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Groton, Connecticut

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Brown & Root Environmental

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APPENDIX G

ECOLOGICAL DATA

G.1 SUMMARY OF LOCAL ECOLOGY
G.2 SITE 3 - AREA A DOWNSTREAM WATERCOURSES/OBDA ECOLOGICAL DATA
G.3 THAMES RIVER/GOSS COVE ECOLOGICAL DATA

APPENDIX G.1

SUMMARY OF LOCAL ECOLOGY

Source: **NEESA, March 1983.**

Biological Features

Background

The New London/Groton area lies in the Central Hardwoods zone that covers a great portion of the northeastern United States. Due to settlement, agriculture, lumbering and coal production, the virgin forests have been replaced by second or third growth stands. Many of the wetlands have been filled and are presently in commercial and residential use.

The Thames River has been altered to accommodate large marine vessels through dredging and bank stabilization. However, the original course of the river is the same, and many indigenous species of flora and fauna remain the same as those present prior to manipulation.

The New London Subase encompasses 1,412 acres of land, of which 547 acres are used as operational and support facilities with the remaining acreage being used for housing and community support. Within this total acreage are areas used for drainage, disposal, buffer, recreational activities and areas set aside for potential expansion. These presently contain a variety of upland, wetland and aquatic habitats directly connected to similar habitats off-base. There are also approximately 1.7 miles of Thames River shoreline incorporated into the Subase.

Environmental concern for the river and surrounding natural habitats is strong among the local populace. The Connecticut Department of Environmental Protection (Conn. DEP) in cooperation with sportsmen's groups and citizens has developed programs to enhance and protect the aquatic and upland habitats and their wildlife components in the New London/Groton area.

Upland Vegetation

The southern New England climate supports a mixed deciduous-coniferous forest comprised of such common tree species as oak, hickory, chestnut, beech, birch, maple, white pine, and hemlock.

Forest cover varies from place to place, depending on soil moisture, soil fertility and temperature. The climate favors hardwoods over softwoods yet the latter can be found on poorer sites where competition from hardwood species is less intense.

Typical of most municipal areas in Connecticut, oak/beech/red maple forests dominate among the upland vegetational types. These hardwoods, or deciduous trees, comprise most of the total vegetative cover, with oak the dominant species. The softwoods, or evergreens, account for less than 10 percent of the forest types, with white pine, cedar and hemlock as the major trees in this category. Excluding ornamental plantings, the evergreens usually occur naturally in concentrated clusters or stands. Both the Pine Swamp and the Great Cedar Swamp in Ledyard are excellent examples of this condition. Though a deciduous tree, red maple usually dominates along with the evergreens in wet areas.

Although mature hardwoods and softwoods exist in the area, nearly 70 percent of the total woodland is occupied by immature trees as a result of the extensive logging and clearing for agricultural purposes that occurred in the last century and into the present one. Careful management of the State forests, municipal and private land trust preserves can serve to protect many developing forests, as well as mature trees, from further logging activity or clearing for indiscriminate development.

Some common understory plants of wooded areas are doqwood, cherry, tupelo, sassafras and other tree saplings, catbriar and grape vine. Poison ivy is common. In open areas and old pasture land, bittersweet,

barberry, goldenrod, poison ivy, green briar, catbriar, sumac, hawthorne, grasses and wildflowers flourish.

Wetland Vegetation

The freshwater wetlands of southeastern Connecticut include swamps, bogs and marshes. The New London Subase contains a large tract (approximately 80 acres) of wetland in the northeast section of the base, which can be characterized as a marsh. The area was artificially created by dumping dredge spoils into a lowland containing a small stream. The soft organic sediments throughout the majority of the marsh support a monoculture of the reed Phragmites commonis which dominates all other vegetative forms. There are scattered patches of open water between the stands of reeds containing scattered duckweed (Lemna spp.) and filamentous algae. The firmer ground with no standing water quickly forms the transition to old field and upland species. Those found in the zone of transition include viburnum (Viburnum recognitum), spicebush (Lindera benzoin), and black alder (Ilex verticillata).

The State of Connecticut defines marshes as those areas where a vegetational community shall exist in standing or running water, and where that community shall include, but not be limited to, some, but not necessarily all, of the following: horsetails (Equisetaceae); bur-reeds (Sparganiaceae); cattails (Typhaceae); pondweeds (Zostereraceae); water plantains (Alismaceae); frog's bits (Hydrocharitaceae); hydrophytic grasses (Gramineae); sedges (Cyperaceae); arums (Araceae); duckweeds (Lemnaceae); rushes (Juncaceae); pickerelweed (Pontederiaceae); pipeworts (Eriocaulonaceae); sweet gale (Myrica gale); tear-thumbs (Polygonaceae); water lilies (Nymphaeaceae); water milfoils (Halorrhagidaceae); dogwoods (Cornus spp.); buttonbush (Cephalanthus occidentalis); and arrowwood (Viburnum spp.).

The subject marsh and its drainage on the Subase contain several of the above mentioned species; however, diversity appears to be limited.

Terrestrial Fauna

The land within and surrounding the Subase provides a variety of habitats for terrestrial fauna. These include hardwood forests, old fields, wetlands and residential areas.

Mammals common to the area are eastern gray squirrel (Sciurus carolinensis), raccoon (Procyon loto), white-tailed deer (Odocorleus virginianus), oppossum (Didelphis marsupialis), eastern cottontail (Sylvilogus floridanus), and the woodchuck (Marmota monax). These forms are common to the hardwood forest and old field habitats but do overlap into the other areas. A complete list of mammalian forms known or expected to be found in the area is included in Table G-1 (Burt and Grossenheider).

Amphibians common to the area include the American toad (Bufo americanus), bullfrog (Rana catesbiana), leopard frog (Rona pipiens), dusky salamander (Desmognathus fuscis), and the red-backed salamander (Plethodon cinerius).

The common reptiles to be found in the Subase area are the water snake (Natrix sipedon), garter snake (Thamnophis sirtalis), hognose snake (Heterodon platychinos), painted turtle (Chrysemys picta), and spotted turtle (Clemmys guttata). A list of reptiles and amphibians known or expected to be found in the Subase area is included in Table G-2 (Conant, 1974).

The avian fauna of the Subase consists of a variety of species which may be permanently residential, migratory or seasonal. Winter birds often found around feeders include the tufted titmouse (Parus bicolor), nuthatch (Sitta canadensis), and cardinal (Cardinalis cardinalis). Summer birds of residential areas are blue jay (Cyanocitta cristata), robin (Turdus migratorias), chickadee (Parus atricapillus), and house sparrow (Passer domesticus). Summer birds common to more natural and open areas are mourning dove (Zenaida macroura), common crow (Corvus brachyrhynchos), eastern kingbird (Tyrannus tyrannus), and the sparrow

hawk (Falco sparvarius). Over 20 species of birds can be found breeding in the upland forests and fields. The most commonly found breeding species are the bobwhite quail (Colinus virginianus), yellow shafted flicker (Colaptes auratus), towhee (Pepelo erythropthalmus), brown thrasher (Toxostoma rufum), and great horned owl (Bubo virginianus). The species known or expected to be found in the vicinity of the Subase are included in Table G-3 (Dowhan and Craig, 1976). The list includes species, seasonal status, nesting potential, and status as state or federal threatened or endangered.

Aquatic Ecosystems

The freshwater aquatic ecosystems naturally occurring within the Subase are restricted to shallow waters of wetland pools and the ephemeral stream draining the wetlands. The water sources for these emanate from drainage of operations areas and natural areas in the north portion of the base. The ephemeral nature of the streams and the shallowness of the wetland surface waters restrict the diversity of aquatic fauna within the systems. The chemical constituents of the organic substrates in the wetlands, especially in Area A, appear to restrict the diversity of aquatic flora. There are two artificial lakes maintained on the Subase, North Lake and Rock Lake, both of which are for recreational and aesthetic purposes. The watersheds for both impoundments receive no drainage from contaminated areas.

The marine ecosystem which forms the entire 1.7 mile western border of the Subase is the Thames River.

Marine Algae - There were thirteen species of algae collected from the Thames River during the 1973 studies (FEIS Subase New London, Connecticut, 1973.) These included 7 Rhodophyta, 2 Phaeophyta and 4 Chlorophyta. The Rhodophyta included: Chondrus crispus, Dosya pedicellata, Grinnellia americana, Agardhiella tenera, Chondria tenuissima, Rhodymenis palmata, and Gracilaria foliifera. Phaeophyta were: Laminaria sp. and Fucus vesiculosus var. sphaerocarpus. Chlorophyta consisted of: Codium fragile ssp. tomentosoides, Ulva lactuca, Protoderma marinum and Ulthrix flacca. The majority of the species were collected by dragging and Eckman sampler in the sublittoral zone, while one Scuba dive was made for collecting purposes. The eulittoral zone is narrow with little substrate for the attachment of algae. Only two species were collected in the eulittoral zone.

The forms collected were sporadic in distribution, being present in few locations. The greatest number of species were collected near the mouth of the river where a total of seven different species were found. Fucus sp. and Ulothrix lacea were collected at a few locations in the eulittoral zone in addition to the pier pilings at the Naval Base marina. At no station was the density of algae very great.

The lack of species diversity and density of algae in the Thames River is probably due to the extreme lack of suitable substrate. When collected, it was found growing on large Venus mercenarca shells and submerged objects such as lobster traps and other debris. Few rocks were present. Small rocks and larger outcroppings were present along one area of the shore where Fucus and Ulothrix were found.

Marine algae is important in the food chain of Thames River marine organisms. Laminaria, Chondrus, Ulva, and Rhodymenia are utilized by such forms as herbivorous gastropods, crustaceans and fishes. These organisms are then eaten by carnivorous forms and so on up the food chain. In addition to being important as a food source, attached marine algae also provide a substrate for the attachment of such invertebrates as hydrozoans, bryozoans, and the polychaete, Spiroobis. Starfish, polychaetes and molluscs are also found entangled in the holdfasts of Laminaria. Despite low numbers and diversity, the importance of the algae in the river should not be minimized.

Species of benthic algae found in this area, of which Ulva was the most prevalent, are:

Agardhiella tenera

Chondria tenuissima

Chondrus crispus

Gracilaria folifera

Grinnellia americana

Protoderma marimum

Ulotrhix flacca

Ulva lactuca

Fucus vesiculosis var. sphaerocarpus

One species of vascular plant was found in the area; Potamogeton pectinatus was found floating throughout the region. No rooted plants of this species were located, however.

Phytoplankton - Zooplankton - Plankton tows were conducted in September, 1972, to determine the density and diversity of phytoplankton in the Thames River. Collection was done with a #25 Standard Mesh Plankton net. Although exact density is not known at this time, the total number of cells was low. Zooplankton were almost completely absent. The few phytoplankters present were members of the Bacillariophyceae and included Ditylum brightwelli, Coscinodiscus spp., Gyrosigma spp., and Glenodinium spp. Ditylum brightwelli was the only species which was uniform in the samples, although density was very low.

A low diatom population was also found in the Thames River. This was probably due to the time of collecting. Nutrient levels were not excessively high, as thorough mixing had not released nutrients from the bottom sediments. Thus, a dense population was not possible. Low temperatures along with winds and wave action in the fall will result in a mixing and release of bottom nutrients and subsequent diatom "bloom."

Aquatic Invertebrates - The invertebrate fauna of the Thames River constitutes a large portion of the protein harvested for human consumption from the river each year. The most sought after invertebrate species for human consumption are lobsters, crabs, clams, and oysters.

The harvesting of lobsters (Homorus americanus) occurs primarily through the spring and summer months. The lobsters move inshore during the warm months to feed and molt near bottom structures. Trapping occurs in the river from the mouth to just upstream of the I-95 bridge (interview, biologist, Conn. DEP). Lobsters are scavengers and feed on almost anything they can find. Molluscs, crustaceans (ranging from crabs to amphipods), and dead fish are included in this diet. These characteristics delineate their level in the food chain of the Thames River estuary.

The harvesting of blue crabs (Callinectes sapidus) from the Thames River occurs primarily during the months of July, August, and September. This species cannot be harvested commercially in the river and must be taken with folding traps or dip nets. Its distribution in the river is considered cosmopolitan, being harvested from the mouth of the river upstream to Norwich. This species is highly intolerant of low temperatures and salinity fluctuations. Correspondingly, there are massive die-offs during extremely cold winters or after

severely heavy or prolonged rains which reduce the salinity in the river. The blue crab is an important member of the food chain. Injured specimens are preyed upon by lobsters and fish, while healthy forms feed on molluscs, crustaceans, dead fish, and so forth.

There is no commercial harvesting of clams or oysters in the Thames River.

Non-commercial harvesting is allowed but is strictly regulated (concerning areas open to harvesting and seasons) by the Connecticut DEP. Coliform counts are used as indicators of pollution (especially hepatitis) and water samples are analyzed from several locations weekly or after rainfall events. The results of the analyses determine the potential for pollution if the shellfish ingest large quantities of water and filter out the organic material as food. This leaves them very susceptible to pollutants, especially bacterial and viral. A large portion of the river is permanently closed to shellfishing and this includes the waterfront of the Subase.

Dredging for shellfish during the 1973 EIS studies has revealed large beds and much preferred substrates near the mouth of the river and extending up to the I-95 bridge.

The quahog (Mercenaria mercenaria) is the most common clam species in the river. It is found in large numbers in shoals and channel banks below the I-95 bridge (biologist, Conn. DEP). The vast beds of quahogs would be an accessible and valuable resource for the area if upstream pollutants could be controlled.

There are no large soft shell clam (Mya orenaria) beds in the river system. Studies conducted by the U.S. Coast Guard (USCG) in 1973 revealed few soft shell clams, and these were restricted to small, isolated groups between the I-95 bridge and the Subase. This area does have substrates preferred by this species, and with improved water quality conditions, a viable population would develop.

The 1973 USGC study revealed approximately 174 acres of oyster beds on the west side of the river. They are located on the west channel bank and extend into the shallows from the Tydol Fuel Dock upstream to approximately one-quarter mile north of the Subase. There is a winter season for harvesting oysters on a non-commercial basis, and no commercial harvesting of oysters has been allowed in the river for many years. However, upstream from the Subase, there are coves being leased and artificially seeded with oysters for potential commercial harvesting in the future.

A list of invertebrates known or expected to be found in the Thames River is included in Table G-4. This list also includes those species of invertebrates common to the river but not regularly consumed by humans. These are important to the river system as they play an integral role in the food chain of the ecosystem.

Finfish - The only water supply affected by the Subase and supporting a fishery is the Thames River. Fish were sampled in the river from the mouth to one-quarter mile north of the Subase during the EIS study by the USCG in 1973. Also, frequent river fish collections are made from March to November by the University of Connecticut, Project Oceanology, Avery Point.

There is presently no commercial fishing allowed in the Thames River for any species above the I-95 bridge (biologist, Conn. DEP). There is, however, a commercial fishery for eels, and some sport fish are caught from the river and sold. The results of collections indicate that the most common species of fish in the river between the mouth and the Subase are winter flounder (Pseudopleuronectes americanus), porgy (Stenotomus versicolor), weakfish (Cynoscion regalis), and tautog (Tautoga onitis). The adult weakfish and porgy are sometimes brackish and primarily marine species substantiating the belief that the fish collected in the trawls were juvenile, temporarily inhabiting the river. The winter flounder appears to inhabit the Thames permanently, and several reliable sources indicate successful spawning does take place. Being the most dominant, these four species would be the most likely to be harvested by sportsmen for human consumption.

Research of existing data indicates that the Thames estuary is also an important spawning and nursery area for anadromous runs of alewives (Alosa aestivalis) and Menhaden (Brenooria tyrannus) which are found in the area from July through October utilizing the river as a nursery area.

Extensive recreational fishing exists for white perch (Roccus americanus), American smelt (Osmerus mordox), tomcod (Mircogadus tomcod), bluefish (Pomatomus saltatrix), and striped bass (Morone saxatilis). The striped bass is one of the most sought after game species on the east coast. A large population of this species winters in the channel of the Thames River in the area of Stodard State Park (Conn. DEP).

There is the potential for a commercial market for American Smelt, American shad (Alosa sapidissima), whiting (Merluccius bilinearis), and blueback herring (Alosa aestivalis). The populations of these species in the river are on the rise, and habitat and water quality improvements have increased the potential for an increase in numbers allowing for commercial harvesting.

Efforts are also being made to re-establish anadromous fish runs of Atlantic salmon (Salmo salor), alewife, and brown trout (Salmo trutta). The browns have escaped from stocked impoundments and streams in the headwaters and developed a considerable population of large fish in the river, and these are sought after by sportsmen. The major problem with re-establishing an anadromous fish run and breeding population in the river is the dams. These impede upstream migration to necessary spawning substrates.

A list of finfish known or expected to be found within the Thames River and the seasons in which they inhabit the river is included in Table G-5.

Threatened and Endangered Species - The ecological habitats within or immediately surrounding the Subase may potentially harbor floral or fauna species of threatened or endangered status as classified by the State of Connecticut or the USDA Fish and Wildlife Service. The habitat which has the greatest potential for harboring these species is the wetland and its associated drainages emanating from Area A. The subject species are limited primarily to plants due to the urbanized nature of the entire area and the constant disturbance by heavy equipment and normal base operations. There have been no confirmed sightings of threatened and endangered species. A list of threatened and endangered species as classified by state and federal governments is included in Table G-6.

TABLE G-1
MAMMALS KNOWN OR EXPECTED TO INHABIT THE AREA*
NSB-NLON, GROTON, CONNECTICUT

Common Name	Scientific Name
Opossum	Didelphis marsupialis
Masked shrew	Sorex cinereus
Shorttail shrew	Blarina brevicauda
Eastern mole	Scalopus aquaticus
Hairytale mole	Parascalops breweri
Little brown myotis	Myotis lucifugus
Keen myotis	Myotis keeni
Eastern pipistreal	Pipistrellus subflavus
Silver-haired bat	Lasionyctris noctivagans
Big brown bat	Eptesicus fucus
Red bat	Lasiurus borealis
Hoary bat	Lasiurus cinereus
Raccoon	Procyon loto
Shorttail weasel	Mustela erminea
Longtail weasel	Mustela frenata
Striped skunk	Mephitis mephitis
Red fox	Vulpes fulva
Gray fox	Urocyon cinereoargenteus
Woodchuck	Marmota monax
Eastern chipmunk	Tamias striatus
Eastern fox squirrel	Sciurus niger
Eastern gray squirrel	Sciurus carolinensis
Red squirrel	Tamiasciurus hudsonicus
Southern flying squirrel	Glaucomys volans
White-footed mouse	Peromyscus leucopus
Boreal redback vole	Clethrionomys gapperi
Meadow vole	Microtus pennsylvanicus
Pine vole	Pitymys pinetorum
Muskrat	Ondatra sibenthica
Meadow jumping mouse	Zapus hudsonius
Woodland jumping mouse	Napaeozapus insignis
Eastern cottontail	Sylvilagus floridanus
New England cottontail	Sylvilagus transitionalis
Whitetail deer	Odocoileus virginianius

* Based on Burt and Grossenheider

TABLE G-2

AMPHIBIANS AND REPTILES KNOWN OR EXPECTED TO INHABIT THE AREA*
NSB-NLON, GROTON, CONNECTICUT

AMPHIBIANS

Scientific Name	Common Name
Dusky salamander	Desmognathus fuscus
Red-backed salamander	Plethodon cinereus
spotted salamander	Ambystoma maculatum
red-spotted newt	Notophthalmus viridescens
American toad	Bufo americanus
Fowler's toad	B. woodhousei
Spring pepper	Hyla crucifer
Leopard frog	Rana pipiens
Pickeral frog	R. palustris
Wood frog	R. sylvatica
Green frog	R. clamitans
Bullfrog	R. catesbeiana

REPTILES

Scientific Name	Common Name
Five-linked skink	Cumeces fasciatus
Snapping turtle	Chelydra serpentina
Stinkpot	Sternotherus odoratus
Mud turtle	Kinosternon subrubrum
Spotted turtle	Clemmys guttata
Wood turtle C.	Insculpta
Box turtle	Terrapene carolina
Painted turtle	Chrysemys picta
Water snake	Natrix sipedon
DeKay's snake	Storeria deKayi
Red bellied snake	S. occipitomaculata
Garter snake	Thamnophis sirtalis
Ribbon snake	I. sauritus
Hognose snake	Heterodon platyrhinos
Ringneck snake	Diadophis punctatus
Worm snake	Carphophis amoenus
Black racer	Coluber constrictor
Smooth green snake	Opheodrys vernalis
Black rate snake	Elaphe obsoleta
Milk snake	Lampropeltis triangulum
Copperhead	Agkistrodon contortrix

* Based on Babbit (1937), Petersen (1970) and Conant (1974).

