1.33E-09	e
Ethylene glycol monobutyl ether	111-76-2	1.70E-07	e	1.34E-07	e	5.37E-05	e	5.37E-08	e	2.06E-07	e
Ethylene glycol monoethyl ether acetate	111-15-9	9.77E-08	e	7.72E-08	e	3.09E-05	e	3.09E-08	e	1.18E-07	e
Ethylene thiourea	96-45-7	5.50E-09	e	4.34E-09	e	1.74E-06	e	1.74E-09	e	6.65E-09	e
Furfural	98-01-1	2.29E-07	e	1.81E-07	e	7.24E-05	e	7.24E-08	e	2.77E-07	e
Maleic hydrazide	123-33-1	3.63E-09	e	2.87E-09	e	1.15E-06	e	1.15E-09	e	4.40E-09	e
Malononitrile	109-77-3	6.31E-09	e	4.98E-09	e	2.00E-06	e	2.00E-09	e	7.64E-09	e
Methyl styrene (mixed isomers)	25013-15-4	7.59E-05	e	5.99E-05	e	2.40E-02	e	2.40E-05	e	9.18E-05	e
Methylhydrazine	60-34-4	2.24E-09	e	1.77E-09	e	7.08E-07	e	7.08E-10	e	2.71E-09	e
N,N-Diphenylamine	122-39-4	7.94E-05	e	6.27E-05	e	2.51E-02	e	2.51E-05	e	9.62E-05	e
Nitric acid, propyl ester	627-13-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-butylamine	924-16-3	6.46E-06	c	5.10E-06	c	2.04E-03	c	2.04E-06	c	7.82E-06	c
N-Nitrosomorpholine	59-89-2	2.40E-07	e	1.90E-07	e	7.59E-05	e	7.59E-08	e	2.91E-07	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Benzoic acid	65-85-0	NA	NA	1.58E+01	c	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	111-91-1	NA	NA	5.73E+00	e	NA	NA	NA	NA
Bis(2-chloroethyl) ether	111-44-4	NA	NA	5.74E+00	c	NA	NA	NA	NA
Chlorocyclopentadiene	41851-50-7	NA	NA	4.14E+01	e	NA	NA	NA	NA
Cyclohexanol	108-93-0	NA	NA	5.07E+00	e	NA	NA	NA	NA
Dichloroisopropyl ether	108-60-1	NA	NA	5.38E+01	e	NA	NA	1.80E+02	d
Dichloromethyl ether	542-88-1	3.16E+00	m	1.62E+00	e	NA	NA	4.42E-03	p
Dichloropentadiene	61626-71-9	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl sulfate	77-78-1	NA	NA	7.79E-01	e	NA	NA	5.00E-01	d
Dimethylaniline	121-69-7	NA	NA	3.35E+01	e	NA	NA	1.80E+02	d
di-n-Propylnitrosamine	621-64-7	NA	NA	6.59E+00	c	NA	NA	NA	NA
Diphenyl ether	101-84-8	NA	NA	NA	NA	NA	NA	NA	NA
Epichlorohydrin	106-89-8	NA	NA	9.13E-01	c	NA	NA	NA	NA
Ethyl carbamate (Urethane)	51-79-6	NA	NA	4.53E-01	e	NA	NA	7.00E+00	d
Ethyl methanesulfonate	62-50-0	NA	NA	6.42E-01	c	NA	NA	NA	NA
Ethylene dibromide	106-93-4	NA	NA	1.26E+01	c	NA	NA	NA	NA
Ethylene glycol	107-21-1	NA	NA	5.45E-02	e	NA	NA	1.20E+01	d
Ethylene glycol monobutyl ether	111-76-2	NA	NA	2.52E+00	e	NA	NA	2.80E+01	d
Ethylene glycol monoethyl ether acetate	111-15-9	NA	NA	1.65E+00	e	NA	NA	NA	NA
Ethylene thiourea	96-45-7	NA	NA	1.86E-01	e	NA	NA	2.80E+01	d
Furfural	98-01-1	NA	NA	3.16E+00	e	NA	NA	NA	NA
Maleic hydrazide	123-33-1	NA	NA	1.35E-01	e	NA	NA	NA	NA
Malononitrile	109-77-3	NA	NA	2.06E-01	e	NA	NA	NA	NA
Methyl styrene (mixed isomers)	25013-15-4	NA	NA	2.60E+02	e	NA	NA	NA	NA
Methylhydrazine	60-34-4	NA	NA	9.38E-02	e	NA	NA	2.40E+01	d
N,N-Diphenylamine	122-39-4	NA	NA	2.69E+02	e	NA	NA	2.80E+01	d
Nitric acid, propyl ester	627-13-4	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodi-n-butylamine	924-16-3	NA	NA	4.00E+01	c	NA	NA	NA	NA
N-Nitrosomorpholine	59-89-2	NA	NA	3.27E+00	e	NA	NA	1.80E+02	d

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Benzoic acid	65-85-0	0.0E+00	NA	1.82E-04	1.22E-05	9.12E-06	e	1.26E+02	c	2.02E+01	1.35E+00	1.01E+00	e
Bis(2-chloroethoxy)methane	111-91-1	0.0E+00	NA	8.06E-04	5.37E-05	4.03E-05	e	0.0E+00	NA	1.77E+01	1.18E+00	8.87E-01	e
Bis(2-chloroethyl) ether	111-44-4	0.0E+00	NA	4.39E-03	2.93E-04	2.20E-04	e	1.41E+00	c	3.52E+00	2.35E-01	1.76E-01	e
Chlorocyclopentadiene	41851-50-7	0.0E+00	NA	4.78E-03	3.19E-04	2.39E-04	e	0.0E+00	NA	2.00E+00	1.34E-01	1.00E-01	e
Cyclohexanol	108-93-0	0.0E+00	NA	2.42E-03	1.61E-04	1.21E-04	e	0.0E+00	NA	1.13E+01	7.56E-01	5.67E-01	e
Dichloroisopropyl ether	108-60-1	0.0E+00	NA	4.22E-03	2.81E-04	2.11E-04	e	1.41E+00	e	4.22E+00	2.81E-01	2.11E-01	e
Dichloromethyl ether	542-88-1	0.0E+00	NA	1.17E-03	7.83E-05	5.87E-05	e	5.73E+04	e	1.63E+01	1.09E+00	8.14E-01	e
Dichloropentadiene	61626-71-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dimethyl sulfate	77-78-1	0.0E+00	NA	3.23E-03	2.15E-04	1.61E-04	e	5.06E+02	e	8.14E+00	5.43E-01	4.07E-01	e
Dimethylaniline	121-69-7	0.0E+00	NA	4.41E-03	2.94E-04	2.20E-04	e	1.41E+00	e	3.48E+00	2.32E-01	1.74E-01	e
di-n-Propylnitrosamine	621-64-7	0.0E+00	NA	2.77E-03	1.85E-04	1.39E-04	e	1.41E+00	c	9.94E+00	6.63E-01	4.97E-01	e
Diphenyl ether	101-84-8	0.0E+00	NA	5.25E-03	3.50E-04	2.63E-04	e	0.0E+00	NA	1.18E-01	7.84E-03	5.88E-03	e
Epichlorohydrin	106-89-8	0.0E+00	NA	6.66E-04	4.44E-05	3.33E-05	e	9.03E+00	c	1.83E+01	1.22E+00	9.15E-01	e
Ethyl carbamate (Urethane)	51-79-6	0.0E+00	NA	3.47E-04	2.31E-05	1.74E-05	e	3.61E+01	e	1.96E+01	1.30E+00	9.78E-01	e
Ethyl methanesulfonate	62-50-0	0.0E+00	NA	4.84E-04	3.22E-05	2.42E-05	e	7.88E+01	c	1.90E+01	1.27E+00	9.51E-01	e
Ethylene dibromide	106-93-4	0.0E+00	NA	3.60E-03	2.40E-04	1.80E-04	e	1.41E+00	c	6.68E+00	4.46E-01	3.34E-01	e
Ethylene glycol	107-21-1	0.0E+00	NA	3.23E-04	2.15E-05	1.61E-05	e	2.11E+01	e	1.97E+01	1.31E+00	9.83E-01	e
Ethylene glycol monobutyl ether	111-76-2	0.0E+00	NA	3.23E-04	2.15E-05	1.61E-05	e	9.03E+00	e	1.97E+01	1.31E+00	9.83E-01	e
Ethylene glycol monoethyl ether acetate	111-15-9	0.0E+00	NA	6.33E-04	4.22E-05	3.16E-05	e	0.0E+00	NA	1.84E+01	1.23E+00	9.21E-01	e
Ethylene thiourea	96-45-7	0.0E+00	NA	1.57E-03	1.05E-04	7.86E-05	e	9.03E+00	e	1.47E+01	9.81E-01	7.35E-01	e
Furfural	98-01-1	0.0E+00	NA	1.80E-03	1.20E-04	8.99E-05	e	0.0E+00	NA	1.38E+01	9.20E-01	6.90E-01	e
Maleic hydrazide	123-33-1	0.0E+00	NA	2.13E-03	1.42E-04	1.06E-04	e	0.0E+00	NA	1.25E+01	8.34E-01	6.26E-01	e
Malononitrile	109-77-3	0.0E+00	NA	2.64E-03	1.76E-04	1.32E-04	e	0.0E+00	NA	1.05E+01	6.99E-01	5.25E-01	e
Methyl styrene (mixed isomers)	25013-15-4	0.0E+00	NA	5.19E-03	3.46E-04	2.59E-04	e	0.0E+00	NA	3.87E-01	2.58E-02	1.93E-02	e
Methylhydrazine	60-34-4	0.0E+00	NA	7.28E-05	4.85E-06	3.64E-06	e	1.05E+01	e	2.06E+01	1.38E+00	1.03E+00	e
N,N-Diphenylamine	122-39-4	0.0E+00	NA	5.06E-03	3.37E-04	2.53E-04	e	9.03E+00	e	8.89E-01	5.93E-02	4.45E-02	e
Nitric acid, propyl ester	627-13-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
N-Nitrosodi-n-butylamine	924-16-3	0.0E+00	NA	4.62E-03	3.08E-04	2.31E-04	e	7.44E+00	c	2.63E+00	1.75E-01	1.32E-01	e
N-Nitrosomorpholine	59-89-2	0.0E+00	NA	1.84E-03	1.23E-04	9.21E-05	e	1.41E+00	e	1.36E+01	9.09E-01	6.82E-01	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
Benzoic acid	65-85-0	1.21E+01	8.05E-01	6.03E-01	e	9.99E+02	4.44E+00	2.50E+00	f	5.70E-03	ab
Bis(2-chloroethoxy)methane	111-91-1	1.06E+01	7.06E-01	5.30E-01	e	1.14E+02	5.08E-01	2.86E-01	f	1.26E-03	aa
Bis(2-chloroethyl) ether	111-44-4	2.10E+00	1.40E-01	1.05E-01	e	3.78E+02	1.68E+00	9.46E-01	f	1.80E-03	ab
Chlorocyclopentadiene	41851-50-7	1.20E+00	7.98E-02	5.98E-02	e	4.15E+05	1.84E+03	1.04E+03	f	1.84E-02	aa
Cyclohexanol	108-93-0	6.77E+00	4.52E-01	3.39E-01	e	1.20E+03	5.32E+00	2.99E+00	f	2.91E-03	aa
Dichloroisopropyl ether	108-60-1	2.52E+00	1.68E-01	1.26E-01	e	1.99E+03	8.83E+00	4.97E+00	f	9.35E-03	aa
Dichloromethyl ether	542-88-1	9.72E+00	6.48E-01	4.86E-01	e	1.15E+05	5.12E+02	2.88E+02	f	8.81E-04	aa
Dichloropentadiene	61626-71-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dimethyl sulfate	77-78-1	4.86E+00	3.24E-01	2.43E-01	e	2.60E+02	1.16E+00	6.51E-01	f	1.80E-03	ab
Dimethylaniline	121-69-7	2.08E+00	1.39E-01	1.04E-01	e	3.45E+03	1.53E+01	8.62E+00	f	1.17E-02	aa
di-n-Propylnitrosamine	621-64-7	5.94E+00	3.96E-01	2.97E-01	e	4.23E+03	1.88E+01	1.06E+01	f	2.30E-03	ab
Diphenyl ether	101-84-8	7.03E-02	4.68E-03	3.51E-03	e	1.73E+02	7.71E-01	4.33E-01	f	1.17E-01	aa
Epichlorohydrin	106-89-8	1.09E+01	7.28E-01	5.46E-01	e	3.46E+04	1.54E+02	8.65E+01	f	3.50E-04	ab
Ethyl carbamate (Urethane)	51-79-6	1.17E+01	7.79E-01	5.84E-01	e	0.0E+00	0.0E+00	0.0E+00	NA	3.90E-04	ab
Ethyl methanesulfonate	62-50-0	1.14E+01	7.57E-01	5.68E-01	e	1.34E+02	5.96E-01	3.35E-01	f	3.45E-04	aa
Ethylene dibromide	106-93-4	3.99E+00	2.66E-01	2.00E-01	e	9.08E+03	4.03E+01	2.27E+01	f	2.80E-03	ab
Ethylene glycol	107-21-1	1.17E+01	7.82E-01	5.87E-01	e	1.98E+02	8.81E-01	4.96E-01	f	8.73E-05	aa
Ethylene glycol monobutyl ether	111-76-2	1.17E+01	7.82E-01	5.87E-01	e	3.19E+03	1.42E+01	7.97E+00	f	1.20E-03	ab
Ethylene glycol monoethyl ether acetate	111-15-9	1.10E+01	7.34E-01	5.50E-01	e	2.14E+03	9.52E+00	5.36E+00	f	7.70E-04	ab
Ethylene thiourea	96-45-7	8.78E+00	5.86E-01	4.39E-01	e	1.13E+02	5.02E-01	2.82E-01	f	1.70E-04	ab
Furfural	98-01-1	8.24E+00	5.50E-01	4.12E-01	e	1.25E+03	5.56E+00	3.13E+00	f	2.02E-03	aa
Maleic hydrazide	123-33-1	7.47E+00	4.98E-01	3.74E-01	e	6.40E-03	2.85E-05	1.60E-05	f	1.02E-04	aa
Malononitrile	109-77-3	6.27E+00	4.18E-01	3.13E-01	e	2.95E+00	1.31E-02	7.38E-03	f	2.68E-04	aa
Methyl styrene (mixed isomers)	25013-15-4	2.31E-01	1.54E-02	1.15E-02	e	1.61E+04	7.14E+01	4.02E+01	f	7.41E-02	aa
Methylhydrazine	60-34-4	1.23E+01	8.22E-01	6.16E-01	e	6.39E+04	2.84E+02	1.60E+02	f	1.73E-04	aa
N,N-Diphenylamine	122-39-4	5.31E-01	3.54E-02	2.66E-02	e	1.90E+00	8.47E-03	4.76E-03	f	3.96E-02	aa
Nitric acid, propyl ester	627-13-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
N-Nitrosodi-n-butylamine	924-16-3	1.57E+00	1.05E-01	7.86E-02	e	1.02E+03	4.53E+00	2.55E+00	f	3.80E-03	ab
N-Nitrosomorpholine	59-89-2	8.14E+00	5.43E-01	4.07E-01	e	7.27E+00	3.23E-02	1.82E-02	f	1.80E-04	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
N-Nitroso-N,N-dimethylamine	62-75-9	0 or 1	b	74.1	NA	7.44E-05	m	1.81E-06	1.13E-01	j	1.24E-05	j
o-Anisidine	90-04-0	0 or 1	b	123.15	NA	NA	NA	NA	7.68E-02	e	8.89E-06	e
Oxalic acid	144-62-7	0 or 1	b	90.035	NA	5.85E-09	k	1.43E-10	9.46E-02	e	1.10E-05	e
Phthalic anhydride	85-44-9	0 or 1	b	148.11	NA	6.28E-09	c	6.28E-09	4.04E-02	c	8.97E-06	c
p-Phthalic acid	100-21-0	0 or 1	b	166.13	NA	1.59E-11	m	3.87E-13	3.90E-02	j	7.14E-06	j
Pyridine	110-86-1	0 or 1	b	79.1	NA	6.86E-03	c	6.86E-03	1.10E-01	c	1.08E-05	c
Quinoline	91-22-5	0 or 1	b	129.16	NA	6.83E-05	m	1.67E-06	5.46E-02	j	8.31E-06	j
Quinone	106-51-4	0 or 1	b	108.1	NA	NA	NA	NA	8.37E-02	e	9.69E-06	e
Safrole	94-59-7	0 or 1	b	162.18	NA	1.19E-05	c	1.19E-05	4.06E-02	c	7.16E-06	c
Tetrahydrofuran	109-99-9	0 or 1	b	72.1	NA	1.54E-05	h	1.54E-05	1.31E-01	c	1.07E-05	c
Other Heavy Semivolatile Compounds (MW>200 g/mole)												
1,2,4,5-Tetrachlorobenzene	95-94-3	0 or 1	b	215.89	NA	1.18E-03	c	1.18E-03	2.11E-02	c	8.75E-06	c
1,3,5-Trinitrobenzene	99-35-4	0 or 1	b	213.11	NA	8.66E-08	c	8.66E-08	2.84E-02	c	6.08E-06	c
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	0 or 1	b	220.35	NA	1.69E-04	k	4.11E-06	5.21E-02	e	6.03E-06	e
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	0 or 1	b	266.25	NA	1.38E-09	m	3.37E-11	4.59E-02	e	5.32E-06	e
2-sec-Butyl-4,6-dinitrophenol	88-85-7	0 or 1	b	240.22	NA	1.86E-05	m	4.55E-07	4.92E-02	e	5.69E-06	e
3,3'-Dichlorobenzidine	91-94-1	0 or 1	b	253.13	NA	2.08E-08	c	2.08E-08	2.28E-02	c	5.48E-06	c
3,3'-Dimethoxybenzidine	119-90-4	0 or 1	b	244.28	NA	3.36E-10	c	3.36E-10	2.38E-02	c	5.60E-06	c
4-Bromophenylphenyl ether	101-55-3	0 or 1	b	249.2	NA	4.78E-03	m	1.17E-04	1.98E-02	c	6.83E-06	c
Ammonium perfluorooctanoate	3825-26-1	0 or 1	b	431.1	NA	4.09E-03	k	9.98E-05	3.33E-02	e	3.86E-06	e
Azobenzene	103-33-3	0 or 1	b	182.22	NA	5.52E-04	m	1.35E-05	3.15E-02	j	7.45E-06	j
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	0 or 1	b	358.54	NA	1.17E-01	k	2.86E-03	3.76E-02	e	4.36E-06	e
Captan	133-06-2	0 or 1	b	300.57	NA	6.00E-01	i	5.94E-06	1.81E-02	j	5.00E-06	j
Chlorobenzilate	510-15-6	0 or 1	b	325.2	NA	7.24E-08	c	7.24E-08	1.65E-02	c	4.72E-06	c
Dibutylphosphate	107-66-4	0 or 1	b	210.21	NA	1.74E-07	k	4.25E-09	5.37E-02	e	6.22E-06	e
Dimethyl aminoazobenzene	60-11-7	0 or 1	b	225.29	NA	NA	NA	NA	5.13E-02	e	5.94E-06	e
Hexachlorobenzene	118-74-1	0 or 1	b	284.8	NA	5.35E-04	c	5.35E-04	1.41E-02	c	7.84E-06	c
Hexachlorobutadiene	87-68-3	0 or 1	b	260.76	NA	2.39E-02	c	2.39E-02	1.73E-02	c	7.33E-06	c
Hexachlorocyclopentadiene	77-47-4	0 or 1	b	272.77	NA	1.72E-02	c	1.72E-02	1.61E-02	c	7.21E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
N-Nitroso-N,N-dimethylamine	62-75-9	3.82E+01	m	3.82E+01	-5.70E-01	m	2.69E-01	1.53E+00	e	3.82E-01	e
o-Anisidine	90-04-0	NA	e	1.18E+01	1.18E+00	l	1.51E+01	4.71E-01	e	1.18E-01	e
Oxalic acid	144-62-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalic anhydride	85-44-9	2.10E-01	h	2.10E-01	2.50E-01	c	2.50E-01	8.40E-03	h	2.10E-03	h
p-Phthalic acid	100-21-0	7.16E+01	m	7.16E+01	2.00E+00	m	1.00E+02	2.86E+00	e	7.16E-01	e
Pyridine	110-86-1	4.72E+00	c	4.72E+00	4.68E+00	c	4.68E+00	1.89E-01	c	4.72E-02	c
Quinoline	91-22-5	1.84E+03	m	1.84E+03	2.03E+00	m	1.07E+02	7.35E+01	e	1.84E+01	e
Quinone	106-51-4	NA	e	2.03E+00	2.00E-01	l	1.58E+00	8.11E-02	e	2.03E-02	e
Safrole	94-59-7	1.68E+02	c	1.68E+02	4.57E+02	c	4.57E+02	6.73E+00	c	1.68E+00	c
Tetrahydrofuran	109-99-9	3.16E+00	c	3.16E+00	2.80E+00	c	2.80E+00	1.26E-01	c	3.16E-02	c
Other Heavy Semivolatile Compounds (MW>200 g/mole)											
1,2,4,5-Tetrachlorobenzene	95-94-3	5.89E+03	c	5.89E+03	4.36E+04	c	4.36E+04	2.36E+02	c	5.89E+01	c
1,3,5-Trinitrobenzene	99-35-4	1.18E+01	c	1.18E+01	1.51E+01	c	1.51E+01	4.72E-01	c	1.18E-01	c
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	NA	e	2.53E+03	4.17E+00	l	1.48E+04	1.01E+02	e	2.53E+01	e
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	NA	e	4.92E+03	4.54E+00	p	3.47E+04	1.97E+02	e	4.92E+01	e
2-sec-Butyl-4,6-dinitrophenol	88-85-7	3.54E+03	m	3.54E+03	3.56E+00	m	3.63E+03	1.42E+02	e	3.54E+01	e
3,3'-Dichlorobenzidine	91-94-1	8.70E+02	c	8.70E+02	3.76E+03	c	3.76E+03	3.48E+01	c	8.70E+00	c
3,3'-Dimethoxybenzidine	119-90-4	3.65E+01	c	3.65E+01	6.46E+01	c	6.46E+01	1.46E+00	c	3.65E-01	c
4-Bromophenylphenyl ether	101-55-3	1.21E+04	h	1.21E+04	1.10E+05	c	1.10E+05	4.85E+02	h	1.21E+02	h
Ammonium perfluorooctanoate	3825-26-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azobenzene	103-33-3	1.95E+03	m	1.95E+03	3.82E+00	m	6.61E+03	7.82E+01	e	1.95E+01	e
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Captan	133-06-2	2.30E+00	i	2.00E+02	2.35E+00	i	2.24E+02	7.98E+00	e	2.00E+00	e
Chlorobenzilate	510-15-6	3.69E+03	c	3.69E+03	2.40E+04	c	2.40E+04	1.48E+02	c	3.69E+01	c
Dibutylphosphate	107-66-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl aminoazobenzene	60-11-7	NA	e	5.29E+03	4.58E+00	l	3.80E+04	2.12E+02	e	5.29E+01	e
Hexachlorobenzene	118-74-1	8.00E+04	c	8.00E+04	3.18E+05	c	3.18E+05	3.20E+03	c	8.00E+02	c
Hexachlorobutadiene	87-68-3	6.94E+03	c	6.94E+03	5.38E+04	c	5.38E+04	2.77E+02	c	6.94E+01	c
Hexachlorocyclopentadiene	77-47-4	9.51E+03	c	9.51E+03	8.07E+04	h	8.07E+04	3.80E+02	c	9.51E+01	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
N-Nitroso-N,N-dimethylamine	62-75-9	2.87E+00	e	8.27E+01	e	8.27E+01	e	8.27E+01
o-Anisidine	90-04-0	8.84E-01	e	8.05E+00	e	8.05E+00	e	8.05E+00
Oxalic acid	144-62-7	NA	NA	NA	NA	NA	NA	NA
Phthalic anhydride	85-44-9	1.57E-02	h	8.63E+01	c	8.63E+01	c	8.63E+01
p-Phthalic acid	100-21-0	5.37E+00	e	2.70E+00	e	2.70E+00	e	2.70E+00
Pyridine	110-86-1	3.54E-01	c	1.59E+01	c	1.59E+01	c	1.59E+01
Quinoline	91-22-5	1.38E+02	e	2.60E+00	e	2.60E+00	e	2.60E+00
Quinone	106-51-4	1.52E-01	e	2.97E+01	e	2.97E+01	e	2.97E+01
Safrole	94-59-7	1.26E+01	c	1.12E+00	c	1.12E+00	c	1.12E+00
Tetrahydrofuran	109-99-9	2.37E-01	c	2.14E+01	c	2.14E+01	c	2.14E+01
Other Heavy Semivolatile Compounds (MW>200 g/mole)								
1,2,4,5-Tetrachlorobenzene	95-94-3	4.42E+02	c	8.06E-02	c	8.06E-02	c	8.06E-02
1,3,5-Trinitrobenzene	99-35-4	8.84E-01	c	8.05E+00	c	8.05E+00	c	8.05E+00
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	1.90E+02	e	1.51E-01	e	1.51E-01	e	1.51E-01
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	3.69E+02	e	9.20E-02	e	9.20E-02	e	9.20E-02
2-sec-Butyl-4,6-dinitrophenol	88-85-7	2.66E+02	e	3.39E-01	e	3.39E-01	e	3.39E-01
3,3'-Dichlorobenzidine	91-94-1	6.52E+01	c	3.32E-01	c	3.32E-01	c	3.32E-01
3,3'-Dimethoxybenzidine	119-90-4	2.74E+00	c	3.48E+00	c	3.48E+00	c	3.48E+00
4-Bromophenylphenyl ether	101-55-3	9.09E+02	h	4.72E-02	c	4.72E-02	c	4.72E-02
Ammonium perfluorooctanoate	3825-26-1	NA	NA	NA	NA	NA	NA	NA
Azobenzene	103-33-3	1.47E+02	e	2.40E-01	e	2.40E-01	e	2.40E-01
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	NA	NA	NA	NA	NA	NA	NA
Captan	133-06-2	1.50E+01	e	1.70E+00	e	1.70E+00	e	1.70E+00
Chlorobenzilate	510-15-6	2.77E+02	c	1.14E-01	c	1.14E-01	c	1.14E-01
Dibutylphosphate	107-66-4	NA	NA	NA	NA	NA	NA	NA
Dimethyl aminoazobenzene	60-11-7	3.97E+02	e	8.72E-02	e	8.72E-02	e	8.72E-02
Hexachlorobenzene	118-74-1	6.00E+03	c	2.56E-02	c	2.56E-02	c	2.56E-02
Hexachlorobutadiene	87-68-3	5.20E+02	c	7.14E-02	c	7.14E-02	c	7.14E-02
Hexachlorocyclopentadiene	77-47-4	7.13E+02	c	5.65E-02	c	5.65E-02	c	5.65E-02