TABLE G-3

BIRDS EXPECTED TO UTILIZE THE AREA
NSB-NLON, GROTON, CONNECTICUT

Birds	Seasonal Status[1]	Nest Potential	Rare/Endangered[3]
Green heron	P.M. (summer only)	Yes	-
Mallard	P.M.	Yes	-
Wood duck	P.M.	Yes	-
Sharp-skinned hawk	hunt bird[2]	-	Declining
Cooper's hawk	hunt bird[2]	-	State endangered
Red-tailed hawk	P.M.	Yes	-
Red-shouldered hawk	P.M.	Yes	-
Broad-winged hawk	M.	Yes	-
Rough-legged hawk	winter only	-	-
Marsh hawk	migrant only	-	-
Merlin	migrant only	-	Declining
American kestrel	P.M.	Yes	-
Bobwhite	R.	Yes	-
Ring-neck pheasant	R.	Yes	-
American woodcock	P.M.	Yes	-
Common snipe	P.M.	-	-
Mourning dove	P.M.	Yes	-
Yellow-billed cuckoo	M.	Yes	-
Black-billed cuckoo	M.	Yes	-
Barn owl	winter only	-	-
Long-eared owl	winter only	-	Indeterminate
Short-eared owl	winter only	-	Indeterminate
Saw-whet owl	winter only	-	-
Whip-poor-will	M.	Yes	-
Common nighthawk	M.	-	-
Ruby-throated hummingbird	M.	Yes	-
Belted kingfisher	P.M.	Yes	-
Common flicker	P.M.	Yes	-
Red-headed woodpecker	migrant only	-	Rare
Yellow-bellied sapsucker	migrant only	-	Rare
Hairy woodpecker	R.	Yes	-
Downy woodpecker	R.	Yes	-
Eastern kingbird	M.	Yes	-
Crested flycatcher	M.	Yes	-
Eastern phoebe	M.	Yes	-
Least flycatcher	M.	Yes	-
Eastern pewee	M.	Yes	-
Tree swallow	M.	Yes	-
Bank swallow	M.	Yes	-
Rough-winged swallow	P.M.	Yes	-
Blue jay	P.M.	Yes	-
Common crow	P.M.	Yes	-
Fish crow	P.M.	-	-
Black-capped chickadee	P.M.	Yes	-

TABLE G-3
BIRDS EXPECTED TO UTILIZE THE AREA
NSB-NLON, GROTON, CONNECTICUT

Birds	Seasonal Status[1]	Nest Potential	Rare/Endangered[3]
White-breasted nuthatch	migrant only	-	-
Brown creeper	migrant only	-	-
House wren	M.	Yes	-
Mockingbird	R.	Yes	-
Catbird	M.	Yes	-
Brown thrasher	P.M.	Yes	-
Robin	P.M.	Yes	-
Wood thrush	M.	Yes	-
Hermit thrush	migrant only	-	-
Verry	M.	Yes	-
Eastern bluebird	P.M.	-	Declining
Cedar waxwing	P.M.	Yes	-
Loggerhead shrike	migrant only	-	-
Starling	P.M.	Yes	-
White-eyed vireo	P.M.	Yes	-
Yellow-throated vireo	migrant only	-	-
Red-eyed vireo	M.	Yes	-
Warbling vireo	M.	Yes	-
Black and white warbler	M.	Yes	-
Worm-eating warbler	M.	Yes	-
Golden-winged warbler	migrant only	-	-
Blue-winged warbler	M.	Yes	-
Nashville warbler	migrant only	-	-
Parula warbler	migrant only	-	Rare
Yellow warbler	P.M.	Yes	-
Black-throated blue warbler	migrant only	-	-
Black-throated green warbler	M.	Yes	-
Chestnut-sided warbler	M.	Yes	-
Bay-breasted warbler	migrant only	Yes	-
Prairie warbler	P.M.	Yes	-
Ovenbird	M.	Yes	-
Yellow throat	P.M.	Yes	-
Yellow-breasted chat	P.M.	Yes	-
Hoodde warbler	migrant only	-	-
Canada warbler	migrant only	-	-
English sparrow	R.	Yes	-
Eastern meadowlark	P.M.	Yes	-
Red-winged blackbird	P.M.	Yes	-
Orchard oriole	migrant only	-	-
Northern oriole	M.	Yes	-
Common grackle	P.M.	Yes	-
Brown-headed cowbird	P.M.	-	-
Scarlet tanager	M.	Yes	-
Cardinal	R.	Yes	-

TABLE G-3
BIRDS EXPECTED TO UTILIZE THE AREA
NSB-NLON, GROTON, CONNECTICUT
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Birds	Seasonal Status[1]	Nest Potential	Rare/Endangered[3]
Rose-breasted grosbeak	M.	Yes	-
Common goldfinch	P.M.	Yes	-
Eastern towhee	P.M.	Yes	-
Savannah sparrow	migrant only	-	-
Tree sparrow	winter only	-	-
Chipping sparrow	P.M.	Yes	-
Field sparrow	P.M.	Yes	-
White-throated sparrow	migrant only	-	-
Song sparrow	P.M.	Yes	-
Swamp sparrow	P.M.	Yes	-

1 R - Residents.
M - Migrants.
P.M. - Partially Migratory.
2 Hunt bird in migration.
3 Dowhan and Craig (1976).

TABLE G-4

INVERTEBRATES KNOWN OR EXPECTED TO BE FOUND IN THE THAMES RIVER NSB-NLON, GROTON, CONNECTICUT

Genus Species	Common Name	Location[1]
M. mercenaria	quahog	TH
Crassostrea virginica	oyster	TH
Spisula solidissma	surf clam	LR
Nassarius obsoletus	mud snail	TH
Cripidula fornicata	slipper shell	LR
Pagursus longicarpus	hermit crab	LR
Cripidula plana	deck shell	LR
Cacer irrortatus	rock crab	TH
Balanus drentatus	barnacle	TH
Balanus balanoidies	barnacles	TH
Pagursus pollicaris	hermit crab	LR
Busycon canaliculatum	c. whelk	LR
Lunatia heros	moon snail	TH
Eupleura caudata	drill	LR
Yoldia limulata	bivalve	LR
Pandora gouldiania	bivalve	LR
Crangon septemspinosus	prawn	TH
Rhithropanopeus harrisi	mud crab	TH
Koldia limulata	bivalve	LR
Lyonsia hyalina	bivalve	LR
Ensis directus	razor clam	TH
Callinectes sapidus	blue crab	TH
Carinides maenas	green crab	TH
Crangon septemspinosis	sand shrimp	LR
Limulus polyphemus	horshoe crab	LR
Libinia emarginata	spider crab	LR
Scoloplos robustus	annelid	LR
Nephyts caece	Polycheare annelid	TH
Sabella micropthalma	feather worm	LR
Sabellaria vulgaris	polychaeta	LR
Terebellid polychaeta		LR
Diopartra cuprea	ornate worm	LR
Nereis virens	sand worm	LR
Polydora ligni	polychaeta	LR
Cliona 2 spp.	sulfer boring sponge	LR
Asterias forbesi	common starfish	LR
Gammarus marinus	gammarid amphipod	LR
Tubularia spp.		TH
Hydroid spps.		LR
Hyrdactinia spp.		LR
Cryptosula spp.		LR
Alyconidin spp.		LR
erect bryozoan		LR
Polynoidae and Sigalionidae	scale worms	TH

TABLE G-4
INVERTEBRATES KNOWN OR EXPECTED TO BE FOUND IN THE THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT
PAGE 2 OF 2

Genus Species	Common Name	Location[1]
Cirrebled polychaeta	worm	LR
Clymenalla torquate	bamboo worm	LR
Ninoe nigripes	Polychaeta	TH
Haliclona 2 spp.	sponge	LR
Metridium semile	anenomae	LR
Toredo navis	shipworm	TH
Cerabratulus sp.	nemertean	TH
Haliplanella luciae	anemonae	LR
Pectenaria gouldi	cone worm	LR

1 UR - From I-95 bridge to Norwich (Upper River)
LR - From I-95 bridge to Mouth (Lower River)
TH - From Mouth of River to Norwich (Throughout)

TABLE G-5

FISHES KNOWN OR EXPECTED TO INHABIT THE THAMES RIVER

Common Name	Genus Species	Season Within River
Blue back herring	Alosa aestivalis	Sp, S
Alewife	Alosa pseudoharengus	Sp, S
Anchovy	Anchoa mitchilli	Y
American eel	Anguilla rostata	Y
Fourspine stickleback	Apeltes guandracus	Y
Menhaden	Breuooria tyrannus	S
Herring	Clupea harengus harengus	Y
Weakfish	Cynoscion regalis	Sp, S
Sheephead	Cyprinodon variegatus	Y
Common mummuchog	Fundulus heteroclitus	Y
Threespine stickleback	Gastrosteus aculeatus	Y
Sea raven	Hemitripterus americanus	Y
Silverside	Menidia menidia	Y
Kingfish	Metricirrhus saxatilis	Sp, S, F
Whiting	Merluccius bilinearis	Sp, S
Tomcod	Microgadus tomcod	Y
Common file fish	Monacanthus hispidus	S
Striped hass	Morone saxatilis	Y
Longhorn sculpin	Myoxocephalus octodecimspinosus	W, Sp, F
Toadfish	Opsanus tau	Y
American smelt	Osmerus mordax	Y
Fluke	Paralichthys dentatus	Sp, S, F
Striped killfish	Funulus Majalis	Y
Tidwater silverside	Menidia beryllina	Y
Sand eel	Ammodytes americanus	Y
Four spot flounder	Paralichthys oblongus	Sp, S
Bluefish	Pomatomus saltatrix	Y
Butterfish	Poronotus triacanthus	S, F
Common searobin	Prionotus carinus	Y
Striped searobin	Prionotus martis	F, W
Winter flounder	Pseudopleuronectes americanus	Y
Ninespine stickleback	Pungitus pungitius	Y
Little skate	Raja Binerinacea	Y
White perch	Morone americanus	Y
Atlantic mackerel	Scomber scrobrus	Y
Sand dab	Scophthalmus aguosos	Y
Dog fish	Squalus acanthias	S
Porgy	Stenotomus chrysops	Sp, S, F
Pipefish	Synagnatus fuscus	Y
Tautog	Tautoga onitis	Y
Cunner	Tautogolabrus adspersus	Y
Hog choker	Trinectes maculatus	Sp, S, F
Red hake	Urophyeis chuss	Sp, S
White hake	Urophyeis tenuis	Sp, S, F
Windowpane	Scophthalmus aguosus	Y

TABLE 6-5
FISHES KNOWN OR EXPECTED TO INHABIT THE THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT
PAGE 2 OF 2

Common Name	Genus Species	Season Within River
Goosefish	Lophis americanus	Sp, S, F
Squirrel Hake	Urophycis chuss	S, F
Needlefish	Strongylura marinus	Y

1 Sp - Spring.
S - Summer.
F - Fall.
W - Winter.
Y - Yearround.

APPENDIX G.2

SITE 3 - AREA A DOWNSTREAM WATERCOURSES/OBDA ECOLOGICAL DATA

G.2.1 SUMMARY OF TAXA IDENTIFIED DURING FFS AND PHASE II RI SUPPLEMENTAL ECOLOGICAL SAMPLING

G.2.2 SURFACE WATER QUALITY DATA

G.2.3 LABORATORY DATA FOR MACROINVERTEBRATE TAXONOMY (ETT ENVIRONMENTAL)

G.2.4 LABORATORY DATA FOR MACROINVERTEBRATE TOXICITY TESTING (ETT ENVIRONMENTAL)

G.2.5 LABORATORY DATA FOR FETAX TESTING (STOVER GROUP)

APPENDIX G.2.1

SUMMARY OF TAXA IDENTIFIED DURING FFS AND PHASE II RI SUPPLEMENTAL ECOLOGICAL SAMPLING

TAXA IDENTIFIED DURING FOCUSED FEASABILITY STUDY AND 1995 SAMPLING
AREA A DOWNSTREAM WATERCOURSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Reference Areas								Impacted Areas											
Order	Family/Genus	Reference Pond (FFS)	BRS-1(FFS)	BRS-2 (FFS)	BRS-3 (FFS)	Niantic Pond	Pequot Woods	Fishtown Brook (FB28)	Fishtown Brook (FB29)	Stream 4 (FFS)	Stream 1 (FFS)	Upper Pond (FFS)	Lower Pond (FFS)	OBDA (FFS)	Stream 1	Stream 2	Stream 3	Stream 4	Upper Pond	OBDA	Lower Pond
Ephemeroptera	Callibaetis						X												X		
	Leptophlebia								X												
	Leptophlebiidae			X															X		
Trichoptera	Agrypnia			X			X														
	Brachycentrus							X													
	Grammotaulis								X												
	Ironoquia								X												
	Lenarchus							X													
	Lepidostoma							X	X												
	Limnephilidae																				
	Limnephilus							X	X												
	Molanna							X													
	Ocecetis						X	X													
	Phylocentropus							X	X												
	Platycentropus						X		X												
	Polycentropus			X		X													X		
	Psilotreta							X													
	Ptilostomis					X	X												X		
	Pycnopysche								X												
Odonata	Aeshhidae	X																			
	Anax						X														
	Boyeria																				X
	Coenagrionidae	X		X	X							X		X					X		
	Cordulegaster							X							X						
	Cordulia					X															
	Enallagma						X									X	X		X		
	Ishnura/Anomalagrion						X														
	Lestes					X	X														
	Libellulidae	X			X							X		X							
	Plathemis																			X	
	Somatochlora						X														
	Tramea																		X		

TAXA IDENTIFIED DURING FOCUSED FEASABILITY STUDY AND 1995 SAMPLING
AREA A DOWNSTREAM WATERCOURSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Reference Areas								Impacted Areas											
Order	Family/Genus	Reference Pond (FFS)	BRS-1 (FFS)	BRS-2 (FFS)	BRS-3 (FFS)	Niantic Pond	Pequot Woods	Fishtown Brook (FB28)	Fishtown Brook (FB29)	Stream 4 (FFS)	Stream 1 (FFS)	Upper Pond (FFS)	Lower Pond (FFS)	OBDA (FFS)	Stream 1	Stream 2	Stream 3	Stream 4	Upper Pond	OBDA	Lower Pond
Megaloptera	Chauliodes						X										X				
	Sialis						X	X	X							X				X	
Lepidoptera	Pyralidae	X																			
Hemiptera	Corixidae			X																	
Heteroptera	Corixidae					X	X														
	Belostoma						X														
	Gerris					X	X												X		
	Hespercorixia						X														
	Notonectidae					X	X												X		
	Notonecta					X	X														
	Pelocoris						X														
	Sigara							X													
	Trichocorixa						X														
Coleoptera	Acilius					X															
	Agabus						X												X	X	X
	Berosus						X														
	Chrysomelidae						X														
	Coptotomus																			X	
	Curculionidae						X									X					
	Cyphon						X													X	X
	Deronectes							X												X	
	Dinetus					X	X														
	Gyrinus						X														
	Hydaticus					X															
	Hydrochus					X	X														
	Hydroporus					X	X										X		X	X	X
	Laccophillis					X	X														
	Lampyridae						X														
	Peltodytes						X												X		
	Stenelmis							X													
	Tropisternus					X	X												X		
	Uvarus																		X		

TAXA IDENTIFIED DURING FOCUSED FEASABILITY STUDY AND 1995 SAMPLING
AREA A DOWNSTREAM WATERCOURSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Reference Areas								Impacted Areas											
Order	Family/Genus	Reference Pond (FFS)	BRS-1(FFS)	BRS-2 (FFS)	BRS-3 (FFS)	Niantic Pond	Pequot Woods	Fishtown Brook (FB28)	Fishtown Brook (FB29)	Stream 4 (FFS)	Stream 1 (FFS)	Upper Pond (FFS)	Lower Pond (FFS)	OBDA (FFS)	Stream 1	Stream 2	Stream 3	Stream 4	Upper Pond	OBDA	Lower Pond
Diptera	Chironomini (general)	X		X	X	X				X	X	X		X					X	X	
(Chironomi)	Chironomus					X	X								X	X	X	X	X	X	X
	Cladopelma						X														
	Einfeldia					X	X								X	X	X	X	X	X	X
	Endochironomus					X		X	X										X		
	Glyptotendipes						X														
	Hyporhygma						X														
	Kiefferulus					X	X														
	Microtendipes						X	X	X												
	Paratendipes						X	X	X						X		X			X	
	Phaenopsectra					X	X	X													
	Polypedilum					X	X	X	X								X		X	X	X
	Tribelos								X												
Diptera	Acricotopus																		X	X	
(Orthocladiinae)	Chaetocladius														X			X		X	
	Coryconeura					X	X														
	Cricotopus						X	X	X										X	X	
	Dipocladius							X													
	Eukiefferiella														X						
	Hydrobaenus						X	X													
	Limnophyes																X		X		
	Orthocladius							X											X		
	nr. Brilla					X															
	Parakeifferiella					X	X	X	X												
	Parametriocnemus						X		X							X	X				X
	Psectrocladius					X	X									X				X	
	Psuedomittia					X															
	Rhecricotopus						X	X	X												
	Smittia																	X			
Diptera (Prodiamseinae)	Prodiamesinae																			X	
Diptera (Tanypodinae)	Ablabesmyia						X														
	Clinotanypus								X												

TAXA IDENTIFIED DURING FOCUSED FEASABILITY STUDY AND 1995 SAMPLING
AREA A DOWNSTREAM WATERCOURSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Reference Areas								Impacted Areas											
Order	Family/Genus	Reference Pond (FFS)	BRS-1(FFS)	BRS-2 (FFS)	BRS-3 (FFS)	Niantic Pond	Pequot Woods	Fishtown Brook (FB28)	Fishtown Brook (FB29)	Stream 4 (FFS)	Stream 1 (FFS)	Upper Pond (FFS)	Lower Pond (FFS)	OBDA (FFS)	Stream 1	Stream 2	Stream 3	Stream 4	Upper Pond	OBDA	Lower Pond
	Conchapelopia								X												
	Macropelopia						X		X						X		X				
	Meropelopia							X	X												
	Monopelopia						X									X					
	Natarsia						X	X											X		
	Procladius						X	X	X						X				X	X	
	Psectrotanypus						X		X						X		X	X	X	X	X
	Tanypus						X														
	Zavrelimyia						X		X						X						
Diptera	Cladotanytarsus						X		X												
(Tanytarsini)	Paratanytarsus						X														
	Rheotanytarsus					X	X	X													
	Tanytarsus					X	X	X	X								X				
	Zavreliella						X														
Diptera	Aedes																		X		
(Other than midges	Anopheles																		X		
	Bezzia							X									X				
	Bittacomorpha																			X	X
	Ceratopogonidae													X							
	Chaoborus	X				X	X					X							X		
	Chrysops						X	X	X										X	X	
	Helius																			X	
	Hexatoma								X												
	Hydrophorus					X	X		X							X					
	Limnophila								X							X					
	Mochlonyx					X															
	Odontomyia																			X	
	Ormosia					X											X	X	X	X	
	Palpomyia						X		X										X		
	Pilaria																			X	
	Ptychoptera							X	X								X				
	Simulium								X												
	Sciomyzidae																		X		
	Stilobezzia						X	X	X						X			X	X	X	

TAXA IDENTIFIED DURING FOCUSED FEASABILITY STUDY AND 1995 SAMPLING
AREA A DOWNSTREAM WATERCOURSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Reference Areas								Impacted Areas											
Order	Family/Genus	Reference Pond (FFS)	BRS-1 (FFS)	BRS-2 (FFS)	BRS-3 (FFS)	Niantic Pond	Pequot Woods	Fishtown Brook (FB28)	Fishtown Brook (FB29)	Stream 4 (FFS)	Stream 1 (FFS)	Upper Pond (FFS)	Lower Pond (FFS)	OBDA (FFS)	Stream 1	Stream 2	Stream 3	Stream 4	Upper Pond	OBDA	Lower Pond
	Tipulidae					X		X			X	X				X					
	Tipulida											X			X	X					
Annelida	Batracobdella							X													
	Helodella						X	X													
	Lumbriculidae					X	X									X	X		X		X
	Naididae						X													X	
	Tubificidae					X	X	X	X						X	X	X	X	X	X	X
Mollusca	Ferrissia/Lavevapex						X														
	Fossaria						X								X		X		X	X	
	Menetus						X												X		
	Physella						X		X												
	Pisidium					X	X	X	X						X		X	X	X		
	Pseudosuccinea						X										X		X		
	Sphaeriidae (general)								X												
	Sphaerium						X		X												
Crustacea	Branchinecta					X															
	Caecidotea					X	X	X	X									X			
	Ceriodaphnia					X	X														
	Hyalella						X	X													
	Ostracod						X	X							X		X				
	Stygobromus						X	X	X												
	Synurella					X	X	X	X												
Collembola	Sminthuridae					X	X														
	Isotomidae																X				
Hydracarina	Hydracarina					X	X														
Oligochaeta		X	X	X						X	X	X	X	X							
Amphipoda		X	X	X	X																
Bivalvia		X	X	X						X		X									

TAXA IDENTIFIED DURING FOCUSED FEASABILITY STUDY AND 1995 SAMPLING
AREA A DOWNSTREAM WATERCOURSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Reference Areas								Impacted Areas										
Order	Family/Genus	Reference Pond (FFS)	BRS-1(FFS)	BRS-2 (FFS)	BRS-3 (FFS)	Niantic Pond	Pequot Woods	Fishtown Brook (FB28)	Fishtown Brook (FB29)	Stream 4 (FFS)	Stream 1 (FFS)	Upper Pond (FFS)	Lower Pond (FFS)	OBDA (FFS)	Stream 1	Stream 2	Stream 3	Stream 4	Upper Pond	OBDA	Lower Pond
Gastropodia				X	X							X									
Hirudinoidea		X	X	X																	
Isopoda				X	X																
Diplopoda										X											

Note: Macroinvertebrate sampling performed for Aquatic Macroinvertebrate Assessment (April - June 1995), unless designated with (FFS) for Focused Feasibility Study Area A Downstream/OBDA (OCt. 1993)
See figure X for location of reference pond, BRS-1, BRS-2, BRS-3
See figure X for the location of Niantic Pond, Pequot Woods, Fishtown Brook, Stream1, Stream 2, Stream 3, Stream 4, OBDA, Upper Pond, Lower Pond , and OBDA
Fishtown Brook sampling station 28 served as the reference stream for streams 1 and 2
Fishtown Brook sampling station 29 served as the reference stream for streams 3 and 4
Niantic Pond served as the reference stream for Lower Pond
Pequot Woods served as the reference stream for Upper Pond and OBDA

APPENDIX G.2.2

SURFACE WATER QUALITY DATA

SUMMARY OF WATER QUALITY DATA FROM 1995 SAMPLING
AREA A DOWNSTREAM WATERCOUSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

Location	sample size		pH S.U.	Conductivity mS/CM	Turbidity NTU	Temperature oC	Dissolved Oxygen Mg/L	Salinity %
Pequot Woods	n = 15	Mean	6.23	0.12	3.6	14.2	8.38	0
		(Min - Max)	(4.73 - 7.4)	(0.07 - 0.227)	(0 - 17)	(7.5 - 26.6)	(2.41 - 11)	0
OBDA Pond	n = 15	Mean	6.6	1.46	5.5	9.6	4.73	0.06
		(Min - Max)	(5.84 - 7.44)	(0.645 - 2.69)	(2 - 18)	(4.7 - 16.5)	(2.01 - 8.5)	(0.02 - 0.13)
Upper Pond	n = 14	Mean	7.31	0.83	16.5	8.98	10.4	0.026
		(Min - Max)	(5.94 - 9.04)	(0.587 - 1.62)	(3 - 72)	(2.3 - 20.6)	(5.93 - 16.3)	(0.002 - 0.07)
Fishtown Brook (FB 29	n = 5	Mean	6.12	0.266	4.8	9.5	7.77	0
		(Min - Max)	(4.59 - 8.15)	(0.006 - 0.98)	(2 - 10)	(4.3 - 18.3)	(6.21 - 9.33)	0
Stream 1	n = 15	Mean	6.53	3.26	6.31	11.2	8.82	0.03
		(Min - Max)	(5.69 - 7.85)	(0.664 - 29.7)	(2 - 25)	(6.7 - 18.9)	(4.99 - 14.79)	(0.02 - 0.04)
Stream 2	n = 15	Mean	6.33	0.682	32.4	12.3	4.17	0.026
		(Min - Max)	(5.53 - 6.56)	(0.5 - 0.801)	(1 - 90)	(5.9 - 21.7)	(1.41 - 6.55)	(0.02 - 0.03)
Fishtown Brook (FB 28	n = 5	Mean	5.89	0.11	1.4	13.3	8.39	0
		(Min - Max)	(3.72 - 7.02)	(0.085 - 0.118)	(0 - 3)	(7.3 - 24.5)	(7.31 - 9.09)	0
Stream 3	n = 15	Mean	7.06	0.85	8.79	9.3	9.42	0.03
		(Min - Max)	(6.36 - 8.08)	(0.58 - 1.44)	(4 - 17)	(0.6 - 20)	(4.94 - 12.98)	(0.02 - 0.06)
Stream 4	n = 15	Mean	6.71	0.91	19.5	8.4	9.28	0.036
		(Min - Max)	(4.77 - 7.65)	(0.604 - 1.77)	(7 - 130)	(2.6 - 19)	(5 - 12.51)	(0.02 - 0.08)
Niantic Pond	n = 15	Mean	4.21	0.041	0.8	11.9	7	0
		(Min - Max)	(2.8 - 4.7)	(0.035 - 0.065)	(0 - 4)	(6 - 22.7)	(2.83 - 9.29)	0
Lower Pond	n = 15	Mean	6.25	0.9	11.9	11.5	4.49	0.027
		(Min - Max)	(5.42 - 7.89)	(0.52 - 2.94)	(6 - 28)	(5.5 - 20.2)	(1.4 - 9.14)	(0.02 - 0.03)

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APPENDIX G.2.3

LABORATORY DATA FOR MACROINVERTEBRATE TAXONOMY (ETT ENVIRONMENTAL)

APPENDIX TABLE 1. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER EPHEMEROPTERA (mayflies)	stage	PP25	Sites PP26	PP27	Total Found	(#/m2)	NP22	Sites NP23	NP24	Total Found	(#/m2)	UP16	Sites UP17	UP18	Total Found	(#/m2)	OP04	Sites OP05	OP06	Total Found	(#/m2)	LP10	Sites LP11	LP12	Total Found	(#/m2)	Biotic Index
Leptophlebiidae (damaged)	nymph	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	4
ORDER TRICHOPTERA (caddisflies)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Polycentropus (sensu lato)	larva	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
ORDER ODONATA (dragonflies)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Coenagrionidae (damaged)	nymph	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	9
Plathemis	nymph	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	8
O. MEGALOPTERA (hellgrammites)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Sialis	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	4
ORDER COLEOPTERA (beetles)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Cyphon	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	14	9
Hydrochus	larva	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hydroporus	adult	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

APPENDIX TABLE 1. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER DIPTERA - other than midges	stage	PP25	PP26	PP27	Sites Total Found	(#/m2)	NP22	NP23	NP24	Sites Total Found	(#/m2)	UP16	UP17	UP18	Sites Total Found	(#/m2)	OP04	OP05	OP06	Sites Total Found	(#/m2)	LP10	LP11	LP12	Sites Total Found	(#/m2)	Biotic Index
Bittacomorpha	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	9
Chaoborus	larva	1	0	0	1	14	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	8
Chrysops	larva	3	4	2	9	130	0	0	0	0	0	1	0	0	1	14	0	0	1	1	14	0	0	0	0	0	6
Mochlonyx	larva	0	0	0	0	0	2	4	11	17	246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Ormosia	larva	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	3
Palpomyia	larva	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Stilobezzia	larva	0	0	1	1	14	0	0	0	0	0	0	1	0	1	14	7	492	4	503	7290	0	0	0	0	0	6
Tipulidae (undescribed genus)	larva	0	0	0	0	0	0	5	7	12	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

ORDER DIPTERA - (Tanypodinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Ablabesmyia	larva	0	6	3	9	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Procladius	larva	3	2	13	18	261	0	0	0	0	0	0	0	4	4	58	1	0	0	1	14	0	0	0	0	0	9
Psectrotanypus	larva	0	0	0	0	0	0	0	0	0	0	54	0	32	86	1246	77	66	92	235	3406	1	0	0	1	14	10
Tanypus	larva	6	2	22	30	435	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10

ORDER DIPTERA - (Orthocladiinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Hydrobaenus	larva, pupa	0	9	0	9	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Parametriocnemus spp.	larva	0	2	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Psectrocladius spp.	larva	1	0	0	1	14	94	2	6	102	1478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Pseudosmittia	larva	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Rheocricotopus spp.	larva	0	7	0	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Chironomini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Einfeldia spp.	larva	0	4	17	21	304	0	0	0	0	0	7	1	9	17	246	0	4	1	5	72	0	0	0	0	0	9
Glyptotendipes	larva	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Kiefferulus	larva	8	0	9	17	246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Paratendipes	larva	0	0	17	17	246	0	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	8
Phaenopsectra	larva	0	0	0	0	0	18	1	7	26	377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Polypedilum spp.	larva	4	4	3	11	159	2	0	3	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Paratanytarsus	larva	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Rheotanytarsus	larva	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Tanytarsus	larva	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Zavreliella	larva	0	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

00002

APPENDIX TABLE 1. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
		Sites			Total		Sites			Total		Sites			Total		Sites			Total		Sites			Total		
ORDER ANNELIDA - (worms, leeches)		PP25	PP26	PP27	Found	(#/m2)	NP22	NP23	NP24	Found	(#/m2)	UP16	UP17	UP18	Found	(#/m2)	OP04	OP05	OP06	Found	(#/m2)	LP10	LP11	LP12	Found	(#/m2)	Biotic Index
Naididae (damaged)	worm	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Tubificidae (damaged or w/o cap. setae)	worm	1	17	1	19	275	0	0	1	1	14	12	3	23	38	551	7	21	18	46	667	2	0	1	3	43	9

ORDER MOLLUSCA - (clams, snails)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Ferrissia	snail	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.9
Fossaria	snail	0	0	0	0	0	0	0	0	0	0	8	1	1	10	145	1	0	0	1	14	0	0	0	0	0	7
Menetus	snail	0	0	7	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.4
Pisidium	clam	0	4	0	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.8
Sphaerium	clam	0	1	1	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7

ORDER CRUSTACEA - (fairy shrimp, isopods, scuds)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	0	1	2	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Hyalella	scud	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.9
Synurella	scud	1	8	5	14	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

APPENDIX TABLE 2. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

Biological Indices	Pequot Woods Pond (PP)				Niantic Pond (NP)				Upper Pond (UP)				OBDA Pond (OP)				Lower Pond (LP)			
	PP25	PP26	PP27	Total	NP22	NP23	NP24	Total	UP16	UP17	UP18	Total	OP04	OP05	OP06	Total	LP10	LP11	LP12	Total
Taxa Richness per Composite Ponar	10	17	18	28	6	5	8	11	5	6	6	10	9	4	5	11	3	0	1	3
Total # of Organisms	29	74	108	211	118	13	37	168	82	9	70	161	99	583	116	798	4	0	1	5
Density (no. organisms/m2)	420	1072	1565	3058	1710	188	536	2435	1188	130	1014	2333	1435	8449	1681	11565	58	0	14	72
[redacted]	[redacted]																			
Community Biotic Index Rating	8.38				7.4				9.3				7.38				9.2			

000004

APPENDIX TABLE 3. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 14 - 16 March 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER EPHEMEROPTERA (mayflies)	stage	Sites FB28	Sites FB29	Total Found	(#/m2)	Sites S101	Sites S102	Sites S103	Total Found	(#/m2)	Sites S207	Sites S208	Sites S209	Total Found	(#/m2)	Sites S313	Sites S314	Sites S315	Total Found	(#/m2)	Sites S419	Sites S420	Sites S421	Total Found	(#/m2)	Biotic Index
Leptophlebia	nymph	0	5	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Oecetis	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.9
Molanna	larva	6	0	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Ironoquia	larva	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Platycentropus	larva	0	4	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Psilotreta	larva, pup	6	0	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pycnopsyche	larva	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

ORDER ODONATA (dragonflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Cordulegaster	nymph	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chauliodes	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	4
Sialis	larva	0	7	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

ORDER COLEOPTERA (beetles)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Curculionidae	larva	0	0	0	0	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	6

000005

APPENDIX TABLE 3. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 14 - 16 March 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER DIPTERA - other than midges	stage	Sites FB28	Sites FB29	Total Found	(#/m2)	S101	Sites S102	S103	Total Found	(#/m2)	S207	Sites S208	S209	Total Found	(#/m2)	S313	Sites S314	S315	Total Found	(#/m2)	S419	Sites S420	S421	Total Found	(#/m2)	Biotic Index
Bezzia	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	6
Chrysops	larva	1	6	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hexatoma	larva	0	18	18	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Limnophila	larva	0	2	2	29	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	3
Ormosia	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	1	0	0	1	14	3
Palpomyia	larva	0	4	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Ptychoptera	larva	2	1	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Stilobezzia	larva	1	10	11	159	0	0	0	0	0	0	0	0	0	0	0	0	2	2	29	0	0	0	0	0	6
Tipulidae (imm.)	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Tipulidae (undescribed genus)	larva	0	0	0	0	0	0	0	0	0	12	2	0	14	203	0	0	0	0	0	0	0	0	0	0	3
Tipula (imm.)	larva	0	0	0	0	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	4
Tipula (Yamatotipula) sp.	larva	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Meropelopia	larva	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
nr. Monopelopia	larva	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	9
Procladius	larva	0	2	2	29	2	0	1	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Psectrotanypus	larva	0	0	0	0	0	0	2	2	29	0	0	0	0	0	1	3	26	30	435	0	0	0	0	0	10
Zavrelimyia	larva	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Diplocladius	larva, pup	3	0	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hydrobaenus	larva, pup	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Parakiefferiella	larva	2	1	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.9
Parametriocnemus spp.	larva	0	2	2	29	0	0	0	0	0	3	13	0	16	232	2	1	0	3	43	0	0	0	0	0	5
Psectrocladius spp.	larva	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	8
Rheocricotopus spp.	larva	3	11	14	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Einfeldia spp.	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	9	12	174	1	0	0	1	14	9
Microtendipes	larva	8	0	8	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Paratendipes	larva	1	3	4	58	0	0	8	8	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Polypedilum spp.	larva	0	5	5	72	0	0	0	0	0	0	0	0	0	0	0	1	0	1	.14	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Cladotanytarsus	larva	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.4
Tanytarsus spp.	larva	4	12	16	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.7

000118

APPENDIX TABLE 3. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 14 - 16 March 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER ANNELIDA - (worms, leeches)		Sites FB28	FB29	Total Found	(#/m2)	Sites S101	S102	S103	Total Found	(#/m2)	Sites S207	S208	S209	Total Found	(#/m2)	Sites S313	S314	S315	Total Found	(#/m2)	Sites S419	S420	S421	Total Found	(#/m2)	Biotic Index
Batracobdella ?	leech	2	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.1
Lumbriculidae (damaged)	worm	0	0	0	0	0	0	0	0	0	0	3	10	13	188	2	0	1	3	43	0	0	0	0	0	7.3
Tubificidae (damaged or w/o cap. setae)	worm	4	3	7	101	1	0	0	1	14	21	8	52	81	1174	5	17	10	32	464	76	10	9	95	1377	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	0	0	0	0	0	1	1	14	0	0	0	0	0	1	3	5	9	130	0	0	0	0	0	7
Pisidium	clam	10	10	20	290	2	0	178	180	2609	0	0	0	0	0	0	6	30	36	522	0	0	0	0	0	6.8
Sphaerium	clam	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7

ORDER CRUSTACEA - (fairy shrimp, isopods, scuds		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	0	92	92	1333	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Hyalella	scud	6	0	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.9
Synurella	scud	4	153	157	2275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

APPENDIX TABLE 4. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 14 - 16 March 1995

Biological Indices	Fishtown Brook (FB)			Stream 1				Stream 2				Stream 3				Stream 4			
	FB28	FB29	Total	S101	S102	S103	Total	S207	S208	S209	Total	S313	S314	S315	Total	S419	S420	S421	Total
Taxa Richness per Composite Ponar	19	24	33	4	0	7	9	7	4	3	9	6	9	8	12	3	1	1	3
Total # of Organisms	66	359	425	6	0	192	198	42	26	63	131	13	34	84	131	78	10	9	97
Density (no. organisms/m2)	957	5203	6159	87	0	2783	2870	609	377	913	1899	188	493	1217	1899	1130	145	130	1406
Community Biotic Index Rating	7.24			6.9				7.53				8.18				8.94			

00008

APPENDIX TABLE 5. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER EPHEMEROPTERA (mayflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Leptophlebia	nymph		P																												4
Leptophlebiidae (damaged)	nymph																						P								4
ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Agrypnia	larva																	D													7
Oecetis	larva	P																													2.9
Molanna	larva	P																													6
Ironoquia	larva		P																												2
Platycentropus	larva		P																												4
Polycentropus (sensu lato)	larva																		D		P										6
Psilotreta	larva,pupa	P																													0
Ptilostomis	larva																														5
Pycnopsyche	larva		P															D	D												4
ORDER ODONATA (dragonflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Boyeria	nymph																											D			2
Coenagrionidae (damaged)	nymph																						P								3
Cordulegaster	nymph					P																									3
Plathemis	nymph																								P						3
Tramea	nymph																						D								3
O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Chauliodes	larva										P																				4
Sialis	larva		P																						P						4
ORDER COLEOPTERA (beetles)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Agabus	larva																	D													9
Curculionidae	larva						P																								6
Cyphon	larva																			P							D	D, P			9
Hydrochus	larva																														8
Hydroporus	adult																	D	D		P		D								9
ORDER HETEROPTERA (true bugs)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Belostoma	adult																	D													9.8