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
N-Nitroso-N,N-dimethylamine	62-75-9	1.67E+01	e	7.63E-03	e	7.63E-03	e	6.39E+00	e
o-Anisidine	90-04-0	6.95E+01	e	NA	NA	NA	NA	8.19E+00	e
Oxalic acid	144-62-7	NA	NA	NA	NA	NA	NA	NA	NA
Phthalic anhydride	85-44-9	3.04E+03	h	2.03E+00	c	2.03E+00	c	6.39E+00	c
p-Phthalic acid	100-21-0	2.01E+01	e	1.95E+07	e	1.95E+07	e	1.44E+01	e
Pyridine	110-86-1	1.50E+02	c	4.22E-05	c	4.22E-05	c	7.07E+00	c
Quinoline	91-22-5	8.06E-01	e	4.89E+00	e	4.89E+00	e	1.48E+01	e
Quinone	106-51-4	3.27E+02	e	NA	NA	NA	NA	6.64E+00	e
Safrole	94-59-7	1.92E+01	c	3.20E+00	c	3.20E+00	c	3.23E+01	c
Tetrahydrofuran	109-99-9	2.16E+02	c	1.08E-02	h	1.08E-02	h	6.82E+00	c
Other Heavy Semivolatile Compounds (MW>200 g/mole)									
1,2,4,5-Tetrachlorobenzene	95-94-3	1.49E+01	c	4.14E+00	c	4.14E+00	c	8.75E+02	c
1,3,5-Trinitrobenzene	99-35-4	6.95E+01	c	1.17E+01	c	1.17E+01	c	8.19E+00	c
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	1.52E+01	e	3.76E+02	e	3.76E+02	e	3.84E+02	e
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	1.49E+01	e	1.14E+08	e	1.14E+08	e	7.34E+02	e
2-sec-Butyl-4,6-dinitrophenol	88-85-7	3.79E+00	e	7.63E+02	e	7.63E+02	e	1.34E+02	e
3,3'-Dichlorobenzidine	91-94-1	1.58E+01	c	1.73E+04	c	1.73E+04	c	1.38E+02	c
3,3'-Dimethoxybenzidine	119-90-4	3.30E+01	c	1.41E+04	c	1.41E+04	c	1.21E+01	c
4-Bromophenylphenyl ether	101-55-3	1.47E+00	c	1.12E+02	e	1.12E+02	e	1.78E+03	c
Ammonium perfluorooctanoate	3825-26-1	NA	NA	NA	NA	NA	NA	NA	NA
Azobenzene	103-33-3	1.07E+01	e	4.87E+01	e	4.87E+01	e	2.09E+02	e
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	NA	NA	NA	NA	NA	NA	NA	NA
Captan	133-06-2	1.07E+01	e	3.00E+00	e	3.00E+00	e	2.13E+01	e
Chlorobenzilate	510-15-6	1.50E+01	c	3.57E+04	c	3.57E+04	c	5.54E+02	c
Dibutylphosphate	107-66-4	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl aminoazobenzene	60-11-7	1.49E+01	e	NA	NA	NA	NA	7.87E+02	e
Hexachlorobenzene	118-74-1	5.02E+00	c	7.57E+01	c	7.57E+01	c	4.02E+03	c
Hexachlorobutadiene	87-68-3	1.48E+01	c	2.55E-01	c	2.55E-01	c	1.03E+03	c
Hexachlorocyclopentadiene	77-47-4	1.47E+01	c	5.47E-01	c	5.47E-01	c	1.40E+03	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
N-Nitroso-N,N-dimethylamine	62-75-9	6.76E-09	e	5.34E-09	e	2.14E-06	e	2.14E-09	e	8.18E-09	e
o-Anisidine	90-04-0	3.80E-07	e	3.00E-07	e	1.20E-04	e	1.20E-07	e	4.60E-07	e
Oxalic acid	144-62-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phthalic anhydride	85-44-9	6.28E-09	c	4.96E-09	c	1.99E-06	c	1.99E-09	c	7.60E-09	c
p-Phthalic acid	100-21-0	2.51E-06	e	1.98E-06	e	7.94E-04	e	7.94E-07	e	3.04E-06	e
Pyridine	110-86-1	1.18E-07	c	9.28E-08	c	3.72E-05	c	3.72E-08	c	1.42E-07	c
Quinoline	91-22-5	2.69E-06	e	2.12E-06	e	8.51E-04	e	8.51E-07	e	3.26E-06	e
Quinone	106-51-4	3.98E-08	e	3.14E-08	e	1.26E-05	e	1.26E-08	e	4.82E-08	e
Safrole	94-59-7	1.15E-05	c	9.06E-06	c	3.63E-03	c	3.63E-06	c	1.39E-05	c
Tetrahydrofuran	109-99-9	7.03E-08	c	5.55E-08	c	2.22E-05	c	2.22E-08	c	8.51E-08	c
Other Heavy Semivolatile Compounds (MW>200 g/mole)											
1,2,4,5-Tetrachlorobenzene	95-94-3	1.10E-03	c	8.66E-04	c	3.47E-01	c	3.47E-04	c	1.33E-03	c
1,3,5-Trinitrobenzene	99-35-4	3.80E-07	c	3.00E-07	c	1.20E-04	c	1.20E-07	c	4.60E-07	c
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	3.72E-04	e	2.93E-04	e	1.17E-01	e	1.17E-04	e	4.50E-04	e
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	8.71E-04	e	6.88E-04	e	2.75E-01	e	2.75E-04	e	1.05E-03	e
2-sec-Butyl-4,6-dinitrophenol	88-85-7	9.12E-05	e	7.20E-05	e	2.88E-02	e	2.88E-05	e	1.10E-04	e
3,3'-Dichlorobenzidine	91-94-1	9.44E-05	c	7.45E-05	c	2.99E-02	c	2.99E-05	c	1.14E-04	c
3,3'-Dimethoxybenzidine	119-90-4	1.62E-06	c	1.28E-06	c	5.13E-04	c	5.13E-07	c	1.96E-06	c
4-Bromophenylphenyl ether	101-55-3	2.76E-03	c	2.18E-03	c	8.74E-01	c	8.74E-04	c	3.34E-03	c
Ammonium perfluorooctanoate	3825-26-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Azobenzene	103-33-3	1.66E-04	e	1.31E-04	e	5.25E-02	e	5.25E-05	e	2.01E-04	e
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Captan	133-06-2	5.62E-06	e	4.44E-06	e	1.78E-03	e	1.78E-06	e	6.81E-06	e
Chlorobenzilate	510-15-6	6.03E-04	c	4.76E-04	c	1.91E-01	c	1.91E-04	c	7.29E-04	c
Dibutylphosphate	107-66-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl aminoazobenzene	60-11-7	9.55E-04	e	7.54E-04	e	3.02E-01	e	3.02E-04	e	1.16E-03	e
Hexachlorobenzene	118-74-1	7.99E-03	c	6.31E-03	c	2.53E+00	c	2.53E-03	c	9.68E-03	c
Hexachlorobutadiene	87-68-3	1.35E-03	c	1.07E-03	c	4.27E-01	c	4.28E-04	c	1.64E-03	c
Hexachlorocyclopentadiene	77-47-4	2.03E-03	c	1.60E-03	c	6.41E-01	c	6.41E-04	c	2.45E-03	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
N-Nitroso-N,N-dimethylamine	62-75-9	NA	NA	2.17E-01	e	NA	NA	1.80E+02	d
o-Anisidine	90-04-0	NA	NA	4.64E+00	e	NA	NA	1.80E+02	d
Oxalic acid	144-62-7	NA	NA	NA	NA	NA	NA	NA	NA
Phthalic anhydride	85-44-9	NA	NA	2.05E-01	c	NA	NA	NA	NA
p-Phthalic acid	100-21-0	NA	NA	1.95E+01	e	NA	NA	7.00E+00	d
Pyridine	110-86-1	NA	NA	1.90E+00	c	NA	NA	NA	NA
Quinoline	91-22-5	NA	NA	2.05E+01	e	NA	NA	1.00E+01	d
Quinone	106-51-4	NA	NA	8.36E-01	e	NA	NA	5.00E+00	d
Safrole	94-59-7	NA	NA	6.19E+01	c	NA	NA	NA	NA
Tetrahydrofuran	109-99-9	NA	NA	1.29E+00	c	NA	NA	NA	NA
Other Heavy Semivolatile Compounds (MW>200 g/mole)									
1,2,4,5-Tetrachlorobenzene	95-94-3	4.30E+03	c	NA	NA	NA	NA	NA	NA
1,3,5-Trinitrobenzene	99-35-4	NA	NA	4.64E+00	c	NA	NA	NA	NA
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	NA	NA	NA	NA	NA	NA	NA	NA
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	2.97E+02	m	NA	NA	NA	NA	NA	NA
2-sec-Butyl-4,6-dinitrophenol	88-85-7	NA	NA	2.99E+02	e	NA	NA	1.23E+02	d
3,3'-Dichlorobenzidine	91-94-1	NA	NA	3.07E+02	c	NA	NA	NA	NA
3,3'-Dimethoxybenzidine	119-90-4	NA	NA	1.40E+01	c	NA	NA	NA	NA
4-Bromophenylphenyl ether	101-55-3	1.46E+04	c	NA	NA	NA	NA	NA	NA
Ammonium perfluorooctanoate	3825-26-1	NA	NA	NA	NA	NA	NA	NA	NA
Azobenzene	103-33-3	NA	NA	4.71E+02	e	NA	NA	NA	NA
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	NA	NA	NA	NA	NA	NA	NA	NA
Captan	133-06-2	NA	NA	3.60E+01	e	NA	NA	6.00E+01	d
Chlorobenzilate	510-15-6	2.03E+03	c	NA	NA	NA	NA	NA	NA
Dibutylphosphate	107-66-4	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl aminoazobenzene	60-11-7	NA	NA	NA	NA	NA	NA	2.80E+01	d
Hexachlorobenzene	118-74-1	2.16E+03	s	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	87-68-3	1.92E+03	s	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	77-47-4	5.25E+02	c	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
N-Nitroso-N,N-dimethylamine	62-75-9	0.0E+00	NA	3.77E-03	2.51E-04	1.88E-04	e	1.41E+00	e	6.01E+00	4.01E-01	3.00E-01	e
o-Anisidine	90-04-0	0.0E+00	NA	2.29E-03	1.53E-04	1.15E-04	e	1.41E+00	e	1.19E+01	7.90E-01	5.93E-01	e
Oxalic acid	144-62-7	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Phthalic anhydride	85-44-9	0.0E+00	NA	7.12E-05	4.74E-06	3.56E-06	e	1.35E+04	c	2.07E+01	1.38E+00	1.03E+00	e
p-Phthalic acid	100-21-0	0.0E+00	NA	4.35E-03	2.90E-04	2.17E-04	e	3.61E+01	e	3.70E+00	2.47E-01	1.85E-01	e
Pyridine	110-86-1	0.0E+00	NA	1.24E-03	8.27E-05	6.20E-05	e	3.61E+01	c	1.60E+01	1.07E+00	8.01E-01	e
Quinoline	91-22-5	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	2.53E+01	e	1.74E-01	1.16E-02	8.69E-03	e
Quinone	106-51-4	0.0E+00	NA	6.15E-04	4.10E-05	3.08E-05	e	5.06E+01	e	1.85E+01	1.23E+00	9.25E-01	e
Safrole	94-59-7	0.0E+00	NA	4.84E-03	3.23E-04	2.42E-04	e	9.03E+00	c	1.76E+00	1.17E-01	8.78E-02	e
Tetrahydrofuran	109-99-9	0.0E+00	NA	9.00E-04	6.00E-05	4.50E-05	e	4.43E+01	c	1.74E+01	1.16E+00	8.68E-01	e
Other Heavy Semivolatile Compounds (MW>200 g/mole)													
1,2,4,5-Tetrachlorobenzene	95-94-3	0.0E+00	NA	5.27E-03	3.51E-04	2.64E-04	e	1.41E+00	c	5.45E-02	3.64E-03	2.73E-03	e
1,3,5-Trinitrobenzene	99-35-4	0.0E+00	NA	2.29E-03	1.53E-04	1.15E-04	e	0.0E+00	NA	1.18E+01	7.90E-01	5.92E-01	e
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	0.0E+00	NA	5.25E-03	3.50E-04	2.63E-04	e	0.0E+00	NA	1.26E-01	8.43E-03	6.32E-03	e
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	0.0E+00	NA	5.27E-03	3.51E-04	2.63E-04	e	0.0E+00	NA	6.52E-02	4.35E-03	3.26E-03	e
2-sec-Butyl-4,6-dinitrophenol	88-85-7	0.0E+00	NA	5.26E-03	3.51E-04	2.63E-04	e	2.06E+00	e	9.05E-02	6.03E-03	4.52E-03	e
3,3'-Dichlorobenzidine	91-94-1	0.0E+00	NA	5.19E-03	3.46E-04	2.60E-04	e	1.41E+00	c	3.64E-01	2.42E-02	1.82E-02	e
3,3'-Dimethoxybenzidine	119-90-4	0.0E+00	NA	3.72E-03	2.48E-04	1.86E-04	e	1.41E+00	c	6.21E+00	4.14E-01	3.10E-01	e
4-Bromophenylphenyl ether	101-55-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.00E+00	NA	2.66E-02	1.77E-03	1.33E-03	e
Ammonium perfluorooctanoate	3825-26-1	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.00E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Azobenzene	103-33-3	0.0E+00	NA	5.24E-03	3.50E-04	2.62E-04	e	0.00E+00	NA	1.64E-01	1.09E-02	8.18E-03	e
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.00E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Captan	133-06-2	0.0E+00	NA	4.91E-03	3.27E-04	2.45E-04	e	4.22E+00	e	1.50E+00	9.99E-02	7.49E-02	e
Chlorobenzilate	510-15-6	0.0E+00	NA	5.26E-03	3.51E-04	2.63E-04	e	7.23E+00	c	8.69E-02	5.79E-03	4.35E-03	e
Dibutylphosphate	107-66-4	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.00E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Dimethyl aminoazobenzene	60-11-7	0.0E+00	NA	5.27E-03	3.51E-04	2.63E-04	e	9.03E+00	e	6.07E-02	4.05E-03	3.04E-03	e
Hexachlorobenzene	118-74-1	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.21E-01	c	4.02E-03	2.68E-04	2.01E-04	e
Hexachlorobutadiene	87-68-3	0.0E+00	NA	5.27E-03	3.52E-04	2.64E-04	e	1.41E+00	c	4.63E-02	3.09E-03	2.31E-03	e
Hexachlorocyclopentadiene	77-47-4	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	9.03E+00	c	3.38E-02	2.25E-03	1.69E-03	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
N-Nitroso-N,N-dimethylamine	62-75-9	3.59E+00	2.39E-01	1.79E-01	e	1.64E+02	7.30E-01	4.10E-01	f	2.50E-04	ab
o-Anisidine	90-04-0	7.08E+00	4.72E-01	3.54E-01	e	0.00E+00	0.00E+00	0.00E+00	NA	1.50E-03	ab
Oxalic acid	144-62-7	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Phthalic anhydride	85-44-9	1.23E+01	8.22E-01	6.17E-01	e	3.71E+01	1.65E-01	9.27E-02	f	9.27E-05	aa
p-Phthalic acid	100-21-0	2.21E+00	1.47E-01	1.11E-01	e	6.47E-06	2.88E-08	1.62E-08	f	4.07E-03	aa
Pyridine	110-86-1	9.57E+00	6.38E-01	4.78E-01	e	4.91E+06	2.18E+04	1.23E+04	f	1.61E-03	aa
Quinoline	91-22-5	1.04E-01	6.92E-03	5.19E-03	e	1.52E+00	6.75E-03	3.80E-03	f	6.87E-03	aa
Quinone	106-51-4	1.10E+01	7.36E-01	5.52E-01	e	0.0E+00	0.0E+00	0.0E+00	NA	5.35E-04	aa
Safrole	94-59-7	1.05E+00	6.99E-02	5.24E-02	e	8.83E+01	3.92E-01	2.21E-01	f	1.10E-02	ab
Tetrahydrofuran	109-99-9	1.04E+01	6.91E-01	5.19E-01	e	1.96E+04	8.71E+01	4.90E+01	f	1.20E-03	ab
Other Heavy Semivolatile Compounds (MW>200 g/mole)											
1,2,4,5-Tetrachlorobenzene	95-94-3	3.26E-02	2.17E-03	1.63E-03	e	1.30E+02	5.77E-01	3.24E-01	f	1.26E-01	aa
1,3,5-Trinitrobenzene	99-35-4	7.07E+00	4.72E-01	3.54E-01	e	6.40E+00	2.84E-02	1.60E-02	f	6.26E-04	aa
2,6-Bis(tert-butyl)-4-methylphenol	128-37-0	7.55E-02	5.03E-03	3.77E-03	e	2.60E+00	1.15E-02	6.49E-03	f	5.75E-02	aa
2-Cyclohexyl-4,6-dinitrophenol	131-89-5	3.89E-02	2.60E-03	1.95E-03	e	9.65E-06	4.29E-08	2.41E-08	f	5.63E-02	aa
2-sec-Butyl-4,6-dinitrophenol	88-85-7	5.40E-02	3.60E-03	2.70E-03	e	1.94E-01	8.60E-04	4.84E-04	f	1.74E-02	aa
3,3'-Dichlorobenzidine	91-94-1	2.17E-01	1.45E-02	1.09E-02	e	1.67E-02	7.44E-05	4.18E-05	f	1.30E-02	ab
3,3'-Dimethoxybenzidine	119-90-4	3.71E+00	2.47E-01	1.85E-01	e	6.72E-03	2.99E-05	1.68E-05	f	9.30E-04	ab
4-Bromophenylphenyl ether	101-55-3	1.59E-02	1.06E-03	7.94E-04	e	5.86E+00	2.60E-02	1.46E-02	f	1.52E-01	aa
Ammonium perfluorooctanoate	3825-26-1	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Azobenzene	103-33-3	9.76E-02	6.51E-03	4.88E-03	e	6.65E+00	2.96E-02	1.66E-02	f	5.48E-02	aa
Bis(3-tert-butyl-4-hydroxy-6-methyl-phenyl)sulfide	96-69-5	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Captan	133-06-2	8.95E-01	5.97E-02	4.47E-02	e	1.65E+01	7.35E-02	4.13E-02	f	1.20E-03	ab
Chlorobenzilate	510-15-6	5.19E-02	3.46E-03	2.59E-03	e	9.94E-03	4.42E-05	2.48E-05	f	2.06E-02	aa
Dibutylphosphate	107-66-4	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Dimethyl aminoazobenzene	60-11-7	3.63E-02	2.42E-03	1.81E-03	e	0.0E+00	0.0E+00	0.0E+00	NA	9.50E-02	ab
Hexachlorobenzene	118-74-1	2.40E-03	1.60E-04	1.20E-04	e	2.89E+00	1.29E-02	7.23E-03	f	1.30E-01	ab
Hexachlorobutadiene	87-68-3	2.76E-02	1.84E-03	1.38E-03	e	1.83E+03	8.13E+00	4.57E+00	f	8.10E-02	ab
Hexachlorocyclopentadiene	77-47-4	2.02E-02	1.35E-03	1.01E-03	e	8.94E+02	3.97E+00	2.23E+00	f	9.12E-02	aa

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Hexachloroethane	67-72-1	0 or 1	b	236.74	NA	3.60E-03	c	3.60E-03	1.77E-02	c	8.88E-06	c
Hexachlorophene	70-30-4	0 or 1	b	406.92	NA	4.88E-10	c	4.88E-10	3.46E-02	c	4.01E-06	c
Hexamethylene-1,5-diisocyanate	822-06-0	0 or 1	b	168.22	NA	1.96E-03	m	4.79E-05	3.80E-02	j	7.17E-06	j
Mirex	2385-85-5	0 or 1	b	545.55	NA	5.32E+01	i	5.27E-04	2.85E-02	e	3.30E-06	e
Nitrofen	1836-75-5	0 or 1	b	284.1	NA	1.04E-05	k	2.55E-07	4.40E-02	e	5.09E-06	e
Pentachlorobenzene	608-93-5	0 or 1	b	250.34	NA	2.43E-02	c	2.43E-02	1.86E-02	c	7.34E-06	c
Pentachloronitrobenzene	82-68-8	0 or 1	b	295.36	NA	2.86E-02	c	2.86E-02	1.87E-02	c	5.00E-06	c
Pentachlorophenol	87-86-5	0 or 1	b	266.35	7	1.41E-05	c	1.41E-05	1.56E-02	c	8.01E-06	c
Picric acid	88-89-1	0 or 1	b	229.11	NA	3.79E-13	l	3.79E-13	5.07E-02	e	5.88E-06	e
Pronamide	23950-58-5	0 or 1	b	256.13	NA	9.05E-06	c	9.05E-06	4.71E-02	c	5.45E-06	c
Strychnine	57-24-9	0 or 1	b	334.4	NA	4.90E-13	c	4.90E-13	1.38E-02	c	5.58E-06	c
Terphenyls	26140-60-3	0 or 1	b	230.31	NA	1.30E-03	k	3.17E-05	5.06E-02	e	5.86E-06	e
Tributyl phosphate	126-73-8	0 or 1	b	266.32	NA	1.50E-07	l	1.50E-07	4.59E-02	e	5.31E-06	e
Trifluralin	1582-09-8	0 or 1	b	335.29	NA	4.03E+00	i	3.99E-05	1.49E-02	j	5.04E-06	j
Triphenylamine	603-34-9	0 or 1	b	245.32	NA	2.21E-04	k	5.40E-06	4.85E-02	e	5.61E-06	e
Herbicides and Organochlorinated Pesticides												
2,4,5-T	93-76-5	0 or 1	b	255.48	NA	8.79E-04	i	8.70E-09	1.92E-02	j	6.70E-06	j
2,4-D and esters	94-75-7	0 or 1	b	221.04	NA	1.38E-05	i	1.37E-10	2.31E-02	j	7.31E-06	j
4,4'-DDD	72-54-8	0 or 1	b	320.05	NA	4.98E-06	c	4.98E-06	1.69E-02	c	4.76E-06	c
4,4'-DDE	72-55-9	0 or 1	b	319.03	NA	1.24E-04	c	1.24E-04	1.70E-02	c	4.78E-06	c
4,4'-DDT	50-29-3	0 or 1	b	354.5	NA	5.37E-05	c	5.37E-05	1.48E-02	c	4.48E-06	c
Aldrin	309-00-2	0 or 1	b	364.93	NA	1.02E-04	h	1.02E-04	1.43E-02	c	4.40E-06	c
alpha-BHC	319-84-6	0 or 1	b	290	NA	6.78E-06	c	6.78E-06	1.91E-02	c	5.04E-06	c
beta-BHC	319-85-7	0 or 1	b	290.83	NA	3.46E-07	c	3.46E-07	1.90E-02	c	5.40E-06	c
Chlordane	57-74-9	0 or 1	b	409.8	NA	2.64E-05	c	2.64E-05	1.18E-02	c	4.37E-06	c
delta-BHC	319-86-8	0 or 1	b	290.85	NA	8.25E-02	i	8.17E-07	4.33E-02	e	5.01E-06	e
Dieldrin	60-57-1	0 or 1	b	380.93	NA	2.66E-06	h	2.66E-06	1.36E-02	c	4.29E-06	c
Endothall	145-73-3	0 or 1	b	186.16	NA	1.57E-14	m	3.84E-16	5.83E-02	e	6.75E-06	e
Endrin	72-20-8	0 or 1	b	380.93	NA	1.19E-06	c	1.19E-06	1.07E-02	c	5.76E-06	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
Hexachloroethane	67-72-1	1.82E+03	h	1.82E+03	9.66E+03	c	9.66E+03	7.27E+01	c	1.82E+01	c
Hexachlorophene	70-30-4	1.08E+06	c	1.08E+06	3.47E+07	c	3.47E+07	4.31E+04	c	1.08E+04	c
Hexamethylene-1,5-diisocyanate	822-06-0	5.86E+03	m	5.86E+03	3.20E+00	m	1.58E+03	2.35E+02	e	5.86E+01	e
Mirex	2385-85-5	6.00E+00	i	1.00E+06	6.89E+00	i	7.76E+06	4.00E+04	e	1.00E+04	e
Nitrofen	1836-75-5	NA	e	2.91E+04	5.53E+00	l	3.39E+05	1.17E+03	e	2.91E+02	e
Pentachlorobenzene	608-93-5	3.21E+04	c	3.21E+04	1.22E+05	c	1.22E+05	1.29E+03	c	3.21E+02	c
Pentachloronitrobenzene	82-68-8	5.89E+03	c	5.89E+03	4.37E+04	c	4.37E+04	2.36E+02	c	5.89E+01	c
Pentachlorophenol	87-86-5	5.05E+02	c	5.05E+02	1.20E+05	c	1.20E+05	2.02E+01	c	5.05E+00	c
Picric acid	88-89-1	NA	e	5.43E+01	2.03E+00	l	1.07E+02	2.17E+00	e	5.43E-01	e
Pronamide	23950-58-5	7.74E+02	c	7.74E+02	3.24E+03	c	3.24E+03	3.10E+01	c	7.74E+00	c
Strychnine	57-24-9	4.53E+01	h	4.53E+01	8.51E+01	c	8.51E+01	1.81E+00	c	4.53E-01	c
Terphenyls	26140-60-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tributyl phosphate	126-73-8	NA	e	1.87E+03	4.00E+00	l	1.00E+04	7.47E+01	e	1.87E+01	e
Trifluralin	1582-09-8	3.78E+00	i	6.03E+03	5.34E+00	i	2.19E+05	2.41E+02	e	6.03E+01	e
Triphenylamine	603-34-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides and Organochlorinated Pesticides											
2,4,5-T	93-76-5	1.72E+00	i	5.25E+01	3.36E+00	i	2.29E+03	2.10E+00	e	5.25E-01	e
2,4-D and esters	94-75-7	1.30E+00	i	2.00E+01	2.81E+00	i	6.46E+02	7.98E-01	e	2.00E-01	e
4,4'-DDD	72-54-8	4.58E+04	c	4.58E+04	1.32E+06	c	1.32E+06	1.83E+03	c	4.58E+02	c
4,4'-DDE	72-55-9	8.64E+04	s	8.64E+04	1.80E+06	c	1.80E+06	3.46E+03	c	8.64E+02	h
4,4'-DDT	50-29-3	6.78E+05	c	6.78E+05	1.17E+06	c	1.17E+06	2.71E+04	c	6.78E+03	c
Aldrin	309-00-2	4.87E+04	c	4.87E+04	1.51E+06	c	1.51E+06	1.95E+03	c	4.87E+02	c
alpha-BHC	319-84-6	1.76E+03	c	1.76E+03	6.30E+03	c	6.30E+03	7.05E+01	c	1.76E+01	c
beta-BHC	319-85-7	2.14E+03	c	2.14E+03	6.81E+03	c	6.81E+03	8.56E+01	c	2.14E+01	c
Chlordane	57-74-9	5.13E+04	c	5.13E+04	8.66E+05	c	8.66E+05	2.05E+03	c	5.13E+02	c
delta-BHC	319-86-8	2.82E+00	i	6.61E+02	4.14E+00	i	1.38E+04	2.64E+01	e	6.61E+00	e
Dieldrin	60-57-1	2.55E+04	c	2.55E+04	1.86E+05	c	1.86E+05	1.02E+03	c	2.55E+02	c
Endothall	145-73-3	NA	e	2.97E-01	-8.70E-01	p	1.35E-01	1.19E-02	e	2.97E-03	e
Endrin	72-20-8	1.08E+04	h	1.08E+04	7.79E+04	c	7.79E+04	4.32E+02	c	1.08E+02	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
Hexachloroethane	67-72-1	1.36E+01	c	1.93E-01	c	1.93E-01	c	1.93E-01
Hexachlorophene	70-30-4	8.08E+04	c	1.70E-03	c	1.70E-03	c	1.70E-03
Hexamethylene-1,5-diisocyanate	822-06-0	4.40E+02	e	5.48E-01	e	5.48E-01	e	5.48E-01
Mirex	2385-85-5	7.50E+04	e	4.03E-03	e	4.03E-03	e	4.03E-03
Nitrofen	1836-75-5	2.19E+03	e	2.46E-02	e	2.46E-02	e	2.46E-02
Pentachlorobenzene	608-93-5	2.41E+03	c	4.44E-02	c	4.44E-02	c	4.44E-02
Pentachloronitrobenzene	82-68-8	4.42E+02	c	8.06E-02	c	8.06E-02	c	8.06E-02
Pentachlorophenol	87-86-5	3.79E+01	c	4.48E-02	c	4.48E-02	c	4.48E-02
Picric acid	88-89-1	4.07E+00	e	2.60E+00	e	2.60E+00	e	2.60E+00
Pronamide	23950-58-5	5.81E+01	c	3.62E-01	c	3.62E-01	c	3.62E-01
Strychnine	57-24-9	3.40E+00	c	2.97E+00	c	2.97E+00	c	2.97E+00
Terphenyls	26140-60-3	NA	NA	NA	NA	NA	NA	NA
Tributyl phosphate	126-73-8	1.40E+02	e	1.89E-01	e	1.89E-01	e	1.89E-01
Trifluralin	1582-09-8	4.52E+02	e	3.17E-02	e	3.17E-02	e	3.17E-02
Triphenylamine	603-34-9	NA	NA	NA	NA	NA	NA	NA
Herbicides and Organochlorinated Pesticides								
2,4,5-T	93-76-5	3.94E+00	e	4.43E-01	e	4.43E-01	e	4.43E-01
2,4-D and esters	94-75-7	1.50E+00	e	9.20E-01	e	9.20E-01	e	9.20E-01
4,4'-DDD	72-54-8	3.44E+03	c	1.12E-02	c	1.12E-02	c	1.12E-02
4,4'-DDE	72-55-9	6.48E+03	c	9.37E-03	c	9.37E-03	c	9.37E-03
4,4'-DDT	50-29-3	5.08E+04	c	1.20E-02	c	1.20E-02	c	1.20E-02
Aldrin	309-00-2	3.65E+03	c	1.04E-02	c	1.04E-02	c	1.04E-02
alpha-BHC	319-84-6	1.32E+02	c	2.47E-01	c	2.47E-01	c	2.47E-01
beta-BHC	319-85-7	1.60E+02	c	2.36E-01	c	2.36E-01	c	2.36E-01
Chlordane	57-74-9	3.85E+03	c	1.43E-02	c	1.43E-02	c	1.43E-02
delta-BHC	319-86-8	4.96E+01	e	1.57E-01	e	1.57E-01	e	1.57E-01
Dieldrin	60-57-1	1.91E+03	c	3.49E-02	c	3.49E-02	c	3.49E-02
Endothall	145-73-3	2.23E-02	e	1.23E+02	e	1.23E+02	e	1.23E+02
Endrin	72-20-8	8.11E+02	c	5.76E-02	c	5.76E-02	c	5.76E-02