000109

APPENDIX TABLE 5. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - other than midges	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Bezzia	larva											P																			6
Bittacomorpha	larva																								P						9
Chaoborus	larva															P							P								8
Chrysops	larva	P	P													P	P	P				P					P				6
Hexatoma	larva		P																												2
Limnophila	larva		P						P																						3
Mochlonyx	larva																		D, P	P	P										8
Ormosia	larva										P		P											P							3
Palpomyia	larva		P														P														6
Ptychoptera	larva	P	P																												9
Stilobezzia	larva	P	P									P						P					P		P	P	D, P				6
Tipulidae (imm.)	larva	P																													3
Tipulidae (undescribed genus)	larva						P	P												P	P										3
Tipula (imm.)	larva						P																								4
Tipula (Yamatotipula) sp.	larva			P																											4

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ablabesmyia	larva																P	D, P													8
Meropelopia	larva		P																												9
nr. Monopelopia	larva						P																								9
Procladius	larva		P	P		P										P	P	D, P						P	P						9
Psectrotanypus	larva					P				P	P	P										P		P	P	P	D, P	P			10
Tanypus	larva															P	P	D, P													10
Zavrelimyia	larva					P																									8

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Diplocladius	larva, pupa	P																													8
Hydrobaenus	larva, pupa	P															P														8
Orthocladiinae (undescribed genus)	larva																						D								6
Pseudorthocladius	larva																		D												0
Parakiefferiella	larva	P	P																												5,9
Parametriocnemus spp.	larva		P				P	P		P	P						P											D			5
Psectrocladius spp.	larva						P									P			D, P	P	P										8
Pseudosmittia	larva																		P												6
Rheocricotopus spp.	larva	P	P														P	D													6

000010

APPENDIX TABLE 5. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 14 - 16 March 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Einfeldia spp.	larva									P	P	P	P				P	D, P				P	P	P		P	D, P	D			9
Endochironomus	larva																						D								10
Glyptotendipes	larva																	P													10
Kiefferulus	larva															P		D, P													10
Microtendipes	larva	P																													6
Paratendipes	larva	P	P			P												D, P							P						8
Phaenopsectra	larva																		D, P	P	P										7
Polypedilum spp.	larva		P								P					P	P	D, P	P		P										6
Chironomini (undescribed genus?)	larva																						D				D				8

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Cladotanytarsus	larva		P																												6.4
Paratanytarsus	larva															P															6
Rheotanytarsus	larva																		P												6
Tanytarsus spp.	larva	P	P														P														6.7
Zavreliella	larva																	D, P													6.7

ORDER ANNELIDA - (worms, leeches)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Batracobdella ?	leech	P																													7.1
Lumbriculidae (damaged)	worm							P	P	P		P																			7.3
Naididae (damaged)	worm																	P										D			6
Tubificidae (damaged or w/o cap. setae)	worm	P	P	P			P	P	P	P	P	P	P	P	P	P	P	P	D		P	P	P	P	P	P	D, P	P		P	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ferrissia/Laevapex	snail																	P													6.9
Fossaria	snail					P				P	P	P										P	D, P	P	P						7
Menetus	snail																	D, P					D								8.4
Pisidium	clam	P	P	P		P					P	P					P	D					D								6.8
Sphaerium	clam		P														P														7.7

ORDER CRUSTACEA - (fairy shrimp, isopods, scuds)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Branchinecta	shrimp																		D												
Caecidotea	isopod		P														P	D, P													9
Hyalella	scud	P															P														7.9
Synurella	scud	P	P													P	D, P	P	D												8

APPENDIX TABLE 6. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
		Sites			Total		Sites			Total		Sites			Total		Sites			Total		Sites			Total		Biotic
ORDER EPHEMEROPTERA (mayflies)	stage	PP25	PP26	PP27	Found	(#/m2)	NP22	NP23	NP24	Found	(#/m2)	UP16	UP17	UP18	Found	(#/m2)	OP04	OP05	OP06	Found	(#/m2)	LP10	LP11	LP12	Found	(#/m2)	Index
Leptophlebiidae (damaged)	nymph	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	4
ORDER TRICHOPTERA (caddisflies)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Ptilostomis	larva	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
O. MEGALOPTERA (hellgrammites)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Sialis	larva	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	4
ORDER COLEOPTERA (beetles)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Agabus	larva	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	9
Chrysomelidae TYPE 1	larva	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Chrysomelidae TYPE 2	larva	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9

APPENDIX TABLE 6. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER DIPTERA - other than midges	stage	PP25	Sites PP26	PP27	Total Found	(#/m2)	NP22	Sites NP23	NP24	Total Found	(#/m2)	UP16	Sites UP17	UP18	Total Found	(#/m2)	OP04	Sites OP05	OP06	Total Found	(#/m2)	LP10	Sites LP11	LP12	Total Found	(#/m2)	Biotic Index
Chaoborus	larva	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Chrysops	larva	2	3	0	5	72	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	6
Hydrophorus	larva	0	0	0	0	0	4	0	0	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Mochlonyx	larva	0	0	0	0	0	1	8	12	21	304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Ormosia	larva	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	3
Stilobezzia	larva	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	1	933	0	934	13536	0	0	0	0	0	6
Tipulidae (undescribed genus)	larva	0	0	0	0	0	33	5	17	55	797	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

ORDER DIPTERA - (Tanypodinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Procladius	larva	5	0	2	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Psectrotanypus	larva, pupa	1	0	8	9	130	0	0	1	1	14	72	0	22	94	1362	4	45	1	50	725	0	0	0	0	0	10
Tanypus	larva	9	0	7	16	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Zavrelimyia	larva	0	4	0	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

ORDER DIPTERA - (Orthocladiinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Corynoneura	larva	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Limnophyes	larva	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	8
Psectrocladius	larva, pupa	1	0	0	1	14	3	0	3	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Pseudosmittia	larva	0	0	0	0	0	2	1	2	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Rheocricotopus	larva	0	2	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Chironomini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Chironomini (undescribed genus)	larva	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chironomus	larva, pupa	0	0	0	0	0	0	0	0	0	0	3	0	9	12	174	0	0	0	0	0	0	0	0	0	0	10
Einfeldia	larva	0	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Kiefferulus	larva	8	0	4	12	174	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Paratendipes	larva	0	0	6	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Phaenopsectra	larva	0	0	0	0	0	15	7	0	22	319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Polypedilum	larva	1	0	1	2	29	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Tanytarsus	larva	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

000013

APPENDIX TABLE 6. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER ANNELIDA - (worms, leeches)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Lumbricutidae (damaged)	worm	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Tubificidae (damaged or w/o cap. setae)	worm	0	8	1	9	130	0	0	0	0	0	0	0	3	3	43	3	6	0	9	130	1	1	1	3	43	9

ORDER MOLLUSCA - (clams, snails)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	0	0	0	0	0	0	0	0	0	5	0	7	12	174	2	3	0	5	72	0	0	0	0	0	7
Pseudosuccinea	snail	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Pisidium	clam	2	41	0	43	623	0	0	0	0	0	0	0	2	2	29	0	0	0	0	0	0	0	0	0	0	6.8

ORDER CRUSTACEA - (fairy shrimp, scuds)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Branchinecta	shrimp	0	0	0	0	0	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Synurella	scud	0	4	0	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

APPENDIX TABLE 7. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

Biological Indices	Pequot Woods Pond (PP)				Niantic Pond (NP)				Upper Pond (UP)				OBDA Pond (OP)				Lower Pond (LP)			
	PP25	PP26	PP27	Total	NP22	NP23	NP24	Total	UP16	UP17	UP18	Total	OP04	OP05	OP06	Total	LP10	LP11	LP12	Total
Taxa Richness per Composite Ponar	10	8	10	20	9	7	7	15	4	1	7	9	5	4	1	5	1	1	1	1
Total #.of Organisms	31	64	33	128	62	24	37	123	82	2	45	129	11	987	1	999	1	1	1	3
Density (no. organisms/m2)	449	928	478	1855	899	348	536	1783	1188	29	652	1870	159	14304	14	14478	14	14	14	43
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Community Biotic Index Rating	8.10				5.37				9.46				6.23				9.00			

** Technically, the Shannon-Weaver Index should not be used if the number of organisms is less than 100.*

APPENDIX TABLE 8. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 5 - 7 April 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER EPHEMEROPTERA (mayflies)	stage	Sites FB28	Sites FB29	Total Found	(#/m2)	S101	Sites S102	S103	Total Found	(#/m2)	S207	Sites S208	S209	Total Found	(#/m2)	S313	Sites S314	S315	Total Found	(#/m2)	S419	Sites S420	S421	Total Found	(#/m2)	Biotic Index
Leptophlebia	nymph	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Grammotaulis	larva	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lepidostoma	larva	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Limnephilidae (immature)	larva	1	1	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Phylocentropus	larva	0	5	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
ORDER ODONATA (dragonflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Enallagma	nymph	0	0	0	0	3	0	0	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Sialis	larva	0	8	8	116	0	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
ORDER COLEOPTERA (beetles)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Stenelmis	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

APPENDIX TABLE 8. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 5 - 7 April 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER DIPTERA - other than midges	stage	Sites FB28	FB29	Total Found	(#/m2)	Sites S101	S102	S103	Total Found	(#/m2)	Sites S207	S208	S209	Total Found	(#/m2)	Sites S313	S314	S315	Total Found	(#/m2)	Sites S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chrysops	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hydrophorus	larva	0	0	0	0	0	0	0	0	0	3	0	0	3	43	0	0	0	0	0	0	0	0	0	0	6
Ormosia	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	14	3
Stilobezzia	larva	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Tipulidae (undescribed genus)	larva	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	3

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Clinotanypus	larva	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Conchapelopia	larva	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
nr. Monopelopia	larva	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	0	0	0	0	0	0	0	0	9
Procladius	larva	0	13	13	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Psectrotanypus	larva	0	0	0	0	0	0	1	1	14	0	0	0	0	0	2	2	6	10	145	1	0	0	1	14	10
Zavrelimyia	larva	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Cricotopus	larva, pup	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Limnophyes	larva	0	0	0	0	0	0	0	0	0	1	0	0	1	14	0	0	3	3	43	0	0	0	0	0	8
Rheocricotopus	larva	4	0	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chironomus	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	43	0	0	0	0	0	10
Microtendipes	larva	7	4	11	159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Paratendipes	larva	0	1	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Phaenopsectra	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Tribelos	larva	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Tanytarsus spp.	larva	1	1	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.7

APPENDIX TABLE 8. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 5 - 7 April 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER ANNELIDA - (worms, leeches)		Sites FB28	Sites FB29	Total Found	(#/m2)	Sites S101	Sites S102	Sites S103	Total Found	(#/m2)	Sites S207	Sites S208	Sites S209	Total Found	(#/m2)	Sites S313	Sites S314	Sites S315	Total Found	(#/m2)	Sites S419	Sites S420	Sites S421	Total Found	(#/m2)	Biotic Index
Lumbriculidae (damaged)	worm	0	0	0	0	0	0	0	0	0	0	20	2	22	319	0	0	3	3	43	0	0	0	0	0	7.3
Tubificidae (damaged or w/o cap. setae)	worm	3	0	3	43	0	0	1	1	14	1	3	22	26	377	2	0	0	2	29	27	9	19	55	797	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	0	0	0	3	3	1	7	101	0	0	0	0	0	6	4	3	13	188	0	0	0	0	0	7
Pisidium	clam	2	1	3	43	9	0	9	18	261	0	0	0	0	0	4	11	27	42	609	0	0	0	0	0	6.8
Pseudosuccinea	snail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	6
Sphaeriidae (undescribed genus)	clam	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7

ORDER CRUSTACEA - (isopods, scuds)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	2	17	19	275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Synurella	scud	11	57	68	986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

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APPENDIX TABLE 9. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 5 - 7 April 1995

Biological Indices	Fishtown Brook (FB)			Stream 1				Stream 2				Stream 3				Stream 4			
	FB28	FB29	Total	S101	S102	S103	Total	S207	S208	S209	Total	S313	S314	S315	Total	S419	S420	S421	Total
Taxa Richness per Composite Ponar	11	19	24	3	1	5	6	5	2	2	6	5	3	6	8	3	1	1	3
Total # of Organisms	34	129	163	15	3	13	31	7	23	24	54	16	17	45	78	29	9	19	57
Density (no. organisms/m2)	493	1870	2362	217	43	188	449	101	333	348	783	232	246	652	1130	420	130	275	826
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Community Biotic Index Rating	7.35			7.14				8.01				7.47				8.91			

** Technically, the Shannon-Weaver Index should not be used if the number of organisms is less than 100.*

APPENDIX TABLE 10. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER EPHEMEROPTERA (mayflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Callibaetis	nymph															D															9
Leptophlebia	nymph		P																												4

ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Grammotaulis	larva		P																												4
Lepidostoma	larva		P																												1
Phylocentropus	larva		P																												5
Polycentropus (sensu lato)	larva																			P											6
Ptilostomis	larva																		P												5

ORDER ODONATA (dragonflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Enallagma	nymph			P																											9
Ischnura / Anomalagrion (damaged)	nymph															D															9
Plathemis	nymph																								D						8

O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Sialis	larva		P			P												P							D, P						4

ORDER COLEOPTERA (beetles)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Agabus	larva																					D	P								9
Chrysomelidae TYPE 1	larva															P															9
Chrysomelidae TYPE 2	larva															P															9
Coptotomus	adult																								D						9
Cyphon	larva																												D		9
Deronectes	larva																								D						8
Hydaticus	larva																			D											8
Hydroporus	adult																												D		8.9
Peliodytes	adult															D															8.5
Stenelmis	larva	P																													5

ORDER HETEROPTERA (true bugs)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Hesperocorixa	adult															D															9.8
Pelocoris	adult															D															9.8
Trichocorixa	adult															D															9.8

000020

APPENDIX TABLE 10. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - other than midges	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Bittacomorpha	larva, pupa																								P						9
Chaoborus	larva															P															8
Chrysops	larva	P														P	P	P				P					P				6
Helius	larva																								D						7
Hydrophorus	larva						P												P												4
Mochlonyx	larva																		P	D, P	P										8
Odontomyia	larva																								D						6
Ormosia	larva												P											P	D						7
Pilaria	larva																								D						6
Stilobezzia	larva		P															P				D			D, P	P					6
Tipulidae (undescribed genus)	larva						P												P	P	P										3

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ablabesmyia	larva															D															8
Conchapelopia	larva		P																												6
nr. Monopelopia	larva						P																								9
Procladius	larva, pupa		P													D, P		P							D						9
Psectrotanypus	larva, pupa					P				P	P	P	P									D			D				D		10
Tanypus	larva															P		P													10
Zavrelimyia	larva		P														P														8

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Corynoneura	larva															P															8
Cricotopus	larva		P																												8
Limnophyes	larva											P												P							6
Parametriocnemus	larva																												D		5
Psectrocladius	larva, pupa						P									D, P			P		P				D						8
Pseudosmittia	larva																		P	P	P										6
Rheocricotopus	larva	P																													6

000021

APPENDIX TABLE 10. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 5 - 7 April 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Chironomus	larva, pupa											P										D, P		P							9
Einfeldia	larva																	P													10
Kiefferulus	larva																	P		P											10
Microtendipes	larva	P	P																												6
Paratendipes	larva		P															P													8
Phaenopsectra	larva	P																	P	P											7
Polypedilum	larva															D, P		P	P												6
Tribelos	larva		P																												5
Chironomini (undescribed genus?)	larva																		P												

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Tanytarsus spp.	larva	P	P														P														6.7

ORDER ANNELIDA - (worms, leeches)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Lumbriculidae (damaged)	worm							P	P			P								P									D		7.3
Tubificidae (damaged or w/o cap. setae)	worm		P			P	P	P	P	P			P	P	P		P	P						P	D, P	P		P	D, P	P	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ferrissia/Laevapex	snail															D															6.9
Fossaria	snail			P	P	P				P	P	P										D, P		P	D, P	P					7
Menetus	snail															D															8.4
Pisidium	clam	P	P	P		P				P	P	P				D, P	P							P							6.8
Pseudosuccinea	snail									P							P					D									7
Sphaeriidae (undescribed genus)	clam		P																												7.7

ORDER CRUSTACEA - (fairy shrimp, isopods, scuds)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Branchinecta	shrimp																				P										
Caecidotea	isopod	P	P														P	D, P													9
Hyalella	scud															D															7.9
Synurella	scud	P	P													D															8

000022

APPENDIX TABLE 11. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 15 - 17 May 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER COLEOPTERA (beetles)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Coptotomus	adult	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	9
Hydroporus	larva	0	0	0	0	0	4	0	0	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.9

ORDER DIPTERA - other than midges	stage	PP25	Sites PP26	PP27	Total Found	(#/m2)	NP22	Sites NP23	NP24	Total Found	(#/m2)	UP16	Sites UP17	UP18	Total Found	(#/m2)	OP04	Sites OP05	OP06	Total Found	(#/m2)	LP10	Sites LP11	LP12	Total Found	(#/m2)	Biotic Index
Chrysops	larva	0	6	0	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hydrophorus	larva	0	3	0	3	43	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Ormosia	larva	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Palponyia	larva	0	3	4	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Stilobezzia	larva	6	12	0	18	261	0	0	0	0	0	0	0	2	2	29	11	186	0	197	2855	0	0	0	0	0	6
Tipulidae (undescribed genus)	larva	0	0	0	0	0	4	6	8	18	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

ORDER DIPTERA - (Tanypodinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Psectrotanypus	larva, pupa	0	0	0	0	0	0	0	0	0	0	0	0	10	10	145	10	14	25	49	710	0	0	0	0	0	10
Tanypus	larva	16	0	0	16	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10

ORDER DIPTERA - (Orthocladiinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Acricotopus	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	43	0	0	0	0	0	10
Corynoneura	larva	0	0	4	4	58	0	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Cricotopus	larva	0	6	0	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Eukiefferiella	larva	0	15	0	15	217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Brillia	larva	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Chaetocladius	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	58	0	0	0	0	0	4
Psectrocladius	larva	0	0	0	0	0	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Pseudosmittia	larva	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Rheocricotopus	larva	0	18	0	18	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

000023

APPENDIX TABLE 11. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 15 - 17 May 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER DIPTERA - (Chironomini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Chironomus	larva	0	0	0	0	0	216	58	26	300	4348	0	0	0	0	0	3	4	15	22	319	8	2	0	10	145	10
Einfeldia	larva	2	3	4	9	130	64	14	22	100	1449	0	0	0	0	0	0	5	12	17	246	0	0	0	0	0	9
Cladopelma	larva	2	0	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Paratendipes	larva	0	3	12	15	217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Polypedilum	larva	8	6	0	14	203	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Tanytarsus	larva	2	0	8	10	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER ANNELIDA - (worms, leeches)		PP25	Sites PP26	PP27	Total Found	(#/m2)	NP22	Sites NP23	NP24	Total Found	(#/m2)	UP16	Sites UP17	UP18	Total Found	(#/m2)	OP04	Sites OP05	OP06	Total Found	(#/m2)	LP10	Sites LP11	LP12	Total Found	(#/m2)	Biotic Index
Helobdella	leech	0	3	0	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lumbriculidae (damaged)	worm	0	0	4	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Naididae (damaged)	worm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	6
Tubificidae (damaged or w/o cap. setae)	worm	2	18	0	20	290	0	0	0	0	0	3	0	6	9	130	1	3	3	7	101	0	2	0	2	29	9