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
Hexachloroethane	67-72-1	1.53E+01	c	2.72E-01	c	2.72E-01	c	2.78E+02	c
Hexachlorophene	70-30-4	1.38E+00	c	1.23E+10	c	1.23E+10	c	1.49E+05	c
Hexamethylene-1,5-diisocyanate	822-06-0	1.26E+00	e	3.00E+00	e	3.00E+00	e	7.39E+01	e
Mirex	2385-85-5	4.69E+00	e	2.32E+03	e	2.32E+03	e	4.69E+04	e
Nitrofen	1836-75-5	1.45E+01	e	1.71E+05	e	1.71E+05	e	4.22E+03	e
Pentachlorobenzene	608-93-5	5.99E+00	c	6.04E-01	c	6.04E-01	c	1.93E+03	c
Pentachloronitrobenzene	82-68-8	1.49E+01	c	1.71E-01	c	1.71E-01	c	8.75E+02	c
Pentachlorophenol	87-86-5	3.77E+02	c	1.02E+03	c	1.02E+03	c	1.90E+03	c
Picric acid	88-89-1	2.73E+01	e	2.15E+07	e	2.15E+07	e	1.48E+01	e
Pronamide	23950-58-5	1.59E+01	c	3.38E+01	c	3.38E+01	c	1.23E+02	c
Strychnine	57-24-9	2.96E+01	c	1.29E+07	c	1.29E+07	c	1.34E+01	c
Terphenyls	26140-60-3	NA	NA	NA	NA	NA	NA	NA	NA
Tributyl phosphate	126-73-8	1.53E+01	e	6.80E+03	e	6.80E+03	e	2.86E+02	e
Trifluralin	1582-09-8	5.00E+01	e	6.84E+02	e	6.84E+02	e	3.01E+03	e
Triphenylamine	603-34-9	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides and Organochlorinated Pesticides									
2,4,5-T	93-76-5	1.83E+02	e	2.44E+04	e	2.44E+04	e	9.61E+01	e
2,4-D and esters	94-75-7	2.01E+02	e	4.03E+05	e	4.03E+05	e	4.02E+01	e
4,4'-DDD	72-54-8	2.62E+01	c	3.70E+04	c	3.70E+04	c	1.20E+04	c
4,4'-DDE	72-55-9	1.77E+01	c	2.08E+03	c	2.08E+03	c	1.53E+04	c
4,4'-DDT	50-29-3	1.62E+00	c	3.03E+03	c	3.03E+03	c	1.10E+04	c
Aldrin	309-00-2	2.73E+01	c	2.08E+03	h	2.08E+03	h	1.33E+04	c
alpha-BHC	319-84-6	1.15E+01	c	9.17E+01	c	9.17E+01	c	2.02E+02	c
beta-BHC	319-85-7	1.00E+01	c	1.95E+03	c	1.95E+03	c	2.14E+02	c
Chlordane	57-74-9	1.69E+01	c	4.46E+03	c	4.46E+03	c	8.67E+03	c
delta-BHC	319-86-8	5.51E+01	e	1.76E+03	e	1.76E+03	e	3.64E+02	e
Dieldrin	60-57-1	1.04E+01	c	8.56E+03	h	8.56E+03	h	2.66E+03	c
Endothall	145-73-3	2.14E+03	e	1.73E+07	e	1.73E+07	e	6.36E+00	e
Endrin	72-20-8	1.26E+01	c	7.62E+03	c	7.62E+03	c	1.36E+03	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
Hexachloroethane	67-72-1	2.43E-04	c	1.92E-04	c	7.67E-02	c	7.67E-05	c	2.94E-04	c
Hexachlorophene	70-30-4	8.71E-01	c	6.88E-01	c	2.75E+02	c	2.75E-01	c	1.05E+00	c
Hexamethylene-1,5-diisocyanate	822-06-0	3.98E-05	e	3.14E-05	e	1.26E-02	e	1.26E-05	e	4.82E-05	e
Mirex	2385-85-5	1.95E-01	e	1.54E-01	e	6.17E+01	e	6.17E-02	e	2.36E-01	e
Nitrofen	1836-75-5	8.51E-03	e	6.72E-03	e	2.69E+00	e	2.69E-03	e	1.03E-02	e
Pentachlorobenzene	608-93-5	3.07E-03	c	2.43E-03	c	9.72E-01	c	9.72E-04	c	3.72E-03	c
Pentachloronitrobenzene	82-68-8	1.10E-03	c	8.66E-04	c	3.47E-01	c	3.47E-04	c	1.33E-03	c
Pentachlorophenol	87-86-5	3.02E-03	c	2.39E-03	c	9.55E-01	c	9.55E-04	c	3.66E-03	c
Picric acid	88-89-1	2.69E-06	e	2.12E-06	e	8.51E-04	e	8.51E-07	e	3.26E-06	e
Pronamide	23950-58-5	8.13E-05	c	6.42E-05	c	2.57E-02	c	2.57E-05	c	9.84E-05	c
Strychnine	57-24-9	2.14E-06	c	1.69E-06	c	6.76E-04	c	6.76E-07	c	2.59E-06	c
Terphenyls	26140-60-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tributyl phosphate	126-73-8	2.51E-04	e	1.98E-04	e	7.94E-02	e	7.94E-05	e	3.04E-04	e
Trifluralin	1582-09-8	5.50E-03	e	4.34E-03	e	1.74E+00	e	1.74E-03	e	6.65E-03	e
Triphenylamine	603-34-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides and Organochlorinated Pesticides											
2,4,5-T	93-76-5	5.75E-05	e	4.54E-05	e	1.82E-02	e	1.82E-05	e	6.97E-05	e
2,4-D and esters	94-75-7	1.62E-05	e	1.28E-05	e	5.13E-03	e	5.13E-06	e	1.96E-05	e
4,4'-DDD	72-54-8	3.31E-02	c	2.62E-02	c	1.05E+01	c	1.05E-02	c	4.01E-02	c
4,4'-DDE	72-55-9	4.53E-02	c	3.58E-02	c	1.43E+01	c	1.43E-02	c	5.49E-02	c
4,4'-DDT	50-29-3	2.95E-02	c	2.33E-02	c	9.33E+00	c	9.33E-03	c	3.57E-02	c
Aldrin	309-00-2	3.79E-02	c	2.99E-02	c	1.20E+01	c	1.20E-02	c	4.59E-02	c
alpha-BHC	319-84-6	1.58E-04	c	1.25E-04	c	5.00E-02	c	5.00E-05	c	1.92E-04	c
beta-BHC	319-85-7	1.71E-04	c	1.35E-04	c	5.41E-02	c	5.41E-05	c	2.07E-04	c
Chlordane	57-74-9	2.17E-02	c	1.72E-02	c	6.88E+00	c	6.88E-03	c	2.63E-02	c
delta-BHC	319-86-8	3.47E-04	e	2.74E-04	e	1.10E-01	e	1.10E-04	e	4.20E-04	e
Dieldrin	60-57-1	4.67E-03	c	3.68E-03	c	1.48E+00	c	1.48E-03	c	5.65E-03	c
Endothall	145-73-3	3.39E-09	e	2.68E-09	e	1.07E-06	e	1.07E-09	e	4.10E-09	e
Endrin	72-20-8	1.96E-03	c	1.55E-03	c	6.19E-01	c	6.19E-04	c	2.37E-03	c

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Hexachloroethane	67-72-1	NA	NA	6.29E+02	c	NA	NA	NA	NA
Hexachlorophene	70-30-4	4.66E+03	c	NA	NA	NA	NA	NA	NA
Hexamethylene-1,5-diisocyanate	822-06-0	NA	NA	1.59E+02	e	NA	NA	NA	NA
Mirex	2385-85-5	2.19E+05	r	NA	NA	NA	NA	NA	NA
Nitrofen	1836-75-5	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorobenzene	608-93-5	4.62E+04	s	NA	NA	NA	NA	NA	NA
Pentachloronitrobenzene	82-68-8	4.65E+02	c	NA	NA	NA	NA	NA	NA
Pentachlorophenol	87-86-5	3.97E+02	c	NA	NA	NA	NA	NA	NA
Picric acid	88-89-1	NA	NA	2.05E+01	e	NA	NA	1.80E+02	d
Pronamide	23950-58-5	NA	NA	2.74E+02	c	NA	NA	NA	NA
Strychnine	57-24-9	NA	NA	1.72E+01	c	NA	NA	NA	NA
Terphenyls	26140-60-3	NA	NA	NA	NA	NA	NA	NA	NA
Tributyl phosphate	126-73-8	NA	NA	6.46E+02	e	NA	NA	NA	NA
Trifluralin	1582-09-8	4.32E+04	r	NA	NA	NA	NA	NA	NA
Triphenylamine	603-34-9	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides and Organochlorinated Pesticides									
2,4,5-T	93-76-5	NA	NA	2.11E+02	e	NA	NA	2.00E+01	d
2,4-D and esters	94-75-7	NA	NA	8.05E+01	e	NA	NA	5.00E+01	d
4,4'-DDD	72-54-8	5.25E+05	c	NA	NA	NA	NA	5.83E+03	d
4,4'-DDE	72-55-9	5.53E+05	c	NA	NA	NA	NA	NA	NA
4,4'-DDT	50-29-3	4.30E+05	c	NA	NA	NA	NA	5.83E+03	d
Aldrin	309-00-2	5.82E+05	c	NA	NA	NA	NA	NA	NA
alpha-BHC	319-84-6	NA	NA	4.54E+02	c	NA	NA	NA	NA
beta-BHC	319-85-7	NA	NA	4.82E+02	c	NA	NA	NA	NA
Chlordane	57-74-9	3.07E+05	s	NA	NA	NA	NA	NA	NA
delta-BHC	319-86-8	3.08E+02	m	NA	NA	NA	NA	1.00E+02	d
Dieldrin	60-57-1	2.86E+04	c	NA	NA	NA	NA	NA	NA
Endothall	145-73-3	NA	NA	1.28E-01	e	NA	NA	NA	NA
Endrin	72-20-8	8.55E+03	c	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Hexachloroethane	67-72-1	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	1.41E+00	c	1.75E-01	1.17E-02	8.77E-03	e
Hexachlorophene	70-30-4	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	7.71E-01	c	2.98E-04	1.99E-05	1.49E-05	e
Hexamethylene-1,5-diisocyanate	822-06-0	0.0E+00	NA	5.27E-03	3.51E-04	2.64E-04	e	0.00E+00	NA	5.48E-02	3.65E-03	2.74E-03	e
Mirex	2385-85-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.00E+00	NA	3.22E-04	2.15E-05	1.61E-05	e
Nitrofen	1836-75-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.00E+00	NA	1.10E-02	7.37E-04	5.52E-04	e
Pentachlorobenzene	608-93-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	7.33E-01	c	1.00E-02	6.68E-04	5.01E-04	e
Pentachloronitrobenzene	82-68-8	0.0E+00	NA	5.27E-03	3.51E-04	2.64E-04	e	3.62E-01	c	5.45E-02	3.64E-03	2.73E-03	e
Pentachlorophenol	87-86-5	0.0E+00	NA	5.13E-03	3.42E-04	2.56E-04	e	1.42E+00	c	6.19E-01	4.13E-02	3.09E-02	e
Picric acid	88-89-1	0.0E+00	NA	4.12E-03	2.74E-04	2.06E-04	e	1.41E+00	e	4.62E+00	3.08E-01	2.31E-01	e
Pronamide	23950-58-5	0.0E+00	NA	5.18E-03	3.45E-04	2.59E-04	e	0.00E+00	NA	4.08E-01	2.72E-02	2.04E-02	e
Strychnine	57-24-9	0.0E+00	NA	3.94E-03	2.63E-04	1.97E-04	e	9.03E+00	c	5.31E+00	3.54E-01	2.65E-01	e
Terphenyls	26140-60-3	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.00E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Tributyl phosphate	126-73-8	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	0.0E+00	NA	1.71E-01	1.14E-02	8.56E-03	e
Trifluralin	1582-09-8	0.0E+00	NA	5.27E-03	3.51E-04	2.64E-04	e	0.0E+00	NA	5.33E-02	3.55E-03	2.67E-03	e
Triphenylamine	603-34-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Herbicides and Organochlorinated Pesticides													
2,4,5-T	93-76-5	0.0E+00	NA	4.09E-03	2.72E-04	2.04E-04	e	1.26E+01	e	4.75E+00	3.16E-01	2.37E-01	e
2,4-D and esters	94-75-7	0.0E+00	NA	2.98E-03	1.99E-04	1.49E-04	e	5.06E+00	e	9.11E+00	6.08E-01	4.56E-01	e
4,4'-DDD	72-54-8	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	4.34E-02	c	7.03E-03	4.69E-04	3.51E-04	e
4,4'-DDE	72-55-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	4.34E-02	c	3.73E-03	2.48E-04	1.86E-04	e
4,4'-DDT	50-29-3	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	4.34E-02	c	4.75E-04	3.17E-05	2.37E-05	e
Aldrin	309-00-2	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	4.28E-01	c	6.61E-03	4.41E-04	3.31E-04	e
alpha-BHC	319-84-6	0.0E+00	NA	5.24E-03	3.49E-04	2.62E-04	e	1.87E+00	c	1.81E-01	1.21E-02	9.07E-03	e
beta-BHC	319-85-7	0.0E+00	NA	5.25E-03	3.50E-04	2.62E-04	e	2.04E+00	c	1.49E-01	9.96E-03	7.47E-03	e
Chlordane	57-74-9	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.83E-01	c	6.28E-03	4.18E-04	3.14E-04	e
delta-BHC	319-86-8	0.0E+00	NA	5.16E-03	3.44E-04	2.58E-04	e	2.53E+00	e	4.76E-01	3.18E-02	2.38E-02	e
Dieldrin	60-57-1	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	2.34E+00	c	1.26E-02	8.41E-04	6.31E-04	e
Endothall	145-73-3	0.0E+00	NA	1.00E-04	6.67E-06	5.00E-06	e	0.0E+00	NA	2.05E+01	1.37E+00	1.03E+00	e
Endrin	72-20-8	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	3.61E+04	c	2.98E-02	1.99E-03	1.49E-03	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
Hexachloroethane	67-72-1	1.05E-01	6.99E-03	5.24E-03	e	1.07E+03	4.78E+00	2.69E+00	f	3.00E-02	ab
Hexachlorophene	70-30-4	1.78E-04	1.19E-05	8.90E-06	e	4.80E-07	2.13E-09	1.20E-09	f	9.40E-01	aa
Hexamethylene-1,5-diisocyanate	822-06-0	3.27E-02	2.18E-03	1.64E-03	e	9.52E+00	4.23E-02	2.38E-02	f	2.52E-02	aa
Mirex	2385-85-5	1.92E-04	1.28E-05	9.62E-06	e	4.60E-01	2.04E-03	1.15E-03	f	5.77E-02	aa
Nitrofen	1836-75-5	6.60E-03	4.40E-04	3.30E-04	e	1.18E-02	5.24E-05	2.95E-05	f	1.90E-01	ab
Pentachlorobenzene	608-93-5	5.99E-03	3.99E-04	2.99E-04	e	4.32E+02	1.92E+00	1.08E+00	f	1.61E-01	aa
Pentachloronitrobenzene	82-68-8	3.26E-02	2.17E-03	1.63E-03	e	2.79E+03	1.24E+01	6.97E+00	f	4.20E-02	ab
Pentachlorophenol	87-86-5	3.70E-01	2.46E-02	1.85E-02	e	1.34E+01	5.94E-02	3.34E-02	f	3.90E-01	ab
Picric acid	88-89-1	2.76E+00	1.84E-01	1.38E-01	e	1.09E-05	4.84E-08	2.72E-08	f	1.89E-03	aa
Pronamide	23950-58-5	2.44E-01	1.62E-02	1.22E-02	e	1.69E+01	7.51E-02	4.23E-02	f	1.31E-02	aa
Strychnine	57-24-9	3.17E+00	2.11E-01	1.58E-01	e	4.58E-06	2.04E-08	1.15E-08	f	4.17E-04	aa
Terphenyls	26140-60-3	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Tributyl phosphate	126-73-8	1.02E-01	6.81E-03	5.11E-03	e	1.13E-01	5.03E-04	2.83E-04	f	2.45E-02	aa
Trifluralin	1582-09-8	3.18E-02	2.12E-03	1.59E-03	e	3.03E+00	1.35E-02	7.58E-03	f	7.95E-02	aa
Triphenylamine	603-34-9	0.00E+00	0.00E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Herbicides and Organochlorinated Pesticides											
2,4,5-T	93-76-5	2.83E+00	1.89E-01	1.42E-01	e	9.77E-02	4.34E-04	2.44E-04	f	1.05E-02	aa
2,4-D and esters	94-75-7	5.44E+00	3.63E-01	2.72E-01	e	4.85E-03	2.16E-05	1.21E-05	f	7.00E-03	aa
4,4'-DDD	72-54-8	4.20E-03	2.80E-04	2.10E-04	e	5.64E-02	2.51E-04	1.41E-04	f	1.80E-01	ab
4,4'-DDE	72-55-9	2.23E-03	1.48E-04	1.11E-04	e	7.49E-01	3.33E-03	1.87E-03	f	1.60E-01	ab
4,4'-DDT	50-29-3	2.84E-04	1.89E-05	1.42E-05	e	3.60E-02	1.60E-04	8.99E-05	f	2.70E-01	ab
Aldrin	309-00-2	3.95E-03	2.63E-04	1.97E-04	e	9.19E-01	4.09E-03	2.30E-03	f	1.40E-03	ab
alpha-BHC	319-84-6	1.08E-01	7.22E-03	5.42E-03	e	2.26E+00	1.00E-02	5.65E-03	f	1.32E-02	aa
beta-BHC	319-85-7	8.92E-02	5.95E-03	4.46E-03	e	9.43E-02	4.19E-04	2.36E-04	f	1.38E-02	aa
Chlordane	57-74-9	3.75E-03	2.50E-04	1.87E-04	e	1.86E-01	8.28E-04	4.66E-04	f	3.80E-02	ab
delta-BHC	319-86-8	2.84E-01	1.90E-02	1.42E-02	e	1.64E+00	7.30E-03	4.11E-03	f	2.21E-02	aa
Dieldrin	60-57-1	7.54E-03	5.02E-04	3.77E-04	e	4.35E-02	1.94E-04	1.09E-04	f	1.20E-02	ab
Endothall	145-73-3	1.23E+01	8.18E-01	6.13E-01	e	2.31E-06	1.03E-08	5.78E-09	f	3.75E-05	aa
Endrin	72-20-8	1.78E-02	1.19E-03	8.89E-04	e	3.62E-02	1.61E-04	9.05E-05	f	1.20E-02	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [x] (various units)	Source	H-used [x] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
gamma-BHC (Lindane)	58-89-9	0 or 1	b	290.83	NA	1.58E-01	i	1.56E-06	4.33E-02	e	5.01E-06	e
Heptachlor	76-44-8	0 or 1	b	373.35	NA	5.87E-06	c	5.87E-06	1.12E-02	c	5.69E-06	c
Isodrin	465-73-6	0 or 1	b	364.91	NA	1.58E-02	k	3.86E-04	3.72E-02	e	4.31E-06	e
Methoxychlor	72-43-5	0 or 1	b	345.65	NA	6.33E-06	c	6.33E-06	1.30E-02	c	5.59E-06	c
Silvex (2,4,5-TP)	93-72-1	0 or 1	b	269.51	NA	3.70E-07	m	9.03E-09	1.94E-02	j	5.83E-06	j
Toxaphene	8001-35-2	0 or 1	b	414	NA	4.56E+01	i	4.51E-04	1.16E-02	j	4.34E-06	j

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Octanol / Water Partitioning Coefficients						Partitioning Coefficients (Kd)			
		K_{oc}-pub [y] (various units)	Source	K_{oc}-used [z] (mL/g)	K_{ow}-pub [y] (various units)	Source	K_{ow}-used [z] (unitless)	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source
gamma-BHC (Lindane)	58-89-9	3.03E+00	i	1.07E+03	3.72E+00	i	5.25E+03	4.29E+01	e	1.07E+01	e
Heptachlor	76-44-8	9.53E+03	c	9.53E+03	1.04E+05	c	1.04E+05	3.81E+02	c	9.53E+01	c
Isodrin	465-73-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	8.00E+04	c	8.00E+04	3.36E+04	c	3.36E+04	3.20E+03	c	8.00E+02	c
Silvex (2,4,5-TP)	93-72-1	8.04E+01	m	8.04E+01	3.80E+00	m	6.31E+03	3.22E+00	e	8.04E-01	e
Toxaphene	8001-35-2	5.00E+00	i	1.00E+05	5.50E+00	i	3.16E+05	4.00E+03	e	1.00E+03	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Kd		Plant Uptake Factors				
		Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil) [a]
gamma-BHC (Lindane)	58-89-9	8.04E+01	e	2.74E-01	e	2.74E-01	e	2.74E-01
Heptachlor	76-44-8	7.15E+02	c	4.89E-02	c	4.89E-02	c	4.89E-02
Isodrin	465-73-6	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	6.00E+03	c	9.38E-02	c	9.38E-02	c	9.38E-02
Silvex (2,4,5-TP)	93-72-1	6.03E+00	e	2.46E-01	e	2.46E-01	e	2.46E-01
Toxaphene	8001-35-2	7.50E+03	e	2.56E-02	e	2.56E-02	e	2.56E-02

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	RCF (µg/g DW plant)/ (µg/mL soil water)	Source
gamma-BHC (Lindane)	58-89-9	1.65E+01	e	3.28E+02	e	3.28E+02	e	1.76E+02	e
Heptachlor	76-44-8	1.78E+01	c	2.09E+03	c	2.09E+03	c	1.70E+03	c
Isodrin	465-73-6	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	8.95E-01	c	5.83E+02	c	5.83E+02	c	7.16E+02	c
Silvex (2,4,5-TP)	93-72-1	2.52E+02	e	6.91E+04	e	6.91E+04	e	2.02E+02	e
Toxaphene	8001-35-2	4.00E+00	e	8.94E+01	e	8.94E+01	e	4.00E+03	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source	Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source
gamma-BHC (Lindane)	58-89-9	1.32E-04	e	1.04E-04	e	4.17E-02	e	4.17E-05	e	1.60E-04	e
Heptachlor	76-44-8	2.60E-03	c	2.05E-03	c	8.22E-01	c	8.22E-04	c	3.15E-03	c
Isodrin	465-73-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	8.43E-04	c	6.66E-04	c	2.67E-01	c	2.67E-04	c	1.02E-03	c
Silvex (2,4,5-TP)	93-72-1	1.58E-04	e	1.25E-04	e	5.01E-02	e	5.01E-05	e	1.92E-04	e
Toxaphene	8001-35-2	7.94E-03	e	6.27E-03	e	2.51E+00	e	2.51E-03	e	9.62E-03	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors						Half-life	
		BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
gamma-BHC (Lindane)	58-89-9	NA	NA	3.96E+02	e	NA	NA	2.40E+02	d
Heptachlor	76-44-8	2.01E+04	s	NA	NA	NA	NA	NA	NA
Isodrin	465-73-6	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	72-43-5	3.16E+03	c	NA	NA	NA	NA	NA	NA
Silvex (2,4,5-TP)	93-72-1	6.06E+02	r	4.55E+02	e	NA	NA	NA	NA
Toxaphene	8001-35-2	8.00E+04	r	NA	NA	NA	NA	NA	NA

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
gamma-BHC (Lindane)	58-89-9	0.0E+00	NA	5.21E-03	3.47E-04	2.60E-04	e	1.05E+00	e	2.96E-01	1.98E-02	1.48E-02	e
Heptachlor	76-44-8	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	1.41E+00	c	3.37E-02	2.25E-03	1.69E-03	e
Isodrin	465-73-6	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Methoxychlor	72-43-5	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	6.93E-01	c	4.02E-03	2.68E-04	2.01E-04	e
Silvex (2,4,5-TP)	93-72-1	0.0E+00	NA	4.44E-03	2.96E-04	2.22E-04	e	0.0E+00	NA	3.36E+00	2.24E-01	1.68E-01	e
Toxaphene	8001-35-2	0.0E+00	NA	5.28E-03	3.52E-04	2.64E-04	e	0.0E+00	NA	3.22E-03	2.15E-04	1.61E-04	e

Table B1-1 Chemical-Specific Parameters for Organic COPCs

Chemical of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [g]								Kp (cm/hr)	Source
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source		
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm			
gamma-BHC (Lindane)	58-89-9	1.77E-01	1.18E-02	8.85E-03	e	1.94E+00	8.62E-03	4.85E-03	f	1.10E-02	ab
Heptachlor	76-44-8	2.01E-02	1.34E-03	1.01E-03	e	2.12E-01	9.41E-04	5.29E-04	f	8.60E-03	ab
Isodrin	465-73-6	0.00E+00	0.00E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	NA	NA
Methoxychlor	72-43-5	2.40E-03	1.60E-04	1.20E-04	e	3.16E-02	1.40E-04	7.89E-05	f	1.98E-02	aa
Silvex (2,4,5-TP)	93-72-1	2.01E+00	1.34E-01	1.00E-01	e	6.69E-02	2.97E-04	1.67E-04	f	1.72E-02	aa
Toxaphene	8001-35-2	1.92E-03	1.28E-04	9.61E-05	e	1.61E+00	7.14E-03	4.02E-03	f	1.20E-02	ab

Table B1-1 Chemical-Specific Parameters for Organic COPCs

CAS = Chemical Abstracts Service.
COPC = Chemical of Potential Concern.
DW = dry weight.
FW = fresh weight.

Notes/Sources

a Br_{forage} value is used as a surrogate value for Br_{grain} for organic COPCs.
b Value for Fv is based on phase type, which is shown in the emissions report (Attachment 1 of this work plan).
c Section 5 and/or Appendix A-3 of the *Human Health Risk Assessment Protocol* (HHRAP) (EPA 1998).
d Howard and others 1991.
e Calculated per Section 5 and/or Appendix A-3 of the HHRAP (EPA 1998).
f Calculated per Errata to HHRAP (EPA 1999b).
g Total soil loss (ks) is the sum of all appropriate soil loss mechanisms.
h Errata to HHRAP (EPA 1999b).
i Mackay and others 1991 - 1995.
j Risk Assessment Information System (RAIS); see http://risk.lsd.ornl.gov/rap_hp.shtml. Accessed in November 2002.
k 24590-WTP-RPT-PO-03-008.
l Chemfate; see http://esc.syrres.com/efdb/Chemfate.htm. Accessed in 1999.
m US Environmental Protection Agency (EPA) EPI software; see http://www.epa.gov/oppt/exposure/docs/episuitedl.htm. Accessed in November 2002.
n Mackay and Shui 1981.
o Hansch and Leo 1985.
p Howard 1989-1997.
q Schwarzenbach and others 1993.
r Calculated per Section C-1.5 in the *Screening-Level Ecological Risk Assessment Protocol* (SLERAP) (EPA 1999a) using Binstein and others 1993.
s CCN 063817.
t Spectrum Chemical Fact Sheet; see http://www.speclab.com/compound/. Accessed in 1999.
u EPA Region 9 Preliminary Remediation Goal (PRG) data set (EPA 2002a).
v Calculated per Section C-1.6 in the SLERAP (EPA 1999a) using Southworth and others 1978.
w SLERAP (EPA 1999a).
x H-pub = published Henry's Law Constant with various units; H-used = actual used Henry's Law Constant in atm-m^3/mol.
y K_{ow}-pub and K_{oc}-pub = published K_{ow} and K_{oc} values, respectively, with various units.
z K_{ow}-used and K_{oc}-used = actual used K_{ow} (unitless) and K_{oc} (mL/g) values, respectively.
aa Calculated per Risk Assessment Guidance for Superfund (RAGS) Part E (EPA 2003).
ab Value from RAGS Part E (EPA 2003).
NA Not Applicable.

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [m] (various units)	Source	H-used [m] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Metals												
Aluminum	7429-90-5	0 or 1	b	26.982	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	7440-36-0	0 or 1	b	121.75	6.8	NA	NA	NA	7.73E-02	f	8.96E-06	f
Arsenic	7440-38-2	0 or 1	b	74.92	6.8	NA	NA	NA	1.07E-01	f	1.24E-05	f
Barium	7440-39-3	0 or 1	b	137.33	6.8	NA	NA	NA	7.14E-02	f	8.26E-06	f
Beryllium	7440-41-7	0 or 1	b	9.01	6.8	NA	NA	NA	4.39E-01	f	5.08E-05	f
Bismuth	7440-69-9	0 or 1	b	208.98	NA	NA	NA	NA	NA	NA	NA	NA
Boron	7440-42-8	0 or 1	b	10.811	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	0 or 1	b	112.41	6.8	NA	NA	NA	8.16E-02	f	9.45E-06	f
Calcium	7440-70-2	0 or 1	b	40.078	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	18540-29-9	0 or 1	b	52	6.8	NA	NA	NA	1.36E-01	f	1.58E-05	f
Cobalt	7440-48-4	0 or 1	b	58.933	NA	NA	NA	NA	NA	NA	NA	NA
Copper	7440-50-8	0 or 1	b	63.546	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7439-89-6	0 or 1	b	55.845	NA	NA	NA	NA	NA	NA	NA	NA
Lead	7439-92-1	0 or 1	b	207.2	NA	NA	NA	NA	5.43E-02	f	6.28E-06	f
Lithium	7439-93-2	0 or 1	b	6.941	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	7439-95-4	0 or 1	b	24.305	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	0 or 1	b	54.938	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	0.85	j	200.59	NA	7.10E-03	f	7.10E-03	1.09E-02	f	3.01E-05	f
Mercury - Hg+2	7487-94-7	0 or 1	b	271.52	NA	7.10E-10	f	7.10E-10	4.53E-02	f	5.25E-06	f
Methylmercury	22967-92-6	0 or 1	b	216	NA	4.70E-07	f	4.70E-07	5.28E-02	f	6.11E-06	f
Molybdenum	7439-98-7	0 or 1	b	95.94	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	7440-02-0	0 or 1	b	58.69	6.8	NA	NA	NA	1.26E-01	f	1.46E-05	f
Potassium	7440-09-7	0 or 1	b	39.098	NA	NA	NA	NA	NA	NA	NA	NA
Rhodium	7440-16-6	0 or 1	b	102.906	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	0 or 1	b	78.96	6.8	NA	NA	NA	1.03E-01	f	1.20E-05	f
Silicon	7440-21-3	0 or 1	b	28.086	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	0 or 1	b	107.87	6.8	NA	NA	NA	8.38E-02	f	9.71E-06	f
Sodium	7440-23-5	0 or 1	b	22.99	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Partitioning Coefficients						Plant Uptake Factors			
		Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source	Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil) [a]	Source	$Br_{ag(fruit)}$ (µg/g DW plant)/ (µg/g soil)	Source
Metals											
Aluminum	7429-90-5	1.50E+03	c	1.50E+03	c	1.50E+03	c	1.08E-03	d	6.50E-04	c
Antimony	7440-36-0	4.50E+01	f	4.50E+01	f	4.50E+01	f	3.19E-02	f	3.00E-02	c
Arsenic	7440-38-2	2.90E+01	f	2.90E+01	f	2.90E+01	f	6.33E-03	f	NA	NA
Barium	7440-39-3	4.10E+01	f	4.10E+01	f	4.10E+01	f	3.22E-02	f	1.50E-02	c
Beryllium	7440-41-7	7.90E+02	f	7.90E+02	f	7.90E+02	f	2.58E-03	f	1.50E-03	c
Bismuth	7440-69-9	2.00E+02	c	2.00E+02	c	2.00E+02	c	8.81E-03	d	5.00E-03	c
Boron	7440-42-8	3.00E+00	c	3.00E+00	c	3.00E+00	c	2.25E+00	d	2.00E+00	c
Cadmium	7440-43-9	7.50E+01	f	7.50E+01	f	7.50E+01	f	1.25E-01	f	NA	NA
Calcium	7440-70-2	4.00E+00	c	4.00E+00	c	4.00E+00	c	7.50E-01	d	3.50E-01	c
Chromium	18540-29-9	1.90E+01	f	1.90E+01	f	1.90E+01	f	4.88E-03	f	4.50E-03	c
Cobalt	7440-48-4	4.50E+01	c	4.50E+01	c	4.50E+01	c	6.36E-02	d	7.00E-02	c
Copper	7440-50-8	3.50E+01	c	3.50E+01	c	3.50E+01	c	2.69E-01	d	2.50E-01	c
Iron	7439-89-6	2.50E+01	c	2.50E+01	c	2.50E+01	c	1.38E-03	d	1.00E-03	c
Lead	7439-92-1	9.00E+02	f	9.00E+02	f	9.00E+02	f	1.36E-02	f	9.00E-03	c
Lithium	7439-93-2	3.00E+02	c	3.00E+02	c	3.00E+02	c	6.67E-03	d	4.00E-03	c
Magnesium	7439-95-4	4.50E+00	c	4.50E+00	c	4.50E+00	c	6.07E-01	d	5.50E-01	c
Manganese	7439-96-5	6.50E+01	c	6.50E+01	c	6.50E+01	c	7.54E-02	d	5.00E-02	c
Mercury	7439-97-6	3.00E+03	f	1.00E+03	f	1.00E+03	f	2.89E-01	d	2.00E-01	c
Mercury - Hg+2	7487-94-7	5.00E+04	f	5.80E+04	f	1.00E+05	f	1.45E-02	f	NA	NA
Methylmercury	22967-92-6	3.00E+03	f	7.00E+03	f	1.00E+05	f	2.94E-02	f	NA	NA
Molybdenum	7439-98-7	2.00E+01	c	2.00E+01	c	2.00E+01	c	8.42E-02	d	6.00E-02	c
Nickel	7440-02-0	6.50E+01	f	6.50E+01	f	6.50E+01	f	9.31E-03	f	NA	NA
Potassium	7440-09-7	5.50E+00	c	5.50E+00	c	5.50E+00	c	6.07E-01	d	5.50E-01	c
Rhodium	7440-16-6	6.00E+01	c	6.00E+01	c	6.00E+01	c	5.40E-02	d	4.00E-02	c
Selenium	7782-49-2	5.00E+00	f	5.00E+00	f	5.00E+00	f	1.95E-02	f	NA	NA
Silicon	7440-21-3	3.00E+01	c	3.00E+01	c	3.00E+01	c	1.06E-01	d	7.00E-02	c
Silver	7440-22-4	8.30E+00	f	8.30E+00	f	8.30E+00	f	1.38E-01	f	1.00E-01	c
Sodium	7440-23-5	1.00E+02	c	1.00E+02	c	1.00E+02	c	5.75E-02	d	5.50E-02	c

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{ag(veg)}$ (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil)	Source	$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source
Metals									
Aluminum	7429-90-5	1.49E-03	d	4.00E-03	c	6.50E-04	c	6.50E-04	c
Antimony	7440-36-0	7.25E-02	d	2.00E-01	f	2.00E-01	f	3.00E-02	f
Arsenic	7440-38-2	NA	NA	3.60E-02	f	4.00E-03	f	8.00E-03	f
Barium	7440-39-3	4.88E-02	d	1.50E-01	f	1.50E-02	f	1.50E-02	f
Beryllium	7440-41-7	3.63E-03	d	1.00E-02	f	1.50E-03	f	1.50E-03	f
Bismuth	7440-69-9	1.25E-02	d	3.50E-02	c	5.00E-03	c	5.00E-03	c
Boron	7440-42-8	2.50E+00	d	4.00E+00	c	2.00E+00	c	2.00E+00	c
Cadmium	7440-43-9	NA	NA	3.64E-01	f	6.20E-02	f	6.40E-02	f
Calcium	7440-70-2	1.14E+00	d	3.50E+00	c	3.50E-01	c	3.50E-01	c
Chromium	18540-29-9	5.25E-03	d	7.50E-03	f	4.50E-03	f	4.50E-03	f
Cobalt	7440-48-4	5.75E-02	d	2.00E-02	c	7.00E-02	c	7.00E-02	c
Copper	7440-50-8	2.88E-01	d	4.00E-01	c	2.50E-01	c	2.50E-01	c
Iron	7439-89-6	1.75E-03	d	4.00E-03	c	1.00E-03	c	1.00E-03	c
Lead	7439-92-1	1.80E-02	d	4.50E-02	f	9.00E-03	f	9.00E-03	f
Lithium	7439-93-2	9.25E-03	d	2.50E-02	c	4.00E-03	c	4.00E-03	c
Magnesium	7439-95-4	6.63E-01	d	1.00E+00	c	5.50E-01	c	5.50E-01	c
Manganese	7439-96-5	1.00E-01	d	2.50E-01	c	5.00E-02	c	5.00E-02	c
Mercury	7439-97-6	3.75E-01	d	9.00E-01	c	2.00E-01	c	2.00E-01	c
Mercury - Hg+2	7487-94-7	NA	NA	NA	NA	NA	NA	3.60E-02	f
Methylmercury	22967-92-6	NA	NA	NA	NA	NA	NA	9.90E-02	f
Molybdenum	7439-98-7	1.08E-01	d	2.50E-01	c	6.00E-02	c	6.00E-02	c
Nickel	7440-02-0	NA	NA	3.20E-02	f	6.00E-03	f	8.00E-03	f
Potassium	7440-09-7	6.63E-01	d	1.00E+00	c	5.50E-01	c	5.50E-01	c
Rhodium	7440-16-6	6.75E-02	d	1.50E-01	c	4.00E-02	c	4.00E-02	c
Selenium	7782-49-2	NA	NA	1.60E-02	f	2.00E-03	f	2.20E-02	f
Silicon	7440-21-3	1.40E-01	d	3.50E-01	c	7.00E-02	c	7.00E-02	c
Silver	7440-22-4	1.75E-01	d	4.00E-01	f	1.00E-01	f	1.00E-01	f
Sodium	7440-23-5	6.00E-02	d	7.50E-02	c	5.50E-02	c	5.50E-02	c

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Plant Uptake Factors				Bioconcentration/Bioaccumulation Factors					
		Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source
Metals											
Aluminum	7429-90-5	NA	NA	NA	NA	1.50E-03	c	NA	NA	NA	NA
Antimony	7440-36-0	NA	NA	NA	NA	1.00E-03	f	NA	NA	NA	NA
Arsenic	7440-38-2	NA	NA	NA	NA	2.00E-03	f	NA	NA	NA	NA
Barium	7440-39-3	NA	NA	NA	NA	1.50E-04	f	2.00E-02	h	9.00E-01	h
Beryllium	7440-41-7	NA	NA	NA	NA	1.00E-03	f	NA	NA	NA	NA
Bismuth	7440-69-9	NA	NA	NA	NA	4.00E-04	c	NA	NA	NA	NA
Boron	7440-42-8	NA	NA	NA	NA	8.00E-04	c	NA	NA	NA	NA
Cadmium	7440-43-9	NA	NA	NA	NA	1.20E-04	f	1.06E-01	f	2.50E-03	f
Calcium	7440-70-2	NA	NA	NA	NA	7.00E-04	c	4.40E-02	h	4.40E-02	h
Chromium	18540-29-9	NA	NA	NA	NA	5.50E-03	f	NA	NA	NA	NA
Cobalt	7440-48-4	NA	NA	NA	NA	2.00E-02	c	5.30E-01	h	2.00E-02	h
Copper	7440-50-8	NA	NA	NA	NA	1.00E-02	c	5.10E-01	h	4.90E-01	h
Iron	7439-89-6	NA	NA	NA	NA	2.00E-02	c	1.50E+00	h	1.30E+00	h
Lead	7439-92-1	NA	NA	NA	NA	3.00E-04	f	NA	NA	NA	NA
Lithium	7439-93-2	NA	NA	NA	NA	1.00E-02	c	NA	NA	NA	NA
Magnesium	7439-95-4	NA	NA	NA	NA	5.00E-03	c	NA	NA	1.60E+00	h
Manganese	7439-96-5	NA	NA	NA	NA	4.00E-04	c	5.10E-02	h	6.50E-02	h
Mercury	7439-97-6	1.80E+03	j	1.80E+03	j	2.50E-01	c	2.70E-02	h	NA	NA
Mercury - Hg+2	7487-94-7	1.80E+03	f	1.80E+03	f	5.22E-03	f	2.39E-02	f	2.39E-02	f
Methylmercury	22967-92-6	NA	NA	NA	NA	7.80E-04	f	3.58E-03	f	3.58E-03	f
Molybdenum	7439-98-7	NA	NA	NA	NA	6.00E-03	c	5.00E-02	h	5.00E-01	h
Nickel	7440-02-0	NA	NA	NA	NA	6.00E-03	f	NA	NA	NA	NA
Potassium	7440-09-7	NA	NA	NA	NA	2.00E-02	c	NA	NA	1.10E+00	h
Rhodium	7440-16-6	NA	NA	NA	NA	2.00E-03	c	NA	NA	NA	NA
Selenium	7782-49-2	NA	NA	NA	NA	2.27E-03	f	1.13E+00	f	1.13E+00	f
Silicon	7440-21-3	NA	NA	NA	NA	4.00E-05	c	NA	NA	NA	NA
Silver	7440-22-4	NA	NA	NA	NA	3.00E-03	f	NA	NA	NA	NA
Sodium	7440-23-5	NA	NA	NA	NA	5.50E-02	c	NA	NA	6.10E+00	h