ORDER MOLLUSCA - (clams, snails)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	0	0	0	0	0	0	0	0	0	0	0	4	4	58	0	0	0	0	0	0	0	0	0	0	7
Pisidium	clam	0	21	8	29	420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.8

ORDER CRUSTACEA - (isopods, scuds)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	0	3	4	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Synurella	scud	0	30	4	34	493	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

APPENDIX TABLE 12. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 15 - 17 May 1995

Biological Indices	Pequot Woods Pond (PP)				Niantic Pond (NP)				Upper Pond (UP)				OBDA Pond (OP)				Lower Pond (LP)			
	PP25	PP26	PP27	Total	NP22	NP23	NP24	Total	UP16	UP17	UP18	Total	OP04	OP05	OP06	Total	LP10	LP11	LP12	Total
Taxa Richness per Composite Ponar	7	15	9	20	8	4	4	10	1	0	4	4	6	10	4	10	1	2	0	2
Total # of Organisms	38	150	52	240	296	79	58	433	3	0	22	25	27	220	55	302	8	4	0	12
Density (no. organisms/m2)*	551	2174	754	3478	4290	1145	841	6275	43	0	319	362	391	3188	797	4377	116	58	0	174
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Community Biotic Index Rating	7.42				9.36				8.84				7.2				9.83			

** Technically, the Shannon-Weaver Index should not be used if the number of organisms is less than 100.*

*** This composite sample was not preserved in the field; hence, no invertebrate organisms were discernible.*

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APPENDIX TABLE 13. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 15 - 17 May 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Limnephilus	larva	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lenarchus	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Psilotreta	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ORDER ODONATA (dragonflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Enallagma	nymph	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	9

O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Sialis	larva	1	12	13	188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

ORDER COLEOPTERA (beetles)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Deronectes	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Stenelmis	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

APPENDIX TABLE 13. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 15 - 17 May 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER DIPTERA - other than midges	stage	Sites FB28	FB29	Total Found	(#/m2)	Sites S101	S102	S103	Total Found	(#/m2)	Sites S207	S208	S209	Total Found	(#/m2)	Sites S313	S314	S315	Total Found	(#/m2)	Sites S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chrysops	larva	0	12	12	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hydrophorus	larva	0	3	3	43	0	0	0	0	0	9	0	0	9	130	0	0	0	0	0	0	0	0	0	0	6
Stilobezzia	larva	2	0	2	29	0	0	16	16	232	0	0	0	0	0	0	0	0	0	0	0	1	1	2	29	6
Tipula (Arctotipula)	larva	0	0	0	0	0	0	0	0	0	3	0	0	3	43	0	0	0	0	0	0	0	0	0	0	4
Tipulidae (undescribed genus)	larva	0	0	0	0	0	0	0	0	0	33	3	0	36	522	0	0	0	0	0	0	0	0	0	0	3

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Conchapelopia	larva	0	3	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Macropelopia	larva	0	6	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Natarsia	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Psectrotanypus	larva	0	0	0	0	0	0	4	4	58	0	0	0	0	0	0	2	15	17	246	0	0	1	1	14	10

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Cricotopus	larva, pup	1	3	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Diplocladius	larva	2	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Eukiefferiella	larva	0	0	0	0	0	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Limnophyes	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	14	0	0	0	0	0	8
Orthocladius	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Rheocricotopus	larva, pup	1	6	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chironomus	larva	0	0	0	0	0	0	0	0	0	0	36	4	40	580	0	0	3	3	43	2	1	0	3	43	10
Einfeldia	larva	0	0	0	0	0	0	16	16	232	0	3	0	3	43	0	0	0	0	0	0	1	0	1	14	9
Microtendipes	larva	2	3	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Paratendipes	larva	0	0	0	0	0	0	8	8	116	0	0	0	0	0	0	0	3	3	43	0	0	0	0	0	8
Polypedilum	larva	3	9	12	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Rheotanytarsus	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Tanytarsus	larva, pup	9	0	9	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.7

APPENDIX TABLE 13. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 15 - 17 May 1995

		Fishtown Brook (FB)				Stream 1					Stream 2					Stream 3					Stream 4					
ORDER ANNELIDA - (worms, leeches)		Sites FB28	Sites FB29	Total Found	(#/m2)	Sites S101	Sites S102	Sites S103	Total Found	(#/m2)	Sites S207	Sites S208	Sites S209	Total Found	(#/m2)	Sites S313	Sites S314	Sites S315	Total Found	(#/m2)	Sites S419	Sites S420	Sites S421	Total Found	(#/m2)	Biotic Index
Lumbriculidae (damaged)	worm	0	0	0	0	0	0	0	0	0	0	12	0	12	174	2	1	0	3	43	0	0	0	0	0	7.3
Tubificidae (damaged or w/o cap. setae)	worm	0	3	3	43	6	0	4	10	145	3	0	0	3	43	0	5	6	11	159	10	5	3	18	261	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	11	6	21	304	0	0	0	0	0	7
Pisidium	clam	40	12	52	754	4	0	204	208	3014	0	0	0	0	0	4	22	72	98	1420	2	0	0	2	29	6.8

ORDER CRUSTACEA - (isopods, scuds)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S207	S208	S209	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	51	66	117	1696	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	9
Hyalella	scud	2	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Ostracoda						+												+								
Synurella	scud	81	81	162	2348	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

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APPENDIX TABLE 14. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
County: New London, CT
Collection Date: 15 - 17 May 1995

Biological Indices	Fishtown Brook (FB)			Stream 1				Stream 2				Stream 3				Stream 4			
	FB28	FB29	Total	S101	S102	S103	Total	S207	S208	S209	Total	S313	S314	S315	Total	S419	S420	S421	Total
Taxa Richness per Composite Ponar	19	14	25	2	1	6	7	4	4	1	7	3	7	6	9	3	4	4	7
Total # of Organisms	202	222	424	10	1	252	263	48	54	4	106	10	43	105	158	14	8	6	28
Density (no. organisms/m2)	2928	3217	6145	145	14	3652	3812	696	783	58	1536	145	623	1522	2290	203	116	87	406
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Community Biotic Index Rating	7.7			7.06				6.75				7.44				8.77			

** Technically, the Shannon-Weaver Index should not be used if the number of organisms is less than 100.*

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APPENDIX TABLE 15. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 15 - 17 May 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER EPHEMEROPTERA (mayflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Callibaetis	nymph																D														9

ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Limnephilus	larva		P																												3
Lenarchus	larva	P																													1
Oecetis	larva																D														8
Platycentropus	larva																D														4
Psilotreta	larva	P																													0

ORDER ODONATA (dragonflies)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Boyeria	nymph																													D	6.3
Enallagma	nymph										P						D							D							9
Lestes	nymph																D														9

O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Chauliodes	larva																D														4
Sialis	larva	P	P																												4

ORDER COLEOPTERA (beetles)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Acilius	larva																				D										9
Agabus spp.	larva																D									D				D	9
Coptotomus	adult																									P					9
Cyphon	larva																D														9
Deronectes	larva	P																													9
Hydaticus	larva																				D										8
nr. Hydrochus spp.	adult																D				D										8
Hydroporus	larva, adul																D		P		D			D						D	8.9
Lampyridae	larva																D														9
Curculionidae	adult																D														9
Peltodytes	adult																D														8.5
Stenelmis	larva	P																													5

ORDER HETEROPTERA (true bugs)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Gerris	adult																				D										9
Notonectidae (immature)	juvenile																D				D										5
Notonecta	adult																				D										9
Sigara	adult	P																													9
Trichocorixa	adult																D														9

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APPENDIX TABLE 15. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 15 - 17 May 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - other than midges	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Aedes	larva, pupa																							D							9
Chrysops	larva		P														D														6
Hydrophorus	larva		P				P										D, P		P												6
Mochlonyx	larva, pupa																				D										8
Ormosia	larva																		P												7
Palpomyia	larva, pupa																D, P	P						D							6
Stilobezzia	larva	P				P								P	P	P	D, P								P	D, P					6
Tipula (Arctotipula)	larva						P																								4
Tipulidae (undescribed genus)	larva						P	P											P	P	D, P										3

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Conchapelopia	larva		P																												6
Macropelopia	larva		P																												9
Monopelopia	larva																D														6
Natarsia	larva, pupa	P															D														8
Psectrotanypus	larva, pupa					P					P	P			P									D, P	P	D, P	P				10
Tanypus	larva															P															10

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Acricotopus	larva																								P	D, P					10
Corynoneura	larva																	P			D, P										7
Cricotopus	larva, pupa	P	P														D, P														7
Diplocladius	larva	P																													8
Eukiefferiella	larva				P																										8
Limnophyes	larva										P																				8
Orthocladius	larva	P																													6
Parakiefferiella	larva																P														6
nr. Brillia	larva																		P		D										5
Chaetocladius	larva																								P	D, P					4
Psectrocladius	larva																		P		D										8
Pseudosmittia	larva																			P											6
Rheocricotopus spp.	larva, pupa	P	P														D, P														6

APPENDIX TABLE 15. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 2, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 15 - 17 May 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 2 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Chironomus	larva							P	P			P	P	P					P	P	D, P				P	D, P	P	P	P	D	10
Einfeldia	larva					P		P						P		P	P	P	P	P	P			D		P	P			D	9
Cladopelma	larva															P															9
Microtendipes	larva	P	P																												7
Paratendipes	larva					P						P					P	P													8
Polypedilum	larva, pupa	P	P													P	D, P				D					P					6

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Rheotanytarsus	larva	P																													6
Tanytarsus	larva	P														P	D	P			D										6.7
Zavreliella	larva, pupa																	P													6

ORDER ANNELIDA - (worms, leeches)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Helobdella	leech																P														9
Lumbriculidae (damaged)	worm							P		P	P																			D	7.3
Naididae (damaged)	worm																									P					6
Tubificidae (damaged or w/o cap. setae)	worm		P	P		P	P				P	P	P	P	P	P	D, P					P		D, P	P	P	P		P	D	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Fossaria	snail									P	P	P												D, P							7
Menetus	snail																D														8.4
Physella	snail																D														9
Pisidium	clam	P	P	P		P				P	P	P	P				D, P	P			D			D							6.8

ORDER CRUSTACEA - (water fleas, isopods, scuds)		FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ceriodaphnia	water flea																D														
Caecidotea	isopod	P	P												P		P	P													9
Hyalella	scud	P															D														8
Ostracoda				P								P																			
Synurella	scud	P	P														D, P	P													8

ORDER COLLEMBOLA - (springtails)	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Sminthuridae																D				P										

ORDER HYDRACARINA - (water mites)	FB28	FB29	S101	S102	S103	S207	S208	S209	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Hydracarina																D				P										

APPENDIX TABLE 16. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
		Sites			Total		Sites			Total		Sites			Total		Sites			Total		Sites			Total		
ORDER EPHEMEROPTERA (mayflies)	stage	PP25	PP26	PP27	Found	(#/m2)	NP22	NP23	NP24	Found	(#/m2)	UP16	UP17	UP18	Found	(#/m2)	OP04	OP05	OP06	Found	(#/m2)	LP10	LP11	LP12	Found	(#/m2)	Biotic Index
Callibaetis	nymph	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
ORDER HETEROPTERA (true bugs)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Corixidae (immature)	juvenile	0	4	0	4	58	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
ORDER COLEOPTERA (beetles)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Agabus	larva	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Berosus	larva	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Chrysomelidae TYPE 1	larva	12	0	0	12	174	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Curculionidae	larva	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Hydroporus	larva, adult	0	0	0	0	0	1	0	0	1	14		0	15	15	217	0	0	0	0	0	0	0	0	0	0	8.9
Tropisternus	larva, adult	3	2	0	5	72	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.8
Uvarus	adult	0	0	0	0	0	0	0	0	0	0		0	3	3	43	0	0	0	0	0	0	0	0	0	0	9
ORDER DIPTERA - other than midges	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Bittacomorpha	larva	0	0	0	0	0	0	0	0	0	0		0	0	0	0	1	0	0	1	14	0	0	0	0	0	9
Chaoborus	larva	3	0	0	3	43	1	0	0	1	14		0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Chrysops	larva	6	0	0	6	87	0	0	0	0	0		0	0	0	0	1	0	0	1	14	0	0	0	0	0	6
Hydrophorus	larva	0	0	0	0	0	2	0	0	2	29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Stilobezzia	larva	0	16	0	16	232	0	0	0	0	0		0	0	0	0	2	8	0	10	145	0	0	0	0	0	6
Tipulidae (undescribed genus)	larva	0	0	0	0	0	32	0	4	36	522		0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

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APPENDIX TABLE 16. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER DIPTERA - (Tanypodinae)	stage	PP25	Sites PP26	PP27	Total Found	(#/m2)	NP22	Sites NP23	NP24	Total Found	(#/m2)	UP16	Sites UP17	UP18	Total Found	(#/m2)	OP04	Sites OP05	OP06	Total Found	(#/m2)	LP10	Sites LP11	LP12	Total Found	(#/m2)	Biotic Index
Ablabesmyia spp.	larva	3	10	0	13	188	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Macropelopia	larva	3	0	0	3	43	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Procladius	larva	9	8	16	33	478	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Psectrotanypus	larva	3	4	0	7	101	0	0	0	0	0		0	36	36	522	59	68	216	343	4971	0	0	0	0	0	10
Tanypus	larva	33	8	32	73	1058	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Zavrelimyia	larva	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

ORDER DIPTERA - (Prodiamesinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Prodiamesa	larva	0	0	0	0	0	0	0	0	0	0		0	0	0	0	1	6	0	7	101	0	0	0	0	0	3

ORDER DIPTERA - (Orthocladiinae)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Acricotopus	larva	0	0	0	0	0	0	0	0	0	0		0	0	0	0	1	2	0	3	43	0	0	0	0	0	10
Corynoneura	larva	0	60	0	60	870	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Cricotopus	larva	0	0	0	0	0	0	0	0	0	0		2	3	5	72	0	0	0	0	0	0	0	0	0	0	7
Parakiefferiella	larva	0	0	0	0	0	1	0	2	3	43		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Pseudosmittia	larva	0	0	0	0	0	2	0	0	2	29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Chironomini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Chironomus	larva	51	8	36	95	1377	63	0	8	71	1029		0	3	3	43	42	10	16	68	986	4	0	20	24	348	10
Einfeldia	larva	3	4	4	11	159	3	0	0	3	43		2	3	5	72	1	2	4	7	101	0	0	2	2	29	9
Hyporhygma (undescribed species)	larva	3	0	0	3	43	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Microtendipes	larva	0	6	0	6	87	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Phaenopsectra	larva	3	0	0	3	43	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Polypedilum	larva	21	54	12	87	1261	0	0	0	0	0		4	0	4	58	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Cladotanytarsus	larva	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Rheotanytarsus	larva	0	22	0	22	319	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Tanytarsus	larva	6	18	12	36	522	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Zavreliella	larva	0	0	4	4	58	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

APPENDIX TABLE 16. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

		Pequot Woods Pond (PP)					Niantic Pond (NP)					Upper Pond (UP)					OBDA Pond (OP)					Lower Pond (LP)					
ORDER ANNELIDA - (worms, leeches)		PP25	PP26	PP27	Sites Total Found	(#/m2)	NP22	NP23	NP24	Sites Total Found	(#/m2)	UP16	UP17	UP18	Sites Total Found	(#/m2)	OP04	OP05	OP06	Sites Total Found	(#/m2)	LP10	LP11	LP12	Sites Total Found	(#/m2)	Biotic Index
Helobdella	leech	0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lumbriculidae (damaged)	worm	0	0	0	0	0	0	0	0	0	0		0	3	3	43	0	0	0	0	0	0	0	0	0	0	7
Tubificidae (damaged or w/o cap. setae)	worm	0	8	0	8	116	0	0	0	0	0		10	33	43	623	3	0	4	7	101	4	0	2	6	87	9

ORDER MOLLUSCA - (clams, snails)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	16	0	16	232	0	0	0	0	0		4	6	10	145	0	0	0	0	0	0	0	0	0	0	7
Menetus	snail	0	0	0	0	0	0	0	0	0	0		2	0	2	29	0	0	0	0	0	0	0	0	0	0	8.4
Pisidium	clam	0	0	0	0	0	0	0	0	0	0		0	48	48	696	0	0	0	0	0	0	0	0	0	0	6.8

ORDER CRUSTACEA - (isopods, scuds)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	0	4	0	4	58	0	0	2	2	29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Synurella	scud	0	6	4	10	145	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

ORDER COLLEMBOLA - (springtails)		PP25	PP26	PP27	Total Found	(#/m2)	NP22	NP23	NP24	Total Found	(#/m2)	UP16	UP17	UP18	Total Found	(#/m2)	OP04	OP05	OP06	Total Found	(#/m2)	LP10	LP11	LP12	Total Found	(#/m2)	Biotic Index
Sminthuridae		0	2	0	2	29	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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APPENDIX TABLE 17. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

Biological Indices	Pequot Woods Pond (PP)				Niantic Pond (NP)				Upper Pond (UP)				OBDA Pond (OP)				Lower Pond (LP)			
	PP25	PP26	PP27	Total	NP22	NP23	NP24	Total	UP16	UP17	UP18	Total	OP04	OP05	OP06	Total	LP10	LP11	LP12	Total
Taxa Richness per Composite Ponar	15	26	8	33	8	0	4	9		6	10	12	9	6	4	9	2	0	3	3
Total # of Organisms	162	274	120	556	105	0	16	121		24	153	177	111	96	240	447	8	0	24	32
Density (no. organisms/m2)	2348	3971	1739	8058	1522	0	232	1754		348	2217	2565	1609	1391	3478	6478	116	0	348	464
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Community Biotic Index Rating	7.87				7.62				8.34				9.76				9.75			

* *Technically, the Shannon-Weaver Index should not be used if the number of organisms is less than 100.*

** *This composite sample was not preserved in the field; hence, no invertebrate organisms were discernible.*

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APPENDIX TABLE 18. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
County: New London, CT
Collection Date: 23 - 24 June 1995

		Fishtown Brook (FB)				Stream 1					Stream 3					Stream 4					
ORDER TRICHOPTERA (caddisflies)	stage	Sites FB28	FB29	Total Found	(#/m2)	S101	Sites S102	S103	Total Found	(#/m2)	S313	Sites S314	S315	Total Found	(#/m2)	S419	Sites S420	S421	Total Found	(#/m2)	Biotic Index
Brachycentrus	larva	5	0	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lepidostoma	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Limnephilus	larva	1	4	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Phylocentropus	larva	2	6	8	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Psilotreta	larva	3	0	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ORDER ODONATA (dragonflies)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Cordulegaster	nymph	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Sialis	larva	0	4	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

ORDER COLEOPTERA (beetles)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Hydroporus	larva	0	0	0	0	0	0	0	0	0	4	4	0	8	116	0	0	0	0	0	9
Stenelmis	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5

APPENDIX TABLE 18. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
County: New London, CT
Collection Date: 23 - 24 June 1995

		Fishtown Brook (FB)				Stream 1					Stream 3					Stream 4					
ORDER DIPTERA - other than midges	stage	Sites FB28	FB29	Total Found	(#/m2)	S101	Sites S102	S103	Total Found	(#/m2)	S313	Sites S314	S315	Total Found	(#/m2)	S419	Sites S420	S421	Total Found	(#/m2)	Biotic Index
Bezzia	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Chrysops	larva	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Simulium	pupa	0	2	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Stilobezzia	larva	0	2	2	29	6	3	0	9	130	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Macropelopia	larva	0	0	0	0	9	9	0	18	261	2	4	0	6	87	0	0	0	0	0	9
Meropelopia	larva	1	2	3	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Procladius	larva	0	8	8	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Psectrotanypus	larva	0	0	0	0	126	102	0	228	3304	4	74	12	90	1304	15	27	14	56	812	10

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chaetocladius	larva	0	0	0	0	3	0	0	3	43	0	0	0	0	0	0	0	1	1	14	6
Diplocladius	larva	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Parametriocnemus	larva	0	12	12	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Smittia	larva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	6

ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Chironomus	larva, pupa	0	0	0	0	6	12	0	18	261	4	14	0	18	261	66	75	10	151	2188	10
Einfeldia	larva	0	0	0	0	6	0	3	9	130	2	4	0	6	87	3	0	1	4	58	9
Endochironomus	larva	8	6	14	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Microtendipes	larva	152	242	394	5710	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Phaenopsectra	larva	2	0	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Polypedilum	larva	5	2	7	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Tanytarsus	larva, pupa	0	2	2	29	0	0	0	0	0	0	2	0	2	29	0	0	0	0	0	6.7

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APPENDIX TABLE 18. Composite Ponar Species List. Relative Abundance and Density (#/m2) of Each Taxon.