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source	BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source
Metals											
Aluminum	7429-90-5	2.00E-04	c	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	7440-36-0	1.00E-04	f	NA	NA	NA	NA	4.00E+01	f	NA	NA
Arsenic	7440-38-2	6.00E-05	g	NA	NA	NA	NA	1.14E+02	g	NA	NA
Barium	7440-39-3	3.50E-04	f	NA	NA	NA	NA	6.33E+02	g	NA	NA
Beryllium	7440-41-7	9.00E-07	f	NA	NA	NA	NA	6.20E+01	g	NA	NA
Bismuth	7440-69-9	5.00E-04	c	NA	NA	NA	NA	NA	NA	NA	NA
Boron	7440-42-8	1.50E-03	c	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	7440-43-9	6.50E-06	f	1.91E-04	f	NA	NA	9.07E+02	g	NA	NA
Calcium	7440-70-2	1.00E-02	c	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	18540-29-9	1.50E-03	f	NA	NA	NA	NA	3.00E+00	f	NA	NA
Cobalt	7440-48-4	2.00E-03	c	1.70E-01	h	3.16E+00	i	NA	NA	NA	NA
Copper	7440-50-8	1.50E-03	c	2.20E-02	h	3.16E+00	i	NA	NA	NA	NA
Iron	7439-89-6	2.50E-04	c	2.60E-02	h	3.16E+00	i	NA	NA	NA	NA
Lead	7439-92-1	2.50E-04	f	NA	NA	8.00E+00	f	NA	NA	NA	NA
Lithium	7439-93-2	2.00E-02	c	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	7439-95-4	4.00E-03	c	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	7439-96-5	3.50E-04	c	3.60E-03	h	NA	NA	NA	NA	NA	NA
Mercury	7439-97-6	4.50E-04	c	NA	NA	NA	NA	NA	NA	NA	NA
Mercury - Hg+2	7487-94-7	2.26E-03	f	3.39E-05	f	0.00E+00	g	NA	NA	NA	NA
Methylmercury	22967-92-6	3.38E-04	f	5.07E-06	f	6.80E+06	f	NA	NA	NA	NA
Molybdenum	7439-98-7	1.50E-03	c	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	7440-02-0	1.00E-03	f	NA	NA	NA	NA	7.80E+01	g	NA	NA
Potassium	7440-09-7	7.00E-03	c	NA	NA	NA	NA	NA	NA	NA	NA
Rhodium	7440-16-6	1.00E-02	c	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	7782-49-2	5.86E-03	f	1.88E-01	f	NA	NA	1.29E+02	f	NA	NA
Silicon	7440-21-3	2.00E-05	c	NA	NA	NA	NA	NA	NA	NA	NA
Silver	7440-22-4	2.00E-02	f	NA	NA	NA	NA	8.77E+01	g	NA	NA
Sodium	7440-23-5	3.50E-02	c	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [e]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_f $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Metals													
Aluminum	7429-90-5	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	2.15E-03	1.43E-04	1.07E-04	d
Antimony	7440-36-0	0.0E+00	NA	1.76E-03	1.17E-04	8.78E-05	d	0.0E+00	NA	7.13E-02	4.75E-03	3.57E-03	d
Arsenic	7440-38-2	0.0E+00	NA	1.75E-03	1.17E-04	8.76E-05	d	0.0E+00	NA	1.10E-01	7.36E-03	5.52E-03	d
Barium	7440-39-3	0.0E+00	NA	1.75E-03	1.17E-04	8.77E-05	d	0.0E+00	NA	7.83E-02	5.22E-03	3.91E-03	d
Beryllium	7440-41-7	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	4.08E-03	2.72E-04	2.04E-04	d
Bismuth	7440-69-9	0.0E+00	NA	1.76E-03	1.17E-04	8.80E-05	d	0.0E+00	NA	1.61E-02	1.07E-03	8.04E-04	d
Boron	7440-42-8	0.0E+00	NA	1.68E-03	1.12E-04	8.38E-05	d	0.0E+00	NA	1.02E+00	6.81E-02	5.11E-02	d
Cadmium	7440-43-9	0.0E+00	NA	1.76E-03	1.17E-04	8.79E-05	d	0.0E+00	NA	4.28E-02	2.86E-03	2.14E-03	d
Calcium	7440-70-2	0.0E+00	NA	1.70E-03	1.13E-04	8.48E-05	d	0.0E+00	NA	7.75E-01	5.17E-02	3.88E-02	d
Chromium	18540-29-9	0.0E+00	NA	1.75E-03	1.16E-04	8.74E-05	d	0.0E+00	NA	1.68E-01	1.12E-02	8.41E-03	d
Cobalt	7440-48-4	0.0E+00	NA	1.76E-03	1.17E-04	8.78E-05	d	0.0E+00	NA	7.13E-02	4.75E-03	3.57E-03	d
Copper	7440-50-8	0.0E+00	NA	1.75E-03	1.17E-04	8.77E-05	d	0.0E+00	NA	9.16E-02	6.11E-03	4.58E-03	d
Iron	7439-89-6	0.0E+00	NA	1.75E-03	1.17E-04	8.75E-05	d	0.0E+00	NA	1.28E-01	8.53E-03	6.40E-03	d
Lead	7439-92-1	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	3.58E-03	2.39E-04	1.79E-04	d
Lithium	7439-93-2	0.0E+00	NA	1.76E-03	1.17E-04	8.80E-05	d	0.0E+00	NA	1.07E-02	7.15E-04	5.36E-04	d
Magnesium	7439-95-4	0.0E+00	NA	1.70E-03	1.14E-04	8.52E-05	d	0.0E+00	NA	6.92E-01	4.61E-02	3.46E-02	d
Manganese	7439-96-5	0.0E+00	NA	1.76E-03	1.17E-04	8.79E-05	d	0.0E+00	NA	4.94E-02	3.30E-03	2.47E-03	d
Mercury	7439-97-6	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	3.22E-03	2.15E-04	1.61E-04	d
Mercury - Hg+2	7487-94-7	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	5.55E-05	3.70E-06	2.78E-06	d
Methylmercury	22967-92-6	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	4.60E-04	3.07E-05	2.30E-05	d
Molybdenum	7439-98-7	0.0E+00	NA	1.75E-03	1.17E-04	8.74E-05	d	0.0E+00	NA	1.60E-01	1.07E-02	7.99E-03	d
Nickel	7440-02-0	0.0E+00	NA	1.76E-03	1.17E-04	8.79E-05	d	0.0E+00	NA	4.94E-02	3.30E-03	2.47E-03	d
Potassium	7440-09-7	0.0E+00	NA	1.71E-03	1.14E-04	8.57E-05	d	0.0E+00	NA	5.70E-01	3.80E-02	2.85E-02	d
Rhodium	7440-16-6	0.0E+00	NA	1.76E-03	1.17E-04	8.78E-05	d	0.0E+00	NA	5.35E-02	3.57E-03	2.68E-03	d
Selenium	7782-49-2	0.0E+00	NA	1.71E-03	1.14E-04	8.54E-05	d	0.0E+00	NA	6.25E-01	4.17E-02	3.12E-02	d
Silicon	7440-21-3	0.0E+00	NA	1.75E-03	1.17E-04	8.76E-05	d	0.0E+00	NA	1.07E-01	7.12E-03	5.34E-03	d
Silver	7440-22-4	0.0E+00	NA	1.73E-03	1.15E-04	8.65E-05	d	0.0E+00	NA	3.81E-01	2.54E-02	1.90E-02	d
Sodium	7440-23-5	0.0E+00	NA	1.76E-03	1.17E-04	8.79E-05	d	0.0E+00	NA	3.22E-02	2.14E-03	1.61E-03	d

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [e]							
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm	
Metals									
Aluminum	7429-90-5	1.28E-03	8.55E-05	6.41E-05	d	0.0E+00	0.0E+00	0.0E+00	NA
Antimony	7440-36-0	4.26E-02	2.84E-03	2.13E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Arsenic	7440-38-2	6.60E-02	4.40E-03	3.30E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Barium	7440-39-3	4.67E-02	3.12E-03	2.34E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Beryllium	7440-41-7	2.43E-03	1.62E-04	1.22E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Bismuth	7440-69-9	9.61E-03	6.41E-04	4.80E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Boron	7440-42-8	6.10E-01	4.07E-02	3.05E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Cadmium	7440-43-9	2.56E-02	1.71E-03	1.28E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Calcium	7440-70-2	4.63E-01	3.09E-02	2.31E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Chromium	18540-29-9	1.00E-01	6.69E-03	5.02E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Cobalt	7440-48-4	4.26E-02	2.84E-03	2.13E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Copper	7440-50-8	5.47E-02	3.65E-03	2.74E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Iron	7439-89-6	7.65E-02	5.10E-03	3.82E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Lead	7439-92-1	2.14E-03	1.42E-04	1.07E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Lithium	7439-93-2	6.41E-03	4.27E-04	3.20E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Magnesium	7439-95-4	4.13E-01	2.75E-02	2.07E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Manganese	7439-96-5	2.95E-02	1.97E-03	1.48E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Mercury	7439-97-6	1.92E-03	1.28E-04	9.61E-05	d	2.38E+01	1.06E-01	5.94E-02	k
Mercury - Hg+2	7487-94-7	3.32E-05	2.21E-06	1.66E-06	d	1.70E-07	7.56E-10	4.25E-10	k
Methylmercury	22967-92-6	2.75E-04	1.83E-05	1.37E-05	d	1.09E-03	4.84E-06	2.72E-06	k
Molybdenum	7439-98-7	9.54E-02	6.36E-03	4.77E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Nickel	7440-02-0	2.95E-02	1.97E-03	1.48E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Potassium	7440-09-7	3.40E-01	2.27E-02	1.70E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Rhodium	7440-16-6	3.20E-02	2.13E-03	1.60E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Selenium	7782-49-2	3.73E-01	2.49E-02	1.87E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Silicon	7440-21-3	6.38E-02	4.25E-03	3.19E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Silver	7440-22-4	2.27E-01	1.52E-02	1.14E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Sodium	7440-23-5	1.92E-02	1.28E-03	9.60E-04	d	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Fraction		MW	pH	Henry's Constant			Diffusivity			
		F_v (unitless)	Source	(g/mol)		H-pub [m] (various units)	Source	H-used [m] (atm-m^3/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source
Strontium	7440-24-6	0 or 1	b	87.62	NA	NA	NA	NA	NA	NA	NA	NA
Tantalum	7440-25-7	0 or 1	b	180.948	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	7440-28-0	0 or 1	b	204.38	6.8	NA	NA	NA	5.48E-02	f	6.34E-06	f
Tin	7440-31-5	0 or 1	b	118.71	NA	NA	NA	NA	NA	NA	NA	NA
Tungsten	7440-33-7	0 or 1	b	183.84	NA	NA	NA	NA	NA	NA	NA	NA
Uranium	7440-61-1	0 or 1	b	238.029	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	7440-62-2	0 or 1	b	50.942	NA	NA	NA	NA	NA	NA	NA	NA
Yttrium	7440-65-5	0 or 1	b	88.906	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	7440-66-6	0 or 1	b	65.38	6.8	NA	NA	NA	1.17E-01	f	1.36E-05	f
Zirconium	7440-67-7	0 or 1	b	91.224	NA	NA	NA	NA	NA	NA	NA	NA
Non-Metals and Anions												
Ammonia/Ammonium	7664-41-7	0 or 1	b	NA	NA	1.41E-04	i	3.44E-06	NA	NA	NA	NA
Bromide	24959-67-9	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	57-12-5	0 or 1	b	26.017	NA	NA	NA	NA	5.48E-01	f	2.10E-05	f
Fluoride	16984-48-8	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	14280-30-9	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iodine	7553-56-2	0 or 1	b	126.904	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate	14265-44-2	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	7723-14-0	0 or 1	b	30.974	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total sulfur	63705-05-5	0 or 1	b	32.064	NA	NA	NA	NA	NA	NA	NA	NA
Criteria Pollutants												
Carbon monoxide	630-08-0	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen dioxide	10102-44-0	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ozone	10028-15-6	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Particulate matter	No CAS #	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur dioxide	7446-09-5	0 or 1	b	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Partitioning Coefficients						Plant Uptake Factors			
		Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source	Kd_{sw} (L/kg)	Source	Br_{ag} (µg/g DW plant)/ (µg/g soil) [a]	Source	$Br_{ag(fruit)}$ (µg/g DW plant)/ (µg/g soil)	Source
Strontium	7440-24-6	3.50E+01	c	3.50E+01	c	3.50E+01	c	5.36E-01	d	2.50E-01	c
Tantalum	7440-25-7	6.50E+02	c	6.50E+02	c	6.50E+02	c	3.45E-03	d	2.50E-03	c
Thallium	7440-28-0	7.10E+01	f	7.10E+01	f	7.10E+01	f	8.58E-04	f	4.00E-04	c
Tin	7440-31-5	2.50E+02	c	2.50E+02	c	2.50E+02	c	9.05E-03	d	6.00E-03	c
Tungsten	7440-33-7	1.50E+02	c	1.50E+02	c	1.50E+02	c	1.25E-02	d	1.00E-02	c
Uranium	7440-61-1	4.50E+02	c	4.50E+02	c	4.50E+02	c	4.57E-03	d	4.00E-03	c
Vanadium	7440-62-2	1.00E+03	c	1.00E+03	c	1.00E+03	c	3.32E-03	d	3.00E-03	c
Yttrium	7440-65-5	5.00E+02	c	5.00E+02	c	5.00E+02	c	7.14E-03	d	6.00E-03	c
Zinc	7440-66-6	6.20E+01	f	6.20E+01	f	6.20E+01	f	7.20E-02	g	4.60E-02	f
Zirconium	7440-67-7	3.00E+03	c	3.00E+03	c	3.00E+03	c	1.02E-01	d	5.00E-04	c
Non-Metals and Anions											
Ammonia/Ammonium	7664-41-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	24959-67-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	57-12-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	16984-48-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	14280-30-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iodine	7553-56-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate	14265-44-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	7723-14-0	3.50E+00	c	3.50E+00	c	3.50E+00	c	3.50E+00	d	3.50E+00	c
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total sulfur	63705-05-5	7.50E+00	c	7.50E+00	c	7.50E+00	c	1.50E+00	d	1.50E+00	c
Criteria Pollutants											
Carbon monoxide	630-08-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen dioxide	10102-44-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ozone	10028-15-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Particulate matter	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur dioxide	7446-09-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		$Br_{ag(veg)}$ (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source	Br_{grain} (µg/g DW plant)/ (µg/g soil)	Source	$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source
Strontium	7440-24-6	8.13E-01	d	2.50E+00	c	2.50E-01	c	2.50E-01	c
Tantalum	7440-25-7	4.38E-03	d	1.00E-02	c	2.50E-03	c	2.50E-03	c
Thallium	7440-28-0	1.30E-03	d	4.00E-03	f	4.00E-04	f	4.00E-04	f
Tin	7440-31-5	1.20E-02	d	3.00E-02	c	6.00E-03	c	6.00E-03	c
Tungsten	7440-33-7	1.88E-02	d	4.50E-02	c	1.00E-02	c	1.00E-02	c
Uranium	7440-61-1	5.13E-03	d	8.50E-03	c	4.00E-03	c	4.00E-03	c
Vanadium	7440-62-2	3.63E-03	d	5.50E-03	c	3.00E-03	c	3.00E-03	c
Yttrium	7440-65-5	8.25E-03	d	1.50E-02	c	6.00E-03	c	6.00E-03	c
Zinc	7440-66-6	9.70E-02	f	2.50E-01	f	5.40E-02	f	4.40E-02	f
Zirconium	7440-67-7	8.75E-04	d	2.00E-03	c	5.00E-04	c	5.00E-04	c
Non-Metals and Anions									
Ammonia/Ammonium	7664-41-7	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	24959-67-9	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	57-12-5	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	16984-48-8	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	14280-30-9	NA	NA	NA	NA	NA	NA	NA	NA
Iodine	7553-56-2	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate	14265-44-2	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	7723-14-0	3.50E+00	d	3.50E+00	c	3.50E+00	c	3.50E+00	c
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA
Total sulfur	63705-05-5	1.50E+00	d	1.50E+00	c	1.50E+00	c	1.50E+00	c
Criteria Pollutants									
Carbon monoxide	630-08-0	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen dioxide	10102-44-0	NA	NA	NA	NA	NA	NA	NA	NA
Ozone	10028-15-6	NA	NA	NA	NA	NA	NA	NA	NA
Particulate matter	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur dioxide	7446-09-5	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Plant Uptake Factors				Bioconcentration/Bioaccumulation Factors					
		Bv_{ag} (µg/g DW plant)/ (µg/g air)	Source	Bv_{forage} (µg/g DW plant)/ (µg/g air)	Source	Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source
Strontium	7440-24-6	NA	NA	NA	NA	3.00E-04	c	NA	NA	NA	NA
Tantalum	7440-25-7	NA	NA	NA	NA	6.00E-04	c	NA	NA	NA	NA
Thallium	7440-28-0	NA	NA	NA	NA	4.00E-02	f	NA	NA	NA	NA
Tin	7440-31-5	NA	NA	NA	NA	8.00E-02	c	NA	NA	NA	NA
Tungsten	7440-33-7	NA	NA	NA	NA	4.50E-02	c	NA	NA	NA	NA
Uranium	7440-61-1	NA	NA	NA	NA	2.00E-04	c	1.20E+00	h	9.90E-01	h
Vanadium	7440-62-2	NA	NA	NA	NA	2.50E-03	c	NA	NA	NA	NA
Yttrium	7440-65-5	NA	NA	NA	NA	3.00E-04	c	1.00E-02	h	2.00E-03	h
Zinc	7440-66-6	NA	NA	NA	NA	9.00E-05	f	8.75E-03	f	8.75E-03	f
Zirconium	7440-67-7	NA	NA	NA	NA	5.50E-03	c	NA	NA	NA	NA
Non-Metals and Anions											
Ammonia/Ammonium	7664-41-7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	24959-67-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	57-12-5	NA	NA	NA	NA	3.10E-07	1	NA	NA	NA	NA
Fluoride	16984-48-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	14280-30-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iodine	7553-56-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate	14265-44-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	7723-14-0	NA	NA	NA	NA	5.50E-02	c	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total sulfur	63705-05-5	NA	NA	NA	NA	1.00E-01	c	NA	NA	NA	NA
Criteria Pollutants											
Carbon monoxide	630-08-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen dioxide	10102-44-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ozone	10028-15-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Particulate matter	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur dioxide	7446-09-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors									
		Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source	BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source
Strontium	7440-24-6	1.50E-03	c	NA	NA	3.16E+00	i	NA	NA	NA	NA
Tantalum	7440-25-7	3.00E-04	c	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	7440-28-0	2.00E-03	f	NA	NA	NA	NA	1.00E+00	g	NA	NA
Tin	7440-31-5	1.00E-03	c	NA	NA	NA	NA	NA	NA	NA	NA
Tungsten	7440-33-7	3.00E-04	c	NA	NA	NA	NA	NA	NA	NA	NA
Uranium	7440-61-1	6.00E-04	c	4.00E-02	h	NA	NA	NA	NA	NA	NA
Vanadium	7440-62-2	2.00E-05	c	NA	NA	NA	NA	NA	NA	NA	NA
Yttrium	7440-65-5	2.00E-05	c	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	7440-66-6	3.25E-05	f	1.28E-04	f	NA	NA	2.06E+03	g	NA	NA
Zirconium	7440-67-7	3.00E-05	c	NA	NA	NA	NA	NA	NA	NA	NA
Non-Metals and Anions											
Ammonia/Ammonium	7664-41-7	7.90E-09	l	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	24959-67-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	16887-00-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	57-12-5	9.90E-08	l	NA	NA	NA	NA	6.33E+02	f	NA	NA
Fluoride	16984-48-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	14280-30-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iodine	7553-56-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	14797-55-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite	14797-65-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate	14265-44-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	7723-14-0	1.50E-02	c	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	14808-79-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total sulfur	63705-05-5	1.50E-02	c	NA	NA	NA	NA	NA	NA	NA	NA
Criteria Pollutants											
Carbon monoxide	630-08-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen dioxide	10102-44-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ozone	10028-15-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Particulate matter	No CAS #	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfur dioxide	7446-09-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [e]											
		k_{decay} (year)$^{-1}$	Source	ks_e (year)$^{-1}$			Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Strontium	7440-24-6	0.0E+00	NA	1.75E-03	1.17E-04	8.77E-05	d	0.0E+00	NA	9.16E-02	6.11E-03	4.58E-03	d
Tantalum	7440-25-7	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	4.95E-03	3.30E-04	2.48E-04	d
Thallium	7440-28-0	0.0E+00	NA	1.76E-03	1.17E-04	8.79E-05	d	0.0E+00	NA	4.53E-02	3.02E-03	2.26E-03	d
Tin	7440-31-5	0.0E+00	NA	1.76E-03	1.17E-04	8.80E-05	d	0.0E+00	NA	1.29E-02	8.58E-04	6.44E-04	d
Tungsten	7440-33-7	0.0E+00	NA	1.76E-03	1.17E-04	8.80E-05	d	0.0E+00	NA	2.14E-02	1.43E-03	1.07E-03	d
Uranium	7440-61-1	0.0E+00	NA	1.76E-03	1.17E-04	8.80E-05	d	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	d
Vanadium	7440-62-2	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	3.22E-03	2.15E-04	1.61E-04	d
Yttrium	7440-65-5	0.0E+00	NA	1.76E-03	1.17E-04	8.80E-05	d	0.0E+00	NA	6.44E-03	4.29E-04	3.22E-04	d
Zinc	7440-66-6	0.0E+00	NA	1.76E-03	1.17E-04	8.79E-05	d	0.0E+00	NA	5.18E-02	3.45E-03	2.59E-03	d
Zirconium	7440-67-7	0.0E+00	NA	1.76E-03	1.17E-04	8.81E-05	d	0.0E+00	NA	1.07E-03	7.16E-05	5.37E-05	d
Non-Metals and Anions													
Ammonia/Ammonium	7664-41-7	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Bromide	24959-67-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Chloride	16887-00-6	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Cyanide	57-12-5	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Fluoride	16984-48-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Hydroxide	14280-30-9	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Iodine	7553-56-2	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Nitrate	14797-55-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Nitrite	14797-65-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Phosphate	14265-44-2	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Phosphorus	7723-14-0	0.0E+00	NA	1.69E-03	1.12E-04	8.44E-05	d	0.0E+00	NA	8.81E-01	5.88E-02	4.41E-02	d
Sulfate	14808-79-8	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Total sulfur	63705-05-5	0.0E+00	NA	1.73E-03	1.15E-04	8.63E-05	d	0.0E+00	NA	4.21E-01	2.80E-02	2.10E-02	d
Criteria Pollutants													
Carbon monoxide	630-08-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Nitrogen dioxide	10102-44-0	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Ozone	10028-15-6	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Particulate matter	No CAS #	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Sulfur dioxide	7446-09-5	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

Chemicals of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [e]							
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm	
Strontium	7440-24-6	5.47E-02	3.65E-03	2.74E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Tantalum	7440-25-7	2.96E-03	1.97E-04	1.48E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Thallium	7440-28-0	2.70E-02	1.80E-03	1.35E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Tin	7440-31-5	7.69E-03	5.13E-04	3.84E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Tungsten	7440-33-7	1.28E-02	8.54E-04	6.40E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Uranium	7440-61-1	4.27E-03	2.85E-04	2.14E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Vanadium	7440-62-2	1.92E-03	1.28E-04	9.61E-05	d	0.0E+00	0.0E+00	0.0E+00	NA
Yttrium	7440-65-5	3.84E-03	2.56E-04	1.92E-04	d	0.0E+00	0.0E+00	0.0E+00	NA
Zinc	7440-66-6	3.09E-02	2.06E-03	1.55E-03	d	0.0E+00	0.0E+00	0.0E+00	NA
Zirconium	7440-67-7	6.41E-04	4.27E-05	3.20E-05	d	0.0E+00	0.0E+00	0.0E+00	NA
Non-Metals and Anions									
Ammonia/Ammonium	7664-41-7	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Bromide	24959-67-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Chloride	16887-00-6	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Cyanide	57-12-5	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Fluoride	16984-48-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Hydroxide	14280-30-9	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Iodine	7553-56-2	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Nitrate	14797-55-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Nitrite	14797-65-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Phosphate	14265-44-2	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Phosphorus	7723-14-0	5.26E-01	3.51E-02	2.63E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Sulfate	14808-79-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Total sulfur	63705-05-5	2.51E-01	1.68E-02	1.26E-02	d	0.0E+00	0.0E+00	0.0E+00	NA
Criteria Pollutants									
Carbon monoxide	630-08-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Nitrogen dioxide	10102-44-0	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Ozone	10028-15-6	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Particulate matter	No CAS #	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Sulfur dioxide	7446-09-5	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-2 Chemical-Specific Parameters for Inorganic COPCs

CAS = Chemical Abstracts Service.
COPC = Chemical of Potential Concern.
DW = dry weight.
FW = fresh weight.

Notes/Sources

a See Section 5 of the *Human Health Risk Assessment Protocol* (HHRAP) (EPA 1998), Br_{ag} = weighted average of $Br_{ag(fruit)}$ and $Br_{ag(veg)}$.
b Value for Fv is based on phase type, which is shown in the emissions report (Attachment 1 of this work plan).
c Baes and others 1984.
d Calculated per Section 5 and/or Appendix A-3 of the HHRAP (EPA 1998).
e Total soil loss (ks) is the sum of all appropriate soil loss mechanisms.
f Section 5 and/or Appendix A-3 of the HHRAP (EPA 1998).
g CCN 063817.
h Ng and others 1982.
i US Environmental Protection Agency (EPA) EPI software; see http://www.epa.gov/oppt/exposure/docs/episuitedl.htm. Accessed in November 2002.
j Appendix A-3 of the HHRAP (EPA 1998) using value from mercuric chloride.
k Calculated per Errata to HHRAP (EPA 1999b).
l Risk Assessment Information System (RAIS); see http://risk.lsd.ornl.gov/rap_hp.shtml. Accessed in November 2002.
m H-pub = published Henry's Law Constant with various units; H-used = actual used Henry's Law Constant in atm-m^3/mol.
NA Not Applicable.

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Fraction		MW	Diffusivity				Partitioning Coefficients					
		F_v (unitless)	Source	(g/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source	Kd_{sw} (L/kg)	Source
Actinium-227	14952-40-0	0 or 1	b	227	NA	NA	NA	NA	1.50E+03	c	1.50E+03	c	1.50E+03	c
Americium-241	14596-10-2	0 or 1	b	241	NA	NA	NA	NA	7.00E+02	c	7.00E+02	c	7.00E+02	c
Americium-243	14993-75-0	0 or 1	b	243	NA	NA	NA	NA	7.00E+02	c	7.00E+02	c	7.00E+02	c
Antimony-125	14234-35-6	0 or 1	b	125	NA	NA	NA	NA	4.50E+01	c	4.50E+01	c	4.50E+01	c
Barium-137m	13981-97-0	0 or 1	b	137	NA	NA	NA	NA	6.00E+01	c	6.00E+01	c	6.00E+01	c
Cadmium-113m	14336-66-4	0 or 1	b	113	NA	NA	NA	NA	6.50E+00	c	6.50E+00	c	6.50E+00	c
Carbon-14	14762-75-5	0 or 1	b	14	NA	NA	NA	NA	6.70E+00	i	6.70E+00	i	6.70E+00	i
Cesium-134	13967-70-9	0 or 1	b	134	NA	NA	NA	NA	1.00E+03	c	1.00E+03	c	1.00E+03	c
Cesium-137	10045-97-3	0 or 1	b	137	NA	NA	NA	NA	1.00E+03	c	1.00E+03	c	1.00E+03	c
Cobalt-60	10198-40-0	0 or 1	b	60	NA	NA	NA	NA	4.50E+01	c	4.50E+01	c	4.50E+01	c
Curium-242	15510-73-3	0 or 1	b	242	NA	NA	NA	NA	2.00E+03	c	2.00E+03	c	2.00E+03	c
Curium-243	15757-87-6	0 or 1	b	243	NA	NA	NA	NA	2.00E+03	c	2.00E+03	c	2.00E+03	c
Curium-244	13981-15-2	0 or 1	b	244	NA	NA	NA	NA	2.00E+03	c	2.00E+03	c	2.00E+03	c
Europium-152	14683-23-9	0 or 1	b	152	NA	NA	NA	NA	6.50E+02	c	6.50E+02	c	6.50E+02	c
Europium-154	15585-10-1	0 or 1	b	154	NA	NA	NA	NA	6.50E+02	c	6.50E+02	c	6.50E+02	c
Europium-155	14391-16-3	0 or 1	b	155	NA	NA	NA	NA	6.50E+02	c	6.50E+02	c	6.50E+02	c
Iodine-129	15046-84-1	0 or 1	b	129	NA	NA	NA	NA	6.00E+01	c	6.00E+01	c	6.00E+01	c
Neptunium-237	13994-20-2	0 or 1	b	237	NA	NA	NA	NA	3.00E+01	c	3.00E+01	c	3.00E+01	c
Nickel-59	14336-70-0	0 or 1	b	59	NA	NA	NA	NA	1.50E+02	c	1.50E+02	c	1.50E+02	c
Nickel-63	13981-37-8	0 or 1	b	63	NA	NA	NA	NA	1.50E+02	c	1.50E+02	c	1.50E+02	c
Niobium-93m	7440-03-1	0 or 1	b	93	NA	NA	NA	NA	3.50E+02	c	3.50E+02	c	3.50E+02	c
Plutonium-238	13981-16-3	0 or 1	b	238	NA	NA	NA	NA	4.50E+03	c	4.50E+03	c	4.50E+03	c
Plutonium-239	15117-48-3	0 or 1	b	239	NA	NA	NA	NA	4.50E+03	c	4.50E+03	c	4.50E+03	c
Plutonium-240	14119-33-6	0 or 1	b	240	NA	NA	NA	NA	4.50E+03	c	4.50E+03	c	4.50E+03	c
Plutonium-241	14119-32-5	0 or 1	b	241	NA	NA	NA	NA	4.50E+03	c	4.50E+03	c	4.50E+03	c
Plutonium-242	13982-10-0	0 or 1	b	242	NA	NA	NA	NA	4.50E+03	c	4.50E+03	c	4.50E+03	c
Protactinium-231	14331-85-2	0 or 1	b	231	NA	NA	NA	NA	2.50E+03	c	2.50E+03	c	2.50E+03	c
Radium-226	13982-63-3	0 or 1	b	226	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Radium-228	15262-20-1	0 or 1	b	228	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Ruthenium-106	13967-48-1	0 or 1	b	106	NA	NA	NA	NA	3.50E+02	c	3.50E+02	c	3.50E+02	c
Samarium-151	15715-94-3	0 or 1	b	151	NA	NA	NA	NA	6.50E+02	c	6.50E+02	c	6.50E+02	c

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		Br_{ag} (µg/g DW plant)/ (µg/g soil) [a]	Source	$Br_{ag(fruit)}$ (µg/g DW plant)/ (µg/g soil)	Source	$Br_{ag(veg)}$ (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source
Actinium-227	14952-40-0	7.50E-04	e	3.50E-04	c	1.14E-03	e	3.50E-03	c
Americium-241	14596-10-2	9.17E-04	e	2.50E-04	c	1.56E-03	e	5.50E-03	c
Americium-243	14993-75-0	9.17E-04	e	2.50E-04	c	1.56E-03	e	5.50E-03	c
Antimony-125	14234-35-6	5.16E-02	e	3.00E-02	c	7.25E-02	e	2.00E-01	c
Barium-137m	13981-97-0	3.22E-02	e	1.50E-02	c	4.88E-02	e	1.50E-01	c
Cadmium-113m	14336-66-4	2.01E-01	e	1.50E-01	c	2.50E-01	e	5.50E-01	c
Carbon-14	14762-75-5	NA	NA	NA	NA	NA	NA	NA	NA
Cesium-134	13967-70-9	3.64E-02	e	3.00E-02	c	4.25E-02	e	8.00E-02	c
Cesium-137	10045-97-3	3.64E-02	e	3.00E-02	c	4.25E-02	e	8.00E-02	c
Cobalt-60	10198-40-0	8.65E-03	e	7.00E-03	c	1.03E-02	e	2.00E-02	c
Curium-242	15510-73-3	1.21E-04	e	1.50E-05	c	2.24E-04	e	8.50E-04	c
Curium-243	15757-87-6	1.21E-04	e	1.50E-05	c	2.24E-04	e	8.50E-04	c
Curium-244	13981-15-2	1.21E-04	e	1.50E-05	c	2.24E-04	e	8.50E-04	c
Europium-152	14683-23-9	4.76E-03	e	4.00E-03	c	5.50E-03	e	1.00E-02	c
Europium-154	15585-10-1	4.76E-03	e	4.00E-03	c	5.50E-03	e	1.00E-02	c
Europium-155	14391-16-3	4.76E-03	e	4.00E-03	c	5.50E-03	e	1.00E-02	c
Iodine-129	15046-84-1	6.27E-02	e	5.00E-02	c	7.50E-02	e	1.50E-01	c
Neptunium-237	13994-20-2	2.14E-02	e	1.00E-02	c	3.25E-02	e	1.00E-01	c
Nickel-59	14336-70-0	6.00E-02	e	6.00E-02	c	6.00E-02	e	6.00E-02	c
Nickel-63	13981-37-8	6.00E-02	e	6.00E-02	c	6.00E-02	e	6.00E-02	c
Niobium-93m	7440-03-1	6.91E-03	e	5.00E-03	c	8.75E-03	e	2.00E-02	c
Plutonium-238	13981-16-3	9.65E-05	e	4.50E-05	c	1.46E-04	e	4.50E-04	c
Plutonium-239	15117-48-3	9.65E-05	e	4.50E-05	c	1.46E-04	e	4.50E-04	c
Plutonium-240	14119-33-6	9.65E-05	e	4.50E-05	c	1.46E-04	e	4.50E-04	c
Plutonium-241	14119-32-5	9.65E-05	e	4.50E-05	c	1.46E-04	e	4.50E-04	c
Plutonium-242	13982-10-0	9.65E-05	e	4.50E-05	c	1.46E-04	e	4.50E-04	c
Protactinium-231	14331-85-2	5.36E-04	e	2.50E-04	c	8.13E-04	e	2.50E-03	c
Radium-226	13982-63-3	3.22E-03	e	1.50E-03	c	4.88E-03	e	1.50E-02	c
Radium-228	15262-20-1	3.22E-03	e	1.50E-03	c	4.88E-03	e	1.50E-02	c
Ruthenium-106	13967-48-1	2.70E-02	e	2.00E-02	c	3.38E-02	e	7.50E-02	c
Samarium-151	15715-94-3	4.76E-03	e	4.00E-03	c	5.50E-03	e	1.00E-02	c

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Plant Uptake Factors				Bioconcentration/Bioaccumulation Factors					
		Br_{grain} (µg/g DW plant)/ (µg/g soil)	Source	$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source
Actinium-227	14952-40-0	3.50E-04	c	3.50E-04	c	2.50E-05	c	NA	NA	NA	NA
Americium-241	14596-10-2	2.50E-04	c	2.50E-04	c	3.50E-06	c	NA	NA	NA	NA
Americium-243	14993-75-0	2.50E-04	c	2.50E-04	c	3.50E-06	c	NA	NA	NA	NA
Antimony-125	14234-35-6	3.00E-02	c	3.00E-02	c	1.00E-03	c	NA	NA	NA	NA
Barium-137m	13981-97-0	1.50E-02	c	1.50E-02	c	1.50E-04	c	NA	NA	NA	NA
Cadmium-113m	14336-66-4	1.50E-01	c	1.50E-01	c	5.50E-04	c	NA	NA	NA	NA
Carbon-14	14762-75-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cesium-134	13967-70-9	3.00E-02	c	3.00E-02	c	2.00E-02	c	NA	NA	NA	NA
Cesium-137	10045-97-3	3.00E-02	c	3.00E-02	c	2.00E-02	c	NA	NA	NA	NA
Cobalt-60	10198-40-0	7.00E-03	c	7.00E-03	c	2.00E-02	c	NA	NA	NA	NA
Curium-242	15510-73-3	1.50E-05	c	1.50E-05	c	3.50E-06	c	NA	NA	NA	NA
Curium-243	15757-87-6	1.50E-05	c	1.50E-05	c	3.50E-06	c	NA	NA	NA	NA
Curium-244	13981-15-2	1.50E-05	c	1.50E-05	c	3.50E-06	c	NA	NA	NA	NA
Europium-152	14683-23-9	4.00E-03	c	4.00E-03	c	5.00E-03	c	NA	NA	NA	NA
Europium-154	15585-10-1	4.00E-03	c	4.00E-03	c	5.00E-03	c	NA	NA	NA	NA
Europium-155	14391-16-3	4.00E-03	c	4.00E-03	c	5.00E-03	c	NA	NA	NA	NA
Iodine-129	15046-84-1	5.00E-02	c	5.00E-02	c	7.00E-03	c	NA	NA	NA	NA
Neptunium-237	13994-20-2	1.00E-02	c	1.00E-02	c	5.50E-05	c	NA	NA	NA	NA
Nickel-59	14336-70-0	6.00E-02	c	6.00E-02	c	6.00E-03	c	NA	NA	NA	NA
Nickel-63	13981-37-8	6.00E-02	c	6.00E-02	c	6.00E-03	c	NA	NA	NA	NA
Niobium-93m	7440-03-1	5.00E-03	c	5.00E-03	c	2.50E-01	c	NA	NA	NA	NA
Plutonium-238	13981-16-3	4.50E-05	c	4.50E-05	c	5.00E-07	c	NA	NA	NA	NA
Plutonium-239	15117-48-3	4.50E-05	c	4.50E-05	c	5.00E-07	c	NA	NA	NA	NA
Plutonium-240	14119-33-6	4.50E-05	c	4.50E-05	c	5.00E-07	c	NA	NA	NA	NA
Plutonium-241	14119-32-5	4.50E-05	c	4.50E-05	c	5.00E-07	c	NA	NA	NA	NA
Plutonium-242	13982-10-0	4.50E-05	c	4.50E-05	c	5.00E-07	c	NA	NA	NA	NA
Protactinium-231	14331-85-2	2.50E-04	c	2.50E-04	c	1.00E-05	c	NA	NA	NA	NA
Radium-226	13982-63-3	1.50E-03	c	1.50E-03	c	2.50E-04	c	NA	NA	NA	NA
Radium-228	15262-20-1	1.50E-03	c	1.50E-03	c	2.50E-04	c	NA	NA	NA	NA
Ruthenium-106	13967-48-1	2.00E-02	c	2.00E-02	c	2.00E-03	c	NA	NA	NA	NA
Samarium-151	15715-94-3	4.00E-03	c	4.00E-03	c	5.00E-03	c	NA	NA	NA	NA

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors										Half-life	
		Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source	BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Actinium-227	14952-40-0	2.00E-05	c	NA	NA	2.50E+01	f	NA	NA	NA	NA	7.96E+03	d
Americium-241	14596-10-2	4.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	1.58E+05	d
Americium-243	14993-75-0	4.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	2.69E+06	d
Antimony-125	14234-35-6	1.00E-04	c	NA	NA	1.00E-02	f	NA	NA	NA	NA	1.01E+03	d
Barium-137m	13981-97-0	3.50E-04	c	NA	NA	4.00E+00	f	NA	NA	NA	NA	1.77E-03	d
Cadmium-113m	14336-66-4	1.00E-03	c	NA	NA	2.00E+02	f	NA	NA	NA	NA	4.96E+03	d
Carbon-14	14762-75-5	NA	NA	NA	NA	NA	NA	4.60E+03	j	NA	NA	2.09E+06	d
Cesium-134	13967-70-9	7.00E-03	c	NA	NA	2.00E+03	f	NA	NA	NA	NA	7.52E+02	d
Cesium-137	10045-97-3	7.00E-03	c	NA	NA	2.00E+03	f	NA	NA	NA	NA	1.10E+04	d
Cobalt-60	10198-40-0	2.00E-03	c	NA	NA	3.00E+02	f	NA	NA	NA	NA	1.92E+03	d
Curium-242	15510-73-3	2.00E-03	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	1.63E+02	d
Curium-243	15757-87-6	2.00E-03	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	1.04E+04	d
Curium-244	13981-15-2	2.00E-03	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	6.61E+03	d
Europium-152	14683-23-9	2.00E-05	c	NA	NA	5.00E+01	f	NA	NA	NA	NA	4.85E+03	d
Europium-154	15585-10-1	2.00E-05	c	NA	NA	5.00E+01	f	NA	NA	NA	NA	3.21E+03	d
Europium-155	14391-16-3	2.00E-05	c	NA	NA	5.00E+01	f	NA	NA	NA	NA	1.81E+03	d
Iodine-129	15046-84-1	1.00E-02	c	NA	NA	4.00E+01	f	NA	NA	NA	NA	5.73E+09	d
Neptunium-237	13994-20-2	5.00E-06	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	7.81E+08	d
Nickel-59	14336-70-0	1.00E-03	c	NA	NA	1.00E+02	f	NA	NA	NA	NA	2.74E+07	d
Nickel-63	13981-37-8	1.00E-03	c	NA	NA	1.00E+02	f	NA	NA	NA	NA	3.51E+04	k
Niobium-93m	7440-03-1	2.00E-02	c	NA	NA	3.00E+02	f	NA	NA	NA	NA	4.97E+03	k
Plutonium-238	13981-16-3	1.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	3.20E+04	d
Plutonium-239	15117-48-3	1.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	8.80E+06	d
Plutonium-240	14119-33-6	1.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	2.39E+06	d
Plutonium-241	14119-32-5	1.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	5.26E+03	d
Plutonium-242	13982-10-0	1.00E-07	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	1.37E+08	d
Protactinium-231	14331-85-2	5.00E-06	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	1.20E+07	k
Radium-226	13982-63-3	4.50E-04	c	NA	NA	5.00E+01	f	NA	NA	NA	NA	5.84E+05	d
Radium-228	15262-20-1	4.50E-04	c	NA	NA	5.00E+01	f	NA	NA	NA	NA	2.10E+03	d
Ruthenium-106	13967-48-1	6.00E-07	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	3.68E+02	d
Samarium-151	15715-94-3	2.00E-05	c	NA	NA	NA	NA	2.50E+01	i	NA	NA	3.29E+04	d