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
County: New London, CT
Collection Date: 23 - 24 June 1995

		Fishtown Brook (FB) Sites				Stream 1 Sites					Stream 3 Sites					Stream 4 Sites					
ORDER ANNELIDA - (worms, leeches)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Helobdella	leech	12	0	12	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Tubificidae (damaged or w/o cap. setae)	worm	0	2	2	29	21	0	3	24	348	4	4	0	8	116	60	0	1	61	884	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Fossaria	snail	0	0	0	0	0	0	0	0	0	0	4	3	7	101	0	0	0	0	0	7
Physella	snail	0	6	6	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.1
Pisidium	clam	20	4	24	348	0	0	327	327	4739	6	12	141	159	2304	0	0	0	0	0	6.8
Sphaeriidae (undescribed genus)	clam	0	4	4	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.7

ORDER CRUSTACEA - (isopods, scuds)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Caecidotea	isopod	7	108	115	1667	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	9
Hyalella	scud	5	0	5	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Ostracoda		+										+									
Synurella	scud	14	138	152	2203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

ORDER COLLEMBOLA - (springtails)		FB28	FB29	Total Found	(#/m2)	S101	S102	S103	Total Found	(#/m2)	S313	S314	S315	Total Found	(#/m2)	S419	S420	S421	Total Found	(#/m2)	Biotic Index
Isotomidae											+										

APPENDIX TABLE 19. Quantitative Macroinvertebrate Community Parameters

Client: Halliburton NUS Corporation
Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
County: New London, CT
Collection Date: 23 - 24 June 1995

Biological Indices	Fishtown Brook (FB)			Stream 1				Stream 3				Stream 4			
	FB28	FB29	Total	S101	S102	S103	Total	S313	S314	S315	Total	S419	S420	S421	Total
Taxa Richness per Composite Ponar	20	19	29	7	4	3	8	8	10	3	9	4	2	7	7
Total # of Organisms	242	556	798	177	126	333	636	26	122	156	304	144	102	29	275
Density (no. organisms/m2)	3507	8058	11565	2565	1826	4826	9217	377	1768	2261	4406	2087	1478	420	3986
Shannon-Weaver Diversity (H')*	2.25	2.31	2.51	1.53	0.97	0.15	1.70	2.72	2.03	0.53	1.99	1.50	0.99	1.85	1.10
Community Biotic Index Rating*	6.93			8.2				8.14				9.73			

* *Technically, the Shannon-Weaver Index should not be used if the number of organisms is less than 100.*

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APPENDIX TABLE 20. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER EPHEMEROPTERA (mayflies)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Callibaetis	nymph												D	P						D								9

ORDER TRICHOPTERA (caddisflies)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Brachycentrus	larva	P																										3
Lepidostoma	larva	P																										1
Limnephilus	larva	P	P																									8
Phylocentropus	larva	P	P																									4
Psilotreta	larva	P																										0

ORDER ODONATA (dragonflies)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Anax	nymph												D															8
Boyeria	nymph																								D			6.3
Cordulegaster	nymph	P																										3
Cordulia	nymph															D												3
Enallagma	nymph																			D								9
Lestes	nymph												D			D												9
Somatochlora	nymph												D															1

O. MEGALOPTERA (hellgrammites)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Chauliodes	larva												D															4
Sialis	larva		P																			D						4

ORDER COLEOPTERA (beetles)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Acilius	larva															D												9
Agabus spp.	larva												D	P								D						9
Berosus	larva												D	P														9
Chrysomelidae TYPE 1	larva												P															9
Curculionidae	larva													P														9
Coptotomus	adult																					D						9
Cyphon	larva												D												D			9
Dineutus	larva, adult												D			D												5.5
Gyrinus	adult												D															6.3
Hydroporus	larva, adult						P	P								D, P				D		D						9
Laccophilus	larva, adult												D			D												10
Peltodytes	larva, adult												D							D								8.5
Stenelmis	larva	P																										5
Tropisternus	larva, adult												D, P	P		D				D								9.8
Uvarus	adult																				P							9

APPENDIX TABLE 20. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER HETEROPTERA (true bugs)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Corixidae (immature)	juvenile												D	P		D												9
Gerris	juv., adult												D			D				D								9
Notonectidae (immature)	juvenile												D							D								5
Notonecta	adult												D			D												9
Pelocoris	juvenile												D															9
Trichocorixa	adult												D															9

ORDER DIPTERA - other than midges	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Anopheles	larva, pupa																			D								9.1
Bezzia	larva	P																										6
Bittacomorpha	larva																					D, P			D			9
Chaoborus	larva												P			D, P												8
Chrysops	larva		P										P									P						6
Hydrophorus	larva															P												6
Odontomyia	larva																					D						8
Sciomyzidae	larva																			D								8
Stilobezzia	larva, pupa		P	P	P									P								D, P	P					6
Tipulidae (undescribed genus)	larva															D, P		P										3

ORDER DIPTERA - (Tanypodinae)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ablabesmyia spp.	larva												D, P	P														6
Macropelopia	larva			P	P		P	P					P															9
Meropelopia	larva	P	P																									6
Natarsia	larva																			D								8
Procladius	larva		P										P	P	P													9
Psectrotanypus	larva, pupa			P	P		P	P	P	P	P	P	D, P	P							P	D, P	P	P	D			10
Tanypus	larva												D, P	P	P													10
Zavrelimyia	larva													P														8

ORDER DIPTERA - (Orthocladiinae)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Acricotopus	larva																			D		D, P	P					10
Chaetocladius	larva			P								P																6
Corynoneura	larva												D	P														7
Cricotopus	larva																			D, P	P	D						7
Diplocladius	larva	P																										8
Parakiefferiella	larva															P		P										6
Parametriocnemus	larva		P																									5
Pseudosmittia	larva															P												6
Smittia	larva											P																6

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APPENDIX TABLE 20. Study-Wide Macroinvertebrate Species List. Species Presence Denoted by Sampling Method (P=Ponar; D=Dip Net).

Client: Halliburton NUS Corporation
Lotic Systems: Fishtown Brook, Stream 1, Stream 3, and Stream 4
Lentic Systems: Pequot Woods Pond, Niantic Pond, Upper Pond, OBDA Pond, and Lower Pond
County: New London, CT
Collection Date: 23 - 24 June 1995

		Fishtown Brook (FB) Sites		Stream 1 Sites			Stream 3 Sites			Stream 4 Sites			Pequot Woods Pond (PP) Sites			Niantic Pond (NP) Sites			Upper Pond (UP) Sites			OBDA Pond (OP) Sites			Lower Pond (LP) Sites			
ORDER DIPTERA - (Chironomini)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Chironomus	larva, pupa			P	P		P	P		P	P	P	P	P	P	D, P		P			P	D, P	P	P	D, P		P	10
Einfeldia	larva			P		P	P	P		P		P	P	P	P	P				P	P	D, P	P	P	D		P	9
Endochironomus	larva	P	P													D												10
Hyporhygma (undescribed species)	larva												P															6
Microtendipes	larva	P	P											P														7
Phaenopsectra	larva	P											D, P															7
Polypedilum	larva	P	P										D, P	P	P					D, P					D			6

ORDER DIPTERA - (Tanytarsini)	stage	FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Cladotanytarsus	larva													P														7
Rheotanytarsus	larva												D	P														6
Tanytarsus	larva, pupa		P					P					D, P	P	P													6.7
Zavreliella	larva												D		P													6

ORDER ANNELIDA - (worms, leeches)		FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Helobdella	leech	P												P														9
Lumbriculidae (damaged)	worm																				P							7.3
Tubificidae (damaged or w/o cap. setae)	worm		P	P		P	P	P		P		P		P						P	P	D, P		P	D, P		P	9

ORDER MOLLUSCA - (clams, snails)		FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Fossaria	snail							P	P					P						D, P	P	D						7
Menetus	snail																			P								8.4
Physella	snail		P																									9
Pisidium	clam	P	P			P	P	P	P												P							6.8
Pseudosuccinea	snail												D															7.2
Sphaeriidae (undescribed genus)	clam		P																									6.8

ORDER CRUSTACEA - (water fleas, isopods, scuds)		FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Ceriodaphnia	water flea												D			D												
Caecidotea	isopod	P	P									P		P		D		P										9
Hyalella	scud	P											D															8
Ostracoda		P						P																				
Synurella	scud	P	P											P	P													8

ORDER COLLEMBOLA - (springtails)		FB28	FB29	S101	S102	S103	S313	S314	S315	S419	S420	S421	PP25	PP26	PP27	NP22	NP23	NP24	UP16	UP17	UP18	OP04	OP05	OP06	LP10	LP11	LP12	Biotic Index
Isotomidae							P																					
Sminthuridae													D	P		D												

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APPENDIX G.2.4

LABORATORY DATA FOR MACROINVERTEBRATE TOXICITY TESTING (ETT ENVIRONMENTAL)

WATER QUALITY OF SEDIMENT TOXICITY TESTING CONDUCTED ON FRESHWATER SEDIMENTS
AREA A DOWNSTREAM WATERCOURRSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Hyallela azteca						
Location	Sample ID #	Cond.	NH3	Temp	pH	D.O.	Alk.	Hard
Pequot Woods	EC-SDPP26-02			21.3 - 23.2		6.5 - 8.8		
OBDA Pond	EC-SDOP05-02	192 - 701	3.9 - 4.9	21.9 - 23.2	6.07 -6.82	6.8 - 9.2	30.9 - 72.1	46 - 64
Upper Pond	EC-SDUP18-02	79 - 468	3.1 - 4.5	21.8 - 23.3	5.77 - 6.91	6.8 - 8.4	22.6 - 86.5	16 - 70
Fishtown Brook	EC-SDFB29-02			21.5 - 23.7	6.21 - 6.73	6.8 - 8.6		
Stream 1	EC-SDS102-02	142 - 303	2.3 - 5.2	21.3 - 23.2	6.13 - 6.72	4.2 - 9.0	6.2 - 41.2	34 - 50
Stream 2	EC-SDS209-02	57 - 287	2.7 - 4.6	21.5 - 23.5	6.39 - 6.49	5.6 - 8.6	10.3 - 20.6	14 - 26
Stream 3	EC-SDS313-02	97 - 288	1.71 - 9.49	20.7 - 23.4	6.53 - 6.95	4.3 - 9.0	37 - 53.5	30 - 38
Fishtown Brook	EC-SDFB28-02			20.7 - 23.4	6.14 - 7.08	4.7 - 9.0		
Stream 4	EC-SDS420-02	228 - 382	1.94 - 5.58	21.1 - 23.3	6.14 - 6.68	7.6 - 9.0	98.8 - 130.0	102 - 108
Niantic Pond	EC-SDNP23-02			21.3 - 22.7	5.82 - 6.69	6.6 - 8.4		
Lower Pond	EC-SDLP11-02	79 - 257	2.66 - 3.11	21.3 - 23.2	5.45 - 6.38	5.6 - 8.6	2.1 - 6.2	10.0 - 18.0
	Ref. Sediment			21.0 - 23.3	6.92	6.7 - 8.6		

WATER QUALITY OF SEDIMENT TOXICITY TESTING CONDUCTED ON FRESHWATER SEDIMENTS
AREA A DOWNSTREAM WATERCOURRSES AND OVER BANK DISPOSAL AREA
NSB-NLON, GROTON, CONNECTICUT

		Chironomus tentans						
Location	Sample ID #	Cond.	NH3	Temp	pH	D.O.	Alk.	Hard
Pequot Woods	EC-SDPP26-02			21.3 - 23.2	6.38 - 6.57	6.6 - 8.6		
OBDA Pond	EC-SDOP05-02	192 - 685	3.22 - 5.35	21.3 - 23.2	6.07 - 6.31	5.6 - 8.6	30.9 - 67.9	67.9 - 68
Upper Pond	EC-SDUP18-02	112 - 454	3.22 - 6.08	21.0 - 23.2	5.77 - 6.42	5.6 - 8.4	26.7 - 45.3	26 - 48
Fishtown Brook	EC-SDFB29-02			21.5 - 23.6	6.21 - 6.87	5.4 - 8.6		
Stream 1	EC-SDS102-02	184 - 358	2.83 - 5.18	21.5 - 23.4	6.13 - 6.62	4.2 - 8.8	8.2 - 47.3	50 - 60
Stream 2	EC-SDS209-02	60.5 - 260	3.00 - 4.62	21.0 - 23.2	6.29 - 7.10	7.2 - 9.2	8.2 - 14.4	14 - 26
Stream 3	EC-SDS313-02	103 - 286	2.38 - 5.24	21.7 - 23.6	6.53 - 6.70	4.3 - 8.7	37.0 - 39.1	30 - 38
Fishtown Brook	EC-SDFB28-02			21.7 - 23.4	6.14 - 6.82	4.7 - 9.0		
Stream 4	EC-SDS420-02	252 - 429	2.16 - 5.86	20.8 - 23.1	6.14 - 6.55	7.3 - 8.8	107.0 - 142.1	110 - 124
Niantic Pond	EC-SDNP23-02			21.1 - 23.2	5.45 - 5.67	6.6 - 9.0		
Lower Pond	EC-SDLP11-02	111.6 - 454	3.22 - 6.08	21.0 - 23.2	5.55 - 5.82	5.6 - 8.4	26.7 - 45.3	26 - 48
	Ref. Sediment			22.0 - 23.5	6.28	5.2 - 8.6		

MACROINVERTEBRATE TOXICITY TEST RESULTS

INITIAL TEST

- Pequot Woods Pond vs. Upper Pond
- Pequot Woods Pond vs. OBDA
- Niantic Pond vs. Lower Pond
- Fishtown Brook (28) vs. Streams 3 and 4
- Fishtown Brook (29) vs. Streams 1 and 2

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SUMMARY OF FRESHWATER SEDIMENT TOXICITY TESTS

New London Naval Submarine Base

Prepared for Halliburton NUS Corporation

April-May 1995

Species: Hyalella azteca

Sample ID	ID #	Control ID	10 Day Survival		Mean Length (mm)	
			Control	Sample	Control	Sample
		Reference	83%		1.67	
OBDA Pond	EC-SDOP05-02	Pequot Woods	21%	0%	1.62	
Upper Pond	EC-SDUP18-02	Pequot Woods	21%	1%	1.62	2.10
Stream 1	EC-SDS102-02	Fishtown Brook	51%	0%	1.54	
Stream 2	EC-SDS209-02	Fishtown Brook	51%	0%	1.54	
Stream 3	EC-SDS313-02	Fishtown Brook	36%	0%	1.56	
Stream 4	EC-SDS420-02	Fishtown Brook	36%	0%	1.56	
Lower Pond	EC-SDNP23-02	Niantic Pond	1%	0%	1.90	

Species: Chironomus tentans

Sample ID	ID #	Control ID	10 Day Survival		Mean Wet Weight (mg)	
			Control	Sample	Control	Sample
		Reference	84%		10.05	
OBDA Pond	EC-SDOP05-02	Pequot Woods	29%	4%	4.04	3.83
Upper Pond	EC-SDUP18-02	Pequot Woods	21%	0%	4.04	
Stream 1	EC-SDS102-02	Fishtown Brook	55%	0%	8.80	
Stream 2	EC-SDS209-02	Fishtown Brook	55%	0%	8.80	
Stream 3	EC-SDS313-02	Fishtown Brook	51%	0%	4.48	
Stream 4	EC-SDS420-02	Fishtown Brook	51%	0%	4.48	
Lower Pond	EC-SDNP23-02	Niantic Pond	48%	0%	5.47	

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SEDIMENT TOXICITY REFERENCE TOXICANT RESULTS

Naval Submarine Base - New London, CT

Prepared for Halliburton NUS

April 1995

Species	Size	Reference Toxicant	96 Hour LC50 (mg/L)	EPA Mean LC50 (mg/L)	EPA Lower Control Lmt.	EPA Upper Control Lmt.	% of Control Limit Away from Mean
Chironomus tentans	2nd Instar	KCl	4.35	4.25	0	8.65	2%
Hyallela azteca	2-3 mm	KCl	187	305	163	447	83%

Means and control limits are based upon data from EPA round robin tests with 96 Hr KCl tests (EPA/600/R-94/024 Tables 15.3 & 15.4)

Control limits are based upon two standard deviations. Values within control limits are acceptable.

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: ETT Reference Sediment

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS Corporation	Start Date: 4/18/95
	Sample Identification: ETT Reference Sediment	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Greenville SC Creek was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems, CO
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water w/ Control Sediment
Collection Date 4/17/95

	Initial	Final	
Alkalinity	24.7		mg/L
Ammonia	0.23	0.65	mg/L
Conductivity	83.6		umhos/cm
Hardness	20.0		mg/L
pH:		6.92	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Resurrection Cr. (Greenville Co., SC)
Collection Date: 4/17/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: N/A
Collection Date **Homogenized?:**
Preservation:
Date/Time Added to Test Chambers:
Observations:
Collection Method:
Shipment:

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
	Sample Identification:	ETT Reference Sediment	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2		8.6	100%
1	23.2		7.3	85%
2	21.8		8.3	93%
3	22.0		8.7	100%
4	21.0		8.2	92%
5	22.5		7.0	80%
6	22.7		8.4	97%
7	22.9		8.2	94%
8	23.0		8.3	97%
9	23.3		8.2	95%
10	23.3	6.92	6.7	78%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	no rep	0	NA		NA
B	10	10	0	100%	1.67	1.67
C	10	8	2	80%	1.83	1.83
D	10	9	1	90%	1.86	1.86
E	10	7	3	70%	1.89	1.89
F	10	7	3	70%	1.36	1.36
G	10	8	2	80%	1.60	1.60
H	10	9	1	90%	1.51	1.51
Mean	10.0			83%		1.67

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: Upper Pond (EC-SDUP18-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS Corporation	Start Date: 4/18/95
T3807	Sample Identification: Upper Pond (EC-SDUP18-02)	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Pequot Pond was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Research Organisms, NH
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water - S. Tyger R. (SC) at Hwy. 14
Collection Date 4/17/95

	Initial	Final	
Alkalinity	18.5	8.24	mg/L
Ammonia	4.18	3.22	mg/L
Conductivity	121	50.2	umhos/cm
Hardness	14	8	mg/L
pH:	6.38	7.20	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Pequot Woods (EC-SDPP26-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: Upper Pond
Collection Date 4/11/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3807	Sample Identification:	Upper Pond (EC-SDUP18-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2		7.0	81%
1	23.0		6.9	80%
2	22.6		8.0	92%
3	22.0		8.8	101%
4	21.9		6.5	73%
5	21.3		6.8	76%
6	22.7		8.4	97%
7	23.0		7.8	91%
8	23.0		8.2	95%
9	23.1		6.8	79%
10	22.0		8.8	101%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	468	4.5	23.2	5.77	7.8	91%	86.5	70.0
1			23.3		7.4	86%		
2			21.8		7.8	88%		
3			22.0		7.5	86%		
4			21.9		8.4	94%		
5			21.1		8.0	90%		
6			22.5		8.3	95%		
7			22.5		7.8	90%		
8			21.9		7.5	84%		
9			22.0		8.4	97%		
10	79	3.1	22.5	6.91	6.8	78%	22.6	16.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Mean	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	10	3	7	30%	2.07	2.07
B	10	3	7	30%	1.8	1.80
C	10	1	9	10%	1.1	1.10
D	10	3	7	30%	1.57	1.57
E	10	3	7	30%	2.13	2.13
F	10	3	7	30%	1.27	1.27
G	10	1	9	10%	1.4	1.40
H	10	0	10	0%	0.0	NA
Mean	10.0			21%		1.62

SAMPLE TREATMENT

	# Organisms				Mean	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	1	9	10%	2.1	2.10
H	10	0	10	0%	0.0	NA
Mean	10.0			1%		2.10

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3807	Sample Identification:	Upper Pond (EC-SDUP18-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	21.3%
Sample	1.3%

GROWTH DATA Mean Length (mm)	Mean
Control	1.62
Sample	2.10

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.87
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: t Test
t= 4.67
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The test sediment does adversely affect the survival and growth of freshwater amphipods.