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	k_{decay} (year)$^{-1}$	Source	Soil Loss Mechanisms [h] ks_e (year)$^{-1}$ 1 cm	15 cm	20 cm	Source	ks_g (year)$^{-1}$	Source	ks_l (year)$^{-1}$ 1 cm	15 cm	20 cm	Source
Actinium-227	14952-40-0	3.18E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	2.15E-03	1.43E-04	1.07E-04	e
Americium-241	14596-10-2	1.60E-03	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.60E-03	3.07E-04	2.30E-04	e
Americium-243	14993-75-0	9.39E-05	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.60E-03	3.07E-04	2.30E-04	e
Antimony-125	14234-35-6	2.50E-01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.13E-02	4.75E-03	3.57E-03	e
Barium-137m	13981-97-0	1.43E+05	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	5.35E-02	3.57E-03	2.68E-03	e
Cadmium-113m	14336-66-4	5.10E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.84E-01	3.23E-02	2.42E-02	e
Carbon-14	14762-75-5	1.21E-04	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.70E-01	3.13E-02	2.35E-02	e
Cesium-134	13967-70-9	3.36E-01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	3.22E-03	2.15E-04	1.61E-04	e
Cesium-137	10045-97-3	2.31E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	3.22E-03	2.15E-04	1.61E-04	e
Cobalt-60	10198-40-0	1.32E-01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.13E-02	4.75E-03	3.57E-03	e
Curium-242	15510-73-3	1.55E+00	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.61E-03	1.07E-04	8.05E-05	e
Curium-243	15757-87-6	2.43E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.61E-03	1.07E-04	8.05E-05	e
Curium-244	13981-15-2	3.83E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.61E-03	1.07E-04	8.05E-05	e
Europium-152	14683-23-9	5.21E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.95E-03	3.30E-04	2.48E-04	e
Europium-154	15585-10-1	7.88E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.95E-03	3.30E-04	2.48E-04	e
Europium-155	14391-16-3	1.40E-01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.95E-03	3.30E-04	2.48E-04	e
Iodine-129	15046-84-1	4.41E-08	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	5.35E-02	3.57E-03	2.68E-03	e
Neptunium-237	13994-20-2	3.24E-07	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.07E-01	7.12E-03	5.34E-03	e
Nickel-59	14336-70-0	9.24E-06	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	2.14E-02	1.43E-03	1.07E-03	e
Nickel-63	13981-37-8	7.21E-03	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	2.14E-02	1.43E-03	1.07E-03	e
Niobium-93m	7440-03-1	5.09E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	9.20E-03	6.13E-04	4.60E-04	e
Plutonium-238	13981-16-3	7.90E-03	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.16E-04	4.77E-05	3.58E-05	e
Plutonium-239	15117-48-3	2.88E-05	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.16E-04	4.77E-05	3.58E-05	e
Plutonium-240	14119-33-6	1.06E-04	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.16E-04	4.77E-05	3.58E-05	e
Plutonium-241	14119-32-5	4.81E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.16E-04	4.77E-05	3.58E-05	e
Plutonium-242	13982-10-0	1.84E-06	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.16E-04	4.77E-05	3.58E-05	e
Protactinium-231	14331-85-2	2.11E-05	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.29E-03	8.59E-05	6.44E-05	e
Radium-226	13982-63-3	4.33E-04	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Radium-228	15262-20-1	1.21E-01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Ruthenium-106	13967-48-1	6.87E-01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	9.20E-03	6.13E-04	4.60E-04	e
Samarium-151	15715-94-3	7.70E-03	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	4.95E-03	3.30E-04	2.48E-04	e

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [h]							
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm	
Actinium-227	14952-40-0	1.28E-03	8.55E-05	6.41E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Americium-241	14596-10-2	2.75E-03	1.83E-04	1.37E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Americium-243	14993-75-0	2.75E-03	1.83E-04	1.37E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Antimony-125	14234-35-6	4.26E-02	2.84E-03	2.13E-03	e	0.0E+00	0.0E+00	0.0E+00	NA
Barium-137m	13981-97-0	3.20E-02	2.13E-03	1.60E-03	e	0.0E+00	0.0E+00	0.0E+00	NA
Cadmium-113m	14336-66-4	2.89E-01	1.93E-02	1.45E-02	e	0.0E+00	0.0E+00	0.0E+00	NA
Carbon-14	14762-75-5	2.81E-01	1.87E-02	1.40E-02	e	0.0E+00	0.0E+00	0.0E+00	NA
Cesium-134	13967-70-9	1.92E-03	1.28E-04	9.61E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Cesium-137	10045-97-3	1.92E-03	1.28E-04	9.61E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Cobalt-60	10198-40-0	4.26E-02	2.84E-03	2.13E-03	e	0.0E+00	0.0E+00	0.0E+00	NA
Curium-242	15510-73-3	9.61E-04	6.41E-05	4.81E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Curium-243	15757-87-6	9.61E-04	6.41E-05	4.81E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Curium-244	13981-15-2	9.61E-04	6.41E-05	4.81E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Europium-152	14683-23-9	2.96E-03	1.97E-04	1.48E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Europium-154	15585-10-1	2.96E-03	1.97E-04	1.48E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Europium-155	14391-16-3	2.96E-03	1.97E-04	1.48E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Iodine-129	15046-84-1	3.20E-02	2.13E-03	1.60E-03	e	0.0E+00	0.0E+00	0.0E+00	NA
Neptunium-237	13994-20-2	6.38E-02	4.25E-03	3.19E-03	e	0.0E+00	0.0E+00	0.0E+00	NA
Nickel-59	14336-70-0	1.28E-02	8.54E-04	6.40E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Nickel-63	13981-37-8	1.28E-02	8.54E-04	6.40E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Niobium-93m	7440-03-1	5.49E-03	3.66E-04	2.75E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Plutonium-238	13981-16-3	4.27E-04	2.85E-05	2.14E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Plutonium-239	15117-48-3	4.27E-04	2.85E-05	2.14E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Plutonium-240	14119-33-6	4.27E-04	2.85E-05	2.14E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Plutonium-241	14119-32-5	4.27E-04	2.85E-05	2.14E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Plutonium-242	13982-10-0	4.27E-04	2.85E-05	2.14E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Protactinium-231	14331-85-2	7.69E-04	5.13E-05	3.85E-05	e	0.0E+00	0.0E+00	0.0E+00	NA
Radium-226	13982-63-3	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Radium-228	15262-20-1	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Ruthenium-106	13967-48-1	5.49E-03	3.66E-04	2.75E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Samarium-151	15715-94-3	2.96E-03	1.97E-04	1.48E-04	e	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Fraction		MW	Diffusivity				Partitioning Coefficients					
		F_v (unitless)	Source	(g/mol)	D_a (cm^2/s)	Source	D_w (cm^2/s)	Source	Kd_{bs} (L/kg)	Source	Kd_s (mL/g)	Source	Kd_{sw} (L/kg)	Source
Selenium-79	15758-45-9	0 or 1	b	79	NA	NA	NA	NA	3.00E+02	c	3.00E+02	c	3.00E+02	c
Strontium-90	10098-97-2	0 or 1	b	90	NA	NA	NA	NA	3.50E+01	c	3.50E+01	c	3.50E+01	c
Technetium-99	14133-76-7	0 or 1	b	99	NA	NA	NA	NA	1.50E+00	c	1.50E+00	c	1.50E+00	c
Thorium-229	15594-54-4	0 or 1	b	229	NA	NA	NA	NA	1.50E+05	c	1.50E+05	c	1.50E+05	c
Thorium-232	7440-29-1	0 or 1	b	232	NA	NA	NA	NA	1.50E+05	c	1.50E+05	c	1.50E+05	c
Tin-126	15832-50-5	0 or 1	b	126	NA	NA	NA	NA	2.50E+02	c	2.50E+02	c	2.50E+02	c
Tritium	10028-17-8	0 or 1	b	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Uranium-232	14158-29-3	0 or 1	b	232	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Uranium-233	13968-55-3	0 or 1	b	233	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Uranium-234	13966-29-5	0 or 1	b	234	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Uranium-235	15117-96-1	0 or 1	b	235	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Uranium-236	13982-70-2	0 or 1	b	236	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Uranium-238	7440-61-1	0 or 1	b	238	NA	NA	NA	NA	4.50E+02	c	4.50E+02	c	4.50E+02	c
Yttrium-90	10098-91-6	0 or 1	b	90	NA	NA	NA	NA	5.00E+02	c	5.00E+02	c	5.00E+02	c
Zirconium-93	15751-77-6	0 or 1	b	93	NA	NA	NA	NA	3.00E+03	c	3.00E+03	c	3.00E+03	c

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Plant Uptake Factors							
		Br_{ag} (µg/g DW plant)/ (µg/g soil) [a]	Source	$Br_{ag(fruit)}$ (µg/g DW plant)/ (µg/g soil)	Source	$Br_{ag(veg)}$ (µg/g DW plant)/ (µg/g soil)	Source	Br_{forage} (µg/g DW plant)/ (µg/g soil)	Source
Selenium-79	15758-45-9	2.50E-02	e	2.50E-02	c	2.50E-02	e	2.50E-02	c
Strontium-90	10098-97-2	5.36E-01	e	2.50E-01	c	8.13E-01	e	2.50E+00	c
Technetium-99	14133-76-7	2.52E+00	e	1.50E+00	c	3.50E+00	e	9.50E+00	c
Thorium-229	15594-54-4	1.82E-04	e	8.50E-05	c	2.76E-04	e	8.50E-04	c
Thorium-232	7440-29-1	1.82E-04	e	8.50E-05	c	2.76E-04	e	8.50E-04	c
Tin-126	15832-50-5	9.05E-03	e	6.00E-03	c	1.20E-02	e	3.00E-02	c
Tritium	10028-17-8	NA	NA	NA	NA	NA	NA	NA	NA
Uranium-232	14158-29-3	4.57E-03	e	4.00E-03	c	5.13E-03	e	8.50E-03	c
Uranium-233	13968-55-3	4.57E-03	e	4.00E-03	c	5.13E-03	e	8.50E-03	c
Uranium-234	13966-29-5	4.57E-03	e	4.00E-03	c	5.13E-03	e	8.50E-03	c
Uranium-235	15117-96-1	4.57E-03	e	4.00E-03	c	5.13E-03	e	8.50E-03	c
Uranium-236	13982-70-2	4.57E-03	e	4.00E-03	c	5.13E-03	e	8.50E-03	c
Uranium-238	7440-61-1	4.57E-03	e	4.00E-03	c	5.13E-03	e	8.50E-03	c
Yttrium-90	10098-91-6	7.14E-03	e	6.00E-03	c	8.25E-03	e	1.50E-02	c
Zirconium-93	15751-77-6	6.91E-04	e	5.00E-04	c	8.75E-04	e	2.00E-03	c

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Plant Uptake Factors				Bioconcentration/Bioaccumulation Factors					
		Br_{grain} (µg/g DW plant)/ (µg/g soil)	Source	$Br_{rootveg}$ (µg/g DW plant)/ (µg/g soil)	Source	Ba_{beef} (day/kg FW)	Source	$Ba_{chicken}$ (day/kg FW)	Source	Ba_{egg} (day/kg FW)	Source
Selenium-79	15758-45-9	2.50E-02	c	2.50E-02	c	1.50E-02	c	NA	NA	NA	NA
Strontium-90	10098-97-2	2.50E-01	c	2.50E-01	c	3.00E-04	c	NA	NA	NA	NA
Technetium-99	14133-76-7	1.50E+00	c	1.50E+00	c	8.50E-03	c	NA	NA	NA	NA
Thorium-229	15594-54-4	8.50E-05	c	8.50E-05	c	6.00E-06	c	NA	NA	NA	NA
Thorium-232	7440-29-1	8.50E-05	c	8.50E-05	c	6.00E-06	c	NA	NA	NA	NA
Tin-126	15832-50-5	6.00E-03	c	6.00E-03	c	8.00E-02	c	NA	NA	NA	NA
Tritium	10028-17-8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Uranium-232	14158-29-3	4.00E-03	c	4.00E-03	c	2.00E-04	c	NA	NA	NA	NA
Uranium-233	13968-55-3	4.00E-03	c	4.00E-03	c	2.00E-04	c	NA	NA	NA	NA
Uranium-234	13966-29-5	4.00E-03	c	4.00E-03	c	2.00E-04	c	NA	NA	NA	NA
Uranium-235	15117-96-1	4.00E-03	c	4.00E-03	c	2.00E-04	c	NA	NA	NA	NA
Uranium-236	13982-70-2	4.00E-03	c	4.00E-03	c	2.00E-04	c	NA	NA	NA	NA
Uranium-238	7440-61-1	4.00E-03	c	4.00E-03	c	2.00E-04	c	NA	NA	NA	NA
Yttrium-90	10098-91-6	6.00E-03	c	6.00E-03	c	3.00E-04	c	NA	NA	NA	NA
Zirconium-93	15751-77-6	5.00E-04	c	5.00E-04	c	5.50E-03	c	NA	NA	NA	NA

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Bioconcentration/Bioaccumulation Factors										Half-life	
		Ba_{milk} (day/kg FW)	Source	Ba_{pork} (day/kg FW)	Source	BAF_{fish} (L/kg FW)	Source	BCF_{fish} (L/kg FW)	Source	$BSAF_{fish}$ (unitless)	Source	$t_{1/2}$ (days)	Source
Selenium-79	15758-45-9	4.00E-03	c	NA	NA	5.70E+03	f	NA	NA	NA	NA	2.37E+07	d
Strontium-90	10098-97-2	1.50E-03	c	NA	NA	6.00E+01	f	NA	NA	NA	NA	1.06E+04	d
Technetium-99	14133-76-7	1.00E-02	c	NA	NA	2.00E+01	f	NA	NA	NA	NA	7.77E+07	d
Thorium-229	15594-54-4	5.00E-06	c	NA	NA	1.00E+02	f	NA	NA	NA	NA	2.68E+06	d
Thorium-232	7440-29-1	5.00E-06	c	NA	NA	1.00E+02	f	NA	NA	NA	NA	5.15E+12	d
Tin-126	15832-50-5	1.00E-03	c	NA	NA	3.00E+03	f	NA	NA	NA	NA	3.65E+07	d
Tritium	10028-17-8	1.50E-02	f	NA	NA	1.00E+00	f	NA	NA	NA	NA	4.53E+03	d
Uranium-232	14158-29-3	6.00E-04	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	2.63E+04	d
Uranium-233	13968-55-3	6.00E-04	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	5.80E+07	d
Uranium-234	13966-29-5	6.00E-04	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	8.94E+07	d
Uranium-235	15117-96-1	6.00E-04	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	2.57E+11	d
Uranium-236	13982-70-2	6.00E-04	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	8.54E+09	d
Uranium-238	7440-61-1	6.00E-04	c	NA	NA	1.00E+01	f	NA	NA	NA	NA	1.63E+12	d
Yttrium-90	10098-91-6	2.00E-05	c	NA	NA	3.00E+01	f	NA	NA	NA	NA	2.67E+00	d
Zirconium-93	15751-77-6	3.00E-05	c	NA	NA	3.00E+02	f	NA	NA	NA	NA	5.58E+08	d

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [h]											
		k_{decay} $(year)^{-1}$	Source	ks_e $(year)^{-1}$			Source	ks_g $(year)^{-1}$	Source	ks_l $(year)^{-1}$			Source
				1 cm	15 cm	20 cm				1 cm	15 cm	20 cm	
Selenium-79	15758-45-9	1.07E-05	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.07E-02	7.15E-04	5.36E-04	e
Strontium-90	10098-97-2	2.38E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	9.16E-02	6.11E-03	4.58E-03	e
Technetium-99	14133-76-7	3.25E-06	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.95E+00	1.30E-01	9.74E-02	e
Thorium-229	15594-54-4	9.44E-05	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	2.15E-05	1.43E-06	1.07E-06	e
Thorium-232	7440-29-1	4.92E-11	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	2.15E-05	1.43E-06	1.07E-06	e
Tin-126	15832-50-5	6.93E-06	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.29E-02	8.58E-04	6.44E-04	e
Tritium	10028-17-8	5.59E-02	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-232	14158-29-3	9.63E-03	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Uranium-233	13968-55-3	4.36E-06	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Uranium-234	13966-29-5	2.83E-06	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Uranium-235	15117-96-1	9.85E-10	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Uranium-236	13982-70-2	2.96E-08	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Uranium-238	7440-61-1	1.55E-10	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	7.15E-03	4.77E-04	3.58E-04	e
Yttrium-90	10098-91-6	9.49E+01	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	6.44E-03	4.29E-04	3.22E-04	e
Zirconium-93	15751-77-6	4.53E-07	g	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	NA	1.07E-03	7.16E-05	5.37E-05	e

Table B1-3 Isotope-Specific Parameters for ROPCs

Radionuclide of Potential Concern	CAS Registry Number	Soil Loss Mechanisms [h]							
		ks_r $(year)^{-1}$			Source	ks_v $(year)^{-1}$			Source
		1 cm	15 cm	20 cm		1 cm	15 cm	20 cm	
Selenium-79	15758-45-9	6.41E-03	4.27E-04	3.20E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Strontium-90	10098-97-2	5.47E-02	3.65E-03	2.74E-03	e	0.0E+00	0.0E+00	0.0E+00	NA
Technetium-99	14133-76-7	1.16E+00	7.75E-02	5.81E-02	e	0.0E+00	0.0E+00	0.0E+00	NA
Thorium-229	15594-54-4	1.28E-05	8.55E-07	6.41E-07	e	0.0E+00	0.0E+00	0.0E+00	NA
Thorium-232	7440-29-1	1.28E-05	8.55E-07	6.41E-07	e	0.0E+00	0.0E+00	0.0E+00	NA
Tin-126	15832-50-5	7.69E-03	5.13E-04	3.84E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Tritium	10028-17-8	0.0E+00	0.0E+00	0.0E+00	NA	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-232	14158-29-3	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-233	13968-55-3	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-234	13966-29-5	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-235	15117-96-1	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-236	13982-70-2	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Uranium-238	7440-61-1	4.27E-03	2.85E-04	2.14E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Yttrium-90	10098-91-6	3.84E-03	2.56E-04	1.92E-04	e	0.0E+00	0.0E+00	0.0E+00	NA
Zirconium-93	15751-77-6	6.41E-04	4.27E-05	3.20E-05	e	0.0E+00	0.0E+00	0.0E+00	NA

Table B1-3 Isotope-Specific Parameters for ROPCs

CAS = Chemical Abstracts Service.
DW = dry weight.
FW = fresh weight.
ROPC = Radionuclide of Potential Concern.

Notes/Sources

a See Section 5 of the *Human Health Risk Assessment Protocol* (HHRAP) (EPA 1998), Br_{ag} = weighted average of $Br_{ag(fruit)}$ and $Br_{ag(veg)}$.
b Value for Fv is based on phase type, which is shown in the emissions report (Attachment 1 of this work plan).
c Baes and others 1984.
d Health Effects Assessment Summary Table (HEAST) (EPA 2001).
e Calculated per Section 5 and/or Appendix A-3 of the HHRAP (EPA 1998).
f Risk Assessment Information System (RAIS); see http://risk.lsd.ornl.gov/rap_hp.shtml. Accessed in November 2002.
g Calculated like ks_g per Section 5 of the HHRAP (EPA 1998).
h Total soil loss (ks) is the sum of all appropriate soil loss mechanisms.
i NRC 1992.
j Strenge and others 1986.
k Eckerman and others 1999.
NA Not Applicable.

Appendix B-2

Supporting Equations for Soil, Surface Water, and Sediment Accumulation Modeling

Appendix B-2
Supporting Equations for Soil, Surface Water, and Sediment Accumulation Modeling

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