ETT
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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: OBDA Pond (EC-SDOP05-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3807	Sample Identification:	OBDA Pond (EC-SDOP05-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Pequot Pond was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Research Organisms, NH
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water - S. Tyger R. (SC) at Hwy. 14
Collection Date 4/17/95

	Initial	Final	
Alkalinity	18.5	8.24	mg/L
Ammonia	4.18	3.22	mg/L
Conductivity	121	50.2	umhos/cm
Hardness	14	8	mg/L
pH:	6.38	7.20	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Pequot Woods (EC-SDPP26-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: OBDA Effluent Pond
Collection Date 4/11/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS Corporation	Start Date: 4/18/95
T3807	Sample Identification: OBDA Pond (EC-SDOP05-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2		7.0	81%
1	23.0		6.9	80%
2	22.6		8.0	92%
3	22.0		8.8	101%
4	21.9		6.5	73%
5	21.3		6.8	76%
6	22.7		8.4	97%
7	23.0		7.8	91%
8	23.0		8.2	95%
9	23.1		6.8	79%
10	22.0		8.8	101%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	701	4.9	23.2	6.07	8.0	93%	72.1	64.0
1			23.0		8.4	98%		
2			22.4		9.2	106%		
3			22.5		7.8	90%		
4			21.9		7.2	81%		
5			21.5		8.2	92%		
6			22.7		8.5	98%		
7			22.7		8.2	94%		
8			23.1		8.4	98%		
9			23.2		6.8	79%		
10	192	3.9	22.6	6.82	7.6	87%	30.9	46.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Mean	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	10	3	7	30%	2.07	2.07
B	10	3	7	30%	1.8	1.80
C	10	1	9	10%	1.1	1.10
D	10	3	7	30%	1.57	1.57
E	10	3	7	30%	2.13	2.13
F	10	3	7	30%	1.27	1.27
G	10	1	9	10%	1.4	1.40
H	10	0	10	0%	0.0	NA
Mean	10.0			21%		1.62

SAMPLE TREATMENT

	# Organisms				Mean	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		0.00

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3807	Sample Identification:	OBDA Pond (EC-SDOP05-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	21.3%
Sample	0.0%

GROWTH DATA Mean Length (mm)	Mean
Control	1.62
Sample	0.00

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.77
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: Wilcoxon Test
Sum= 45.5
Critical value: 82
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4 28 95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The test sediment does adversely affect the survival and growth of freshwater amphipods.

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: Stream 1 (EC-SDS102-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3810	Sample Identification:	Stream 1 (EC-SDS102-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems, CO
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water w/ Control Sediment
Collection Date 4/17/95

	Initial	Final	
Alkalinity	18.5	8.24	mg/L
Ammonia	2.9	3.2	mg/L
Conductivity	81.1	41.2	umhos/cm
Hardness	26	10	mg/L
pH:	6.21	6.73	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Fishtown Brook (EC-SDFB29-02)
Collection Date: 4/8/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: Stream 1 (EC-SDS102-02)
Collection Date 4/9/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3810	Sample Identification:	Stream 1 (EC-SDS102-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.21	8.4	98%
1	23.7		7.0	81%
2	22.5		8.4	97%
3	21.5		9.2	103%
4	21.5		7.6	85%
5	21.5		8.6	97%
6	23.4		8.3	97%
7	23.0		7.9	92%
8	23.4		8.4	98%
9	23.1		8.4	98%
10	23.4	6.73	6.8	79%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	303	2.7	23.2	6.13	4.2	49%	41.2	50.0
1			23.2		8.0	93%		
2			21.8		8.4	94%		
3			22.0		9.0	103%		
4			21.3		7.9	89%		
5			21.5		8.2	92%		
6			22.5		8.2	94%		
7			22.5		8.0	92%		
8			22.0		8.1	93%		
9			22.0		8.1	93%		
10	142	5.2	22.3	6.72	8.0	92%	6.2	34.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Mean	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	10	2	8	20%	1.8	1.80
B	10	9	1	90%	1.61	1.61
C	10	8	2	80%	1.67	1.67
D	10	7	3	70%	1.33	1.33
E	10	4	6	40%	1.63	1.63
F	10	6	4	60%	1.27	1.27
G	10	5	5	50%	1.44	1.44
H	10	0	10	0%	0.0	NA
Mean	10.0			51%		1.54

SAMPLE TREATMENT

	# Organisms				Mean	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3810	Sample Identification:	Stream 1 (EC-SDS102-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	51.0%
Sample	0.0%

GROWTH DATA Mean Length (mm)	Mean
Control	1.54
Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.75
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: Wilcoxon Test
Sum= 45.5
Critical value: 82
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-25-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The test sediment does adversely affect the survival and growth of freshwater amphipods.

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: Stream 2 (EC-SDS209-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3811	Sample Identification:	Stream 2 (EC-SDS209-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems, CO
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water w/ Control Sediment

Collection Date 4/17/95	Initial	Final	
Alkalinity	18.5	8.24	mg/L
Ammonia	2.9	3.2	mg/L
Conductivity	81.1	41.2	umhos/cm
Hardness	26	10	mg/L
pH:	6.21	6.73	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Fishtown Brook (EC-SDFB29-02)
Collection Date: 4/8/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: Stream 2 (EC-SDS209-02)
Collection Date 4/9/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3811	Sample Identification:	Stream 2 (EC-SDS209-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.21	8.4	98%
1	23.7		7.0	81%
2	22.5		8.4	97%
3	21.5		9.2	103%
4	21.5		7.6	85%
5	21.5		8.6	97%
6	23.4		8.3	97%
7	23.0		7.9	92%
8	23.4		8.4	98%
9	23.1		8.4	98%
10	23.4	6.73	6.8	79%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	287	2.7	23.2	6.39	7.4	86%	20.6	26.0
1			23.5		5.6	65%		
2			22.3		8.4	97%		
3			21.5		5.8	65%		
4			21.7		8.6	97%		
5			21.5		8.2	92%		
6			22.8		8.4	97%		
7			22.5		8.3	95%		
8			22.5		8.1	93%		
9			22.9		7.0	80%		
10	57	4.6	22.5	6.49	7.8	90%	10.3	14.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Mean Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	10	2	8	20%	1.8	1.80
B	10	9	1	90%	1.61	1.61
C	10	8	2	80%	1.67	1.67
D	10	7	3	70%	1.33	1.33
E	10	4	6	40%	1.63	1.63
F	10	6	4	60%	1.27	1.27
G	10	5	5	50%	1.44	1.44
H	10	0	10	0%	0.0	NA
Mean	10.0			51%		1.54

SAMPLE TREATMENT

	# Organisms				Mean Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3811	Sample Identification:	Stream 2 (EC-SDS209-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA

Mean of Eight Replicates

	Mean %
Control	51.3%
Sample	0.0%

GROWTH DATA

Mean Length (mm)

	Mean
Control	1.54
Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.75
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: Wilcoxon Test
Sum= 45.5
Critical value: 82
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The test sediment does adversely affect the survival and growth of freshwater amphipods.

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: Stream 3 (EC-SDS313-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3813	Sample Identification:	Stream 3 (EC-SDS313-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems, CO
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water w/ Control Sediment
Collection Date 4/17/95

	Initial	Final	
Alkalinity	20.6	2.1	mg/L
Ammonia	2.16	4.29	mg/L
Conductivity	62.6	10.7	umhos/cm
Hardness	36		mg/L
pH:	6.14	7.08	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Fishtown Brook (EC-SDFB28-02)
Collection Date: 4/9/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: Stream 3 (EC-SDS313-02)
Collection Date 4/10/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS Corporation	Start Date: 4/18/95
T3813	Sample Identification: Stream 3 (EC-SDS313-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.14	4.7	55%
1	23.4		7.8	91%
2	22.1		8.1	93%
3	22.2		9.0	103%
4	21.5		8.6	97%
5	20.7		8.4	92%
6	22.6		8.4	97%
7	22.2		8.0	92%
8	22.4		8.2	94%
9	22.5		8.2	94%
10	22.7	7.08	7.8	90%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	288	1.71	23.2	6.53	4.3	50%	53.5	38.0
1			23.4		6.6	77%		
2			22.3		6.9	79%		
3			21.5		9.0	101%		
4			20.9		7.8	86%		
5			20.7		8.4	92%		
6			22.6		8.4	97%		
7			22.1		8.1	93%		
8			22.5		8.0	92%		
9			22.7		7.9	91%		
10	97	9.49	22.5	6.95	7.5	86%	37.0	30.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Mean Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	10	7	3	70%	1.28	1.28
B	10	5	5	50%	2.24	2.24
C	10	0	10	0%		NA
D	10	1	9	10%	1.00	1.00
E	10	0	10	0%		NA
F	10	2	8	20%	1.50	1.50
G	10	6	4	60%	1.58	1.58
H	10	8	2	80%	1.74	1.74
Mean	10.0			36%		1.56

SAMPLE TREATMENT

	# Organisms				Mean Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3813	Sample Identification:	Stream 3 (EC-SDS313-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	36.3%
Sample	0.0%

GROWTH DATA Mean Length (mm)	Mean
Control	1.56
Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.72
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: Wilcoxon Test
Sum= 44
Critical value: 82
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4.28.95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The test sediment does adversely affect the survival and growth of freshwater amphipods.

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: Stream 4 (EC-SDS420-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3814	Sample Identification:	Stream 4 (EC-SDS420-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems, CO
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water w/ Control Sediment
Collection Date 4/17/95

	Initial	Final	
Alkalinity	20.6	2.1	mg/L
Ammonia	2.16	4.29	mg/L
Conductivity	62.6	10.7	umhos/cm
Hardness	36		mg/L
pH:	6.14	7.08	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Fishtown Brook (EC-SDFB28-02)
Collection Date: 4/9/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal:

Test Sediment

Source: Stream 4 (EC-SDS420-02)
Collection Date 4/10/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3814	Sample Identification:	Stream 4 (EC-SDS420-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.14	4.7	55%
1	23.4		7.8	91%
2	22.1		8.1	93%
3	22.2		9.0	103%
4	21.5		8.6	97%
5	20.7		8.4	92%
6	22.6		8.4	97%
7	22.2		8.0	92%
8	22.4		8.2	94%
9	22.5		8.2	94%
10	22.7	7.08	7.8	90%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	382	1.94	23.2	6.14	7.6	88%	130.0	102.0
1			23.2		8.5	99%		
2			22.5		9.0	103%		
3			21.9		9.0	101%		
4			21.1		7.8	88%		
5			21.4		7.8	88%		
6			23.0		8.6	100%		
7			22.5		8.0	92%		
8			22.9		8.5	98%		
9			23.3		8.0	93%		
10	228	5.58	22.9	6.68	7.8	90%	98.8	108.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms			%	Mean	Mean
	Initial	Live at End	Dead at End	Survival	Length (mm)	Length (mm)
A	10	7	3	70%	1.28	1.28
B	10	5	5	50%	2.24	2.24
C	10	0	10	0%		NA
D	10	1	9	10%	1.00	1.00
E	10	0	10	0%		NA
F	10	2	8	20%	1.50	1.50
G	10	6	4	60%	1.58	1.58
H	10	8	2	80%	1.74	1.74
Mean	10.0			36%		1.56

SAMPLE TREATMENT

	# Organisms			%	Mean	Mean
	Initial	Live at End	Dead at End	Survival	Length (mm)	Length (mm)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3814	Sample Identification:	Stream 4 (EC-SDS420-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	36.3%
Sample	0.0%

GROWTH DATA Mean Length (mm)	Mean
Control	1.56
Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.72
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: Wilcoxon Test
Sum= 44
Critical value: 82
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The test sediment does adversely affect the survival and growth of freshwater amphipods.

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10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS Corporation
Sample Identification: Lower Pond (EC-SDLP11-02)

Test Start Date: 4/18/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3783	Sample Identification:	Lower Pond (EC-SDLP11-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Niantic Pond was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems, CO
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water w/ Control Sediment
Collection Date 4/17/95

	Initial	Final	
Alkalinity	0.1	4.1	mg/L
Ammonia	2.05	3.62	mg/L
Conductivity	54.6	30.3	umhos/cm
Hardness	6.0	2.0	mg/L
pH:	5.82	6.69	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Good reproduction of Ceriodaphnia dubia cultures

Control Sediment

Source: Niantic Pond (EC-SDNP23-2)
Collection Date: 4/8/95
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Disposal

Test Sediment

Source: Lower Pond (EC-SDLP11-02)
Collection Date 4/8/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic containers
Date/Time Added to Test Chambers: 4/17/95
Observations: organic
Collection Method: petite ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma)
Purchase Date: **Preparation Date:** 3/23/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Dept 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous throughout test (1 mL pipette)

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3783	Sample Identification:	Lower Pond (EC-SDLP11-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	5.82	6.6	77%
1	23.4		7.6	88%
2	23.3		8.3	97%
3	21.3		7.8	88%
4	21.5		8.0	90%
5	21.5		8.2	92%
6	23.0		8.3	97%
7	22.5		7.8	90%
8	22.7		8.2	94%
9	22.5		8.4	97%
10	22.6	6.69	7.6	87%

SAMPLE TREATMENT

Test Day	Cond. umhos/cm	NH3 mg/L	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	257	2.66	23.2	5.45	7.8	91%	6.2	10.0
1			22.7		7.7	88%		
2			22.6		8.0	92%		
3			21.7		5.6	63%		
4			21.3		8.4	94%		
5			21.4		8.4	94%		
6			23.0		8.6	100%		
7			22.6		8.0	92%		
8			22.9		8.6	99%		
9			23.2		7.8	91%		
10	79	3.11	22.8	6.38	7.5	86%	2.1	18.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	0	10	0%		NA
B	10	0	10	0%		NA
C	10	0	10	0%		NA
D	10	0	10	0%		NA
E	10	0	10	0%		NA
F	10	0	10	0%		NA
G	10	1	9	10%	1.90	1.90
H	10	0	10	0%		NA
Mean	10.0			1%		1.90

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

28 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS Corporation	Start Date:	4/18/95
T3783	Sample Identification:	Lower Pond (EC-SDLP11-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	1.0%
Sample	0.0%

GROWTH DATA Mean Length (mm)	Mean
Control	1.90
Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.35
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.64

Test for Differences in Survival: Wilcoxon Test
Sum= N/A
Critical value: 82
Test organism survival effects cannot be determined.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Growth: "t" Test
t= N/A
Critical value: 1.94
Test organism growth effects cannot be determined

COMMENTS

The control sediment did not meet minimum criteria for survival. No comparison of survival or reproduction can be made. Poor survival in the control and test sediments may be related to acidic pH.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4.28.95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

Effects cannot be determined. Both control and test sediment are toxic.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: ETT Sediment Control

Test Start Date: 4/20/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/20/95
	Sample Identification: ETT Sediment Control	End Date: 4/30/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Greenville, SC Creek was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/19/95

	Initial	Final	
Alkalinity	24.7	22.6	mg/L
Ammonia	0.233	0.412	mg/L
Conductivity	83.6	63	umhos/cm
Hardness	20	14	mg/L
pH:		6.28	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Acceptable culture water for Ceriodaphnia dubia

Control Sediment

Source: Resurrection Creek
Collection Date: 4/19/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/19/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: NA
Collection Date: **Homogenized?:**
Preservation:
Date/Time Added to Test Chambers:
Observations:
Collection Method:
Shipment:

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/20/95
	Sample Identification: ETT Sediment Control	End Date: 4/30/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2		8.6	100%
1	23.5		7.3	85%
2	22.6		5.2	60%
3	22.5		7.3	84%
4	23.5		7.8	91%
5	22.6		8.1	93%
6	22.9		8.0	92%
7	22.7		6.6	76%
8	22.9		7.8	90%
9	22.0		7.1	82%
10	23.0	6.28	8.0	93%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	10	2	8	20%	20.5	10.25
B	10	9	1	90%	91	10.11
C	10	8	2	80%	96.5	12.06
D	10	10	0	100%	84.5	8.45
E	10	10	0	100%	98.7	9.87
F	10	10	0	100%	94.2	9.42
G	10	8	2	80%	90.3	11.29
H	10	10	0	100%	89.2	8.92
Mean	10.0			84%		10.05

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Upper Pond (EC-SDUP18-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3808	Sample Identification: Upper Pond (EC-SDUP18-02)	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Pequot Woods was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	22.6	4.12	mg/L
Ammonia	3.11	3.22	mg/L
Conductivity	115	64.8	umhos/cm
Hardness	16	10	mg/L
pH:	6.38	6.57	units

Preparation Method:
Grab sample

Evidence of Water Quality:

Control Sediment

Source: Pequot Woods (EC-SDPP26-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: Upper Pond (EC-SDUP18-02)
Collection Date: 4/11/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3808	Sample Identification: Upper Pond (EC-SDUP18-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.38	8.0	93%
1	22.5		8.6	99%
2	22.5		8.6	99%
3	22.1		8.1	93%
4	21.9		7.6	85%
5	21.3		8.2	92%
6	22.9		8.2	94%
7	22.5		7.8	90%
8	22.7		8.4	97%
9	23.0		6.6	77%
10	23.2	6.57	7.4	86%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	6.08	454	23.2	5.77	7.8	91%	45.3	48
1			22.8		8.4	97%		
2			22.0		8.4	97%		
3			22.0		5.7	66%		
4			21.9		8.0	90%		
5			21.0		8.2	92%		
6			22.8		8.4	97%		
7			22.5		8.0	92%		
8			22.3		8.3	95%		
9			22.9		5.6	64%		
10	3.22	112	22.5	6.42	7.2	83%	26.7	26.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	4	6	40%	48.2	12.05
B	10	10	0	100%	84.6	8.46
C	10	1	9	10%	0.4	0.40
D	10	3	7	30%	22.1	7.37
E	10	0	10	0%	0	NA
F	10	5	5	50%	20.4	4.08
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			29%		4.04

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3808	Sample Identification:	Upper Pond (EC-SDUP18-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	28.8%	Control	4.04
Sample	0.0%	Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.79
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= NA
Critical value: 6.64
Cannot be calculated

Test for Differences in Survival: "t" Test
t= 2.53
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= NA
Critical value: 0.84

Test for Homogeneity of Variance:
F= NA
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: OBDA Pond (EC-SDOP05-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3807	Sample Identification: OBDA Pond (EC-SDOP05-02)	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Pequot Woods was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	22.6	4.12	mg/L
Ammonia	3.11	3.22	mg/L
Conductivity	115	64.8	umhos/cm
Hardness	16	10	mg/L
pH:	6.38	6.57	units

Preparation Method:
Grab sample

Evidence of Water Quality:

Control Sediment

Source: Pequot Woods (EC-SDPP26-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: OBDA Pond (EC-SDOP05-02)
Collection Date: 4/11/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3807	Sample Identification:	OBDA Pond (EC-SDOP05-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.38	8.0	93%
1	22.5		8.6	99%
2	22.5		8.6	99%
3	22.1		8.1	93%
4	21.9		7.6	85%
5	21.3		8.2	92%
6	22.9		8.2	94%
7	22.5		7.8	90%
8	22.7		8.4	97%
9	23.0		6.6	77%
10	23.2	6.57	7.4	86%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	5.35	685	23.2	6.07	8.0	93%	67.9	68
1			23.2		8.6	100%		
2			21.9		8.3	93%		
3			21.7		6.0	67%		
4			21.9		7.4	83%		
5			21.3		8.4	94%		
6			22.4		8.4	97%		
7			22.5		8.0	92%		
8			22.5		8.2	94%		
9			22.7		5.6	64%		
10	3.22	192	22.7	6.31	7.0	80%	30.9	67.9

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	10	4	6	40%	48.2	12.05
B	10	10	0	100%	84.6	8.46
C	10	1	9	10%	0.4	0.40
D	10	3	7	30%	22.1	7.37
E	10	0	10	0%	0	NA
F	10	5	5	50%	20.4	4.08
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			29%		4.04

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	10	1	9	10%	3.7	3.70
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	2	8	20%	7.9	3.95
H	10	0	10	0%	0.0	NA
Mean	10.0			4%		3.83

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3807	Sample Identification:	OBDA Pond (EC-SDOP05-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	28.8%	Control	4.04
Sample	3.8%	Sample	3.83

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.87
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 9.85
Critical value: 6.64
Data are not homogeneous in variance

Test for Differences in Survival: "t" Test
t= 1.96
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= 0.74
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= 627.66
Critical value: 6.635
Data are not homogeneous in variance

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Effects on growth cannot be determined, however, mean growth among surviving midges in the test sediment was lower, on average, than in the control sediment.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Stream 1 (EC-SDS102-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3810	Sample Identification: Stream 1 (EC-SDS102-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.21	8.4	98%
1	23.6		5.4	63%
2	22.2		8.0	92%
3	22.5		7.8	90%
4	21.9		8.0	90%
5	21.5		8.0	90%
6	23.1		8.6	100%
7	23.0		8.2	95%
8	23.2		8.5	99%
9	23.2		7.2	84%
10	23.3	6.87	6.4	74%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	2.83	358	23.2	6.13	4.2	49%	47.3	60
1			23.4		8.7	101%		
2			21.8		8.3	93%		
3			22.1		8.8	101%		
4			21.6		8.6	97%		
5			21.5		8.3	93%		
6			23.0		8.6	100%		
7			21.9		8.4	94%		
8			22.6		8.3	95%		
9			22.9		8.4	97%		
10	5.18	184	23.1	6.62	8.1	94%	8.2	50.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	10	1	9	10%	22.4	22.40
B	10	1	9	10%	10.6	10.60
C	10	8	2	80%	60.7	7.59
D	10	6	4	60%	26.5	4.42
E	10	1	9	10%	3.2	3.20
F	10	9	1	90%	63.2	7.02
G	10	9	1	90%	51.9	5.77
H	10	9	1	90%	84.8	9.42
Mean	10.0			55%		8.80

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3810	Sample Identification: Stream 1 (EC-SDS102-02)	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	18.5	14.4	mg/L
Ammonia	4.46	4.96	mg/L
Conductivity	76.9	48.3	umhos/cm
Hardness	16	14	mg/L
pH:	6.21	6.87	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Acceptable culture water for Ceriodaphnia dubia

Control Sediment

Source: Fishtown Brook (EC-SDFB29-02)
Collection Date: 4/8/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: Stream 1 (EC-SDS102-02)
Collection Date: 4/9/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3810	Sample Identification:	Stream 1 (EC-SDS102-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	55.0%	Control	8.80
Sample	0.0%	Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.82
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= NA
Critical value: 6.64
Cannot be calculated

Test for Differences in Survival: "t" Test
t= 4.98
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= NA
Critical value: 0.84

Test for Homogeneity of Variance:
F= NA
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-12-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Stream 2 (EC-SDS209-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3811	Sample Identification: Stream 2 (EC-SDS209-02)	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	18.5	14.4	mg/L
Ammonia	4.46	4.96	mg/L
Conductivity	76.9	48.3	umhos/cm
Hardness	16	14	mg/L
pH:	6.21	6.87	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Acceptable culture water for Ceriodaphnia dubia

Control Sediment

Source: Fishtown Brook (EC-SDFB29-02)
Collection Date: 4/8/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: Stream 2 (EC-SDS209-02)
Collection Date: 4/9/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3811	Sample Identification: Stream 2 (EC-SDS209-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.21	8.4	98%
1	23.6		5.4	63%
2	22.2		8.0	92%
3	22.5		7.8	90%
4	21.9		8.0	90%
5	21.5		8.0	90%
6	23.1		8.6	100%
7	23.0		8.2	95%
8	23.2		8.5	99%
9	23.2		7.2	84%
10	23.3	6.87	6.4	74%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	3.00	260	23.2	6.39	7.4	86%	14.4	26
1			23.2		8.3	97%		
2			22.4		8.4	97%		
3			21.1		9.2	103%		
4			21.5		8.5	96%		
5			21.0		8.2	92%		
6			22.5		8.1	93%		
7			23.2		7.9	92%		
8			22.1		8.2	94%		
9			22.5		8.0	92%		
10	4.62	60.5	22.0	7.10	7.2	83%	8.2	14.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	1	9	10%	22.4	22.40
B	10	1	9	10%	10.6	10.60
C	10	8	2	80%	60.7	7.59
D	10	6	4	60%	26.5	4.42
E	10	1	9	10%	3.2	3.20
F	10	9	1	90%	63.2	7.02
G	10	9	1	90%	51.9	5.77
H	10	9	1	90%	84.8	9.42
Mean	10.0			55%		8.80

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3811	Sample Identification:	Stream 2 (EC-SDS209-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	55.0%	Control	8.80
Sample	0.0%	Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.82
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= NA
Critical value: 6.64
Cannot be calculated

Test for Differences in Survival: "t" Test
t= 4.98
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= NA
Critical value: 0.84

Test for Homogeneity of Variance:
F= NA
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:**	Aimee Arnold	**Date:**	4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**		**Date:**	

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Stream 3 (EC-SDS313-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3813	Sample Identification: Stream 3 (EC-SDS313-02)	End Date: 4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	16.5	14.4	mg/L
Ammonia	2.16	4.29	mg/L
Conductivity	95.7	48.3	umhos/cm
Hardness	22	12	mg/L
pH:	6.14	6.82	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Acceptable culture water for Ceriodaphnia dubia

Control Sediment

Source: Fishtown Brook (EC-SDFB28-02)
Collection Date: 4/9/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: Stream 3 (EC-SDS313-02)
Collection Date: 4/10/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3813	Sample Identification: Stream 3 (EC-SDS313-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	6.14	4.7	55%
1	23.4		8.8	102%
2	22.6		8.8	101%
3	22.5		9.0	103%
4	22.2		8.0	92%
5	21.7		8.6	97%
6	23.0		8.6	100%
7	22.3		8.2	94%
8	23.2		8.0	93%
9	22.7		7.9	91%
10	22.9	6.82	7.5	86%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	2.38	286	23.2	6.53	4.3	50%	39.1	38
1			23.5		8.6	100%		
2			22.5		8.4	97%		
3			22.0		8.7	100%		
4			22.1		7.9	91%		
5			21.7		8.0	90%		
6			23.4		8.6	100%		
7			22.9		7.0	80%		
8			22.6		8.4	97%		
9			23.6		7.8	91%		
10	5.24	103	23.6	6.70	7.1	83%	37.0	30.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	7	3	70%	10.9	1.56
B	10	1	9	10%	0.9	0.90
C	10	0	10	0%	0	NA
D	10	10	0	100%	74.8	7.48
E	10	8	2	80%	55.7	6.96
F	10	7	3	70%	72.6	10.37
G	10	8	2	80%	68.5	8.56
H	10	0	10	0%	0.0	NA
Mean	10.0			51%		4.48

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3813	Sample Identification:	Stream 3 (EC-SDS313-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %
Control	51.3%
Sample	0.0%

GROWTH DATA Mean Wet Weight (mg)	Mean
Control	4.48
Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.88
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= NA
Critical value: 6.64
Cannot be calculated

Test for Differences in Survival: "t" Test
t= 3.68
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= NA
Critical value: 0.84

Test for Homogeneity of Variance:
F= NA
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:**	Aimee Arnold	**Date:**	4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**		**Date:**	

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Stream 4 (EC-SDS420-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3814	Sample Identification:	Stream 4 (EC-SDS420-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	16.5	14.4	mg/L
Ammonia	2.16	4.29	mg/L
Conductivity	95.7	48.3	umhos/cm
Hardness	22	12	mg/L
pH:	6.14	6.82	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Acceptable culture water for Ceriodaphnia dubia

Control Sediment

Source: Fishtown Brook (EC-SDFB28-02)
Collection Date: 4/9/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: Stream 4 (EC-SDS420-02)
Collection Date: 4/10/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: grab
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3814	Sample Identification: Stream 4 (EC-SDS420-02)	End Date: 4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.0	6.14	7.6	88%
1	22.6		8.4	97%
2	22.3		8.4	97%
3	22.0		8.8	101%
4	21.9		8.2	92%
5	20.8		7.6	84%
6	23.0		8.1	94%
7	23.1		8.2	95%
8	23.0		8.4	98%
9	23.0		7.3	85%
10	22.7	6.55	7.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	2.16	429	23.0	6.14	7.6	88%	142.1	124
1			22.6		8.4	97%		
2			22.3		8.4	97%		
3			22.0		8.8	101%		
4			21.9		8.2	92%		
5			20.8		7.6	84%		
6			23.0		8.1	94%		
7			23.1		8.2	95%		
8			23.0		8.4	98%		
9			23.0		7.3	85%		
10	5.86	252	22.7	6.55	7.7	89%	107.0	110.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	7	3	70%	10.9	1.56
B	10	1	9	10%	0.9	0.90
C	10	0	10	0%	0	NA
D	10	10	0	100%	74.8	7.48
E	10	8	2	80%	55.7	6.96
F	10	7	3	70%	72.6	10.37
G	10	8	2	80%	68.5	8.56
H	10	0	10	0%	0.0	NA
Mean	10.0			51%		4.48

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 4/18/95
T3814	Sample Identification: Stream 4 (EC-SDS420-02)	End Date: 4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	51.3%	Control	4.48
Sample	0.0%	Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.88
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= NA
Critical value: 6.64
Cannot be calculated

Test for Differences in Survival: "t" Test
t= 3.68
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= NA
Critical value: 0.84

Test for Homogeneity of Variance:
F= NA
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-22-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

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10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Lower Pond (EC-SDLP11-02)

Test Start Date: 4/18/95

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3783	Sample Identification:	Lower Pond (EC-SDLP11-02)	End Date:	4/28/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Niantic Pond was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms, NH
Life Stage: second instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water over Sediment
Collection Date: 4/17/95

	Initial	Final	
Alkalinity	<1.0	2.06	mg/L
Ammonia	2.16	3.56	mg/L
Conductivity	60	27.8	umhos/cm
Hardness	4	4	mg/L
pH:	5.45	5.67	units

Preparation Method:
Grab sample

Evidence of Water Quality:
Acceptable culture water for Ceriodaphnia dubia

Control Sediment

Source: Niantic Pond (EC-SDNP23-2)
Collection Date: 4/8/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: comp
Disposal

Test Sediment

Source: Lower Pond (EC-SDLP11-02)
Collection Date: 4/8/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 4/17/95 @ 5 PM
Observations: organic
Collection Method: comp
Shipment: Overnight at 4°C

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 4/18/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3783	Sample Identification:	Lower Pond (EC-SDLP11-02)	End Date:	4/28/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	23.2	5.45	6.6	77%
1	22.9		8.4	97%
2	21.6		8.6	97%
3	21.6		9.0	101%
4	21.6		8.2	92%
5	21.1		8.4	94%
6	22.5		8.4	97%
7	22.0		7.6	87%
8	22.1		8.1	93%
9	22.1		7.8	90%
10	22.4	5.67	7.4	85%

SAMPLE TREATMENT

Test Day	NH3 end	Cond. umhos/cm	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	6.08	454	23.2	5.82	7.8	91%	45.3	48
1			22.8		8.4	97%		
2			22.0		8.4	97%		
3			22.0		5.7	66%		
4			21.9		8.0	90%		
5			21.0		8.2	92%		
6			22.8		8.4	97%		
7			22.5		8.0	92%		
8			22.3		8.3	95%		
9			22.9		5.6	64%		
10	3.22	111.6	22.5	5.55	7.2	83%	26.7	26.0

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	10	1	9	10%	5.5	5.50
B	10	6	4	60%	35.7	5.95
C	10	8	2	80%	33.8	4.23
D	10	5	5	50%	26.4	5.28
E	10	4	6	40%	32.6	8.15
F	10	6	4	60%	29.7	4.95
G	10	6	4	60%	32	5.33
H	10	2	8	20%	8.7	4.35
Mean	10.0			48%		5.47

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	10	0	10	0%	0	NA
B	10	0	10	0%	0	NA
C	10	0	10	0%	0	NA
D	10	0	10	0%	0	NA
E	10	0	10	0%	0	NA
F	10	0	10	0%	0	NA
G	10	0	10	0%	0	NA
H	10	0	10	0%	0.0	NA
Mean	10.0			0%		NA

10 DAY CHIRONOMID SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	4/18/95
T3783	Sample Identification:	Lower Pond (EC-SDLP11-02)	End Date:	4/28/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	47.5%	Control	5.47
Sample	0.0%	Sample	NA

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.84
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= NA
Critical value: 6.64
Cannot be calculated

Test for Differences in Survival: "t" Test
t= 7.74
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= NA
Critical value: 0.84

Test for Homogeneity of Variance:
F= NA
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94
Effects on growth cannot be determined

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee Arnold	**Date:** 4-28-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	**Date:**

CONCLUSIONS

The sediment does adversely affect the survival and growth of freshwater midges.

MACROINVERTEBRATE TOXICITY TEST RESULTS

Retest of Reference Sediments (Pequot Woods Pond and Fishtown Brook)

ETT Environmental, inc.
(803) 877-6942 • FAX (803) 877-6938
P.O. Box 16414, Greenville, SC 29606 • 4 Craftsman Court, Greer, SC 29650

SUMMARY OF NEW LONDON NSB CONTROL SITE RESULTS

Prepared for Halliburton NUS Corporation

May 1995

SURVIVAL RESULTS

SITE	HNUS ID#	ETT ID#	Survival *Hyallela azteca* 4/18/95	Survival *Hyallela azteca* 5/12/95	Survival *Chironomus tentans* 4/18/95	Survival *Chironomus tentans* 5/12/95
Reference Control			83%		84%	
Pequot Woods	EC-SDPP26-02	T3806	21%	73%	29%	69%
Fishtown Brook	EC-SDFB29-02	T3809	51%	73%	55%	80%
Fishtown Brook	EC-SDFB28-02	T3812	36%	81%	51%	69%

GROWTH RESULTS

SITE	HNUS ID#	ETT ID#	Mean Length (mm) *Hyallela azteca* 4/18/95	Mean Length (mm) *Hyallela azteca* 5/12/95	Mean Weight (mg) *Chironomus tentans* 4/18/95	Mean Weight (mg) *Chironomus tentans* 5/12/95
Reference Control			1.67		10.05	
Pequot Woods	EC-SDPP26-02	T3806	1.62	2.88	4.04	14.09
Fishtown Brook	EC-SDFB29-02	T3809	1.54	3.06	8.80	10.79
Fishtown Brook	EC-SDFB28-02	T3812	1.56	3.22	4.48	12.81

SUMMARY: Results indicate better survival and growth in all three control sites during the second round of testing. This may indicate a decrease in sample toxicity over time. Survival remained relatively low as compared to the reference control.

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS
Sample Identification: Pequot Woods (EC-SDPP26-02)

Test Start Date: 5/12/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3906	Sample Identification: Pequot Woods (EC-SDPP26-02)	End Date: 5/22/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Pequot Woods was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems (Fort Collins, CO)
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/11/95
Culturing: as received
Rec'd 5/11/95

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water
Collection Date 5/11/95

Preparation Method:
Grab sample

Evidence of Water Quality:

Control Sediment

Source: Pequot Woods (EC-SDPP26-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 5 PM
Observations: organic
Collection Method: ponar grab
Disposal:

Test Sediment

Source: N/A
Collection Date N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma
Purchase Date: **Preparation Date:** 5/11/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: continual

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3906	Sample Identification: Pequot Woods (EC-SDPP26-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Aeration start	Aeration end
Start	23.9		6.6	77%	continual	
1	22.6		7.6	87%		
2	22.9		6.8	78%		
3	22.4		7.8	90%		
4	24.1		6.8	79%		
5	23.5		7.4	86%		
6	22.0		6.8	78%		
7	22.8		7.7	89%		
8	22.5		7.6	87%		
9	23.0		7.8	91%		
10	22.7	6.30	6.6	76%		

SAMPLE TREATMENT

	NH3 mg/L				
	5.6				
	6.2				

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	8	0	80%	3.175	3.18
B	10	9	1	90%	3.156	3.16
C	10	10	0	100%	2.667	2.67
D	10	4	2	40%	2.7	2.70
E	10	6	3	60%	3.067	3.07
F	10	9	3	90%	2.989	2.99
G	10	5	4	50%	2.833	2.83
H	10	7	6	70%	2.5	2.47
Mean	10.0			73%		2.88

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS
Sample Identification: Fishtown Brook (EC-SDFB29-02)

Test Start Date: 5/12/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3909	Sample Identification: Fishtown Brook (EC-SDFB29-02)	End Date: 5/22/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems (Fort Collins, CO)
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/11/95
Culturing: as received
Rec'd 5/11/95
Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water
Collection Date 5/11/95
Preparation Method:
Grab sample
Evidence of Water Quality:

Control Sediment

Source: Fishtown Brook (EC-SDFB29-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 5 PM
Observations: organic
Collection Method: ponar grab
Disposal:

Test Sediment

Source: N/A
Collection Date N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma
Purchase Date: **Preparation Date:** 5/11/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: continual

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3909	Sample Identification: Fishtown Brook (EC-SDFB29-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Aeration start	Aeration end
Start	23.5		7.1	83%	continual	
1	22.0		7.9	91%		
2	23.2		6.8	79%		
3	22.5		7.7	89%		
4	24.0		6.6	77%		
5	23.7		8.0	93%		
6	22.3		7.8	90%		
7	22.8		7.9	91%		
8	22.5		8.0	92%		
9	23.1		7.9	92%		
10	22.8	6.81	7.7	89%		

SAMPLE TREATMENT

	NH3 mg/L				
	5.1				
	5.6				

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	4	0	40%	3.3	3.30
B	10	9	1	90%	3.05	3.05
C	10	8	0	80%	3.256	3.26
D	10	8	2	80%	3.375	3.38
E	10	6	3	60%	2.3	2.30
F	10	8	3	80%	3.125	3.13
G	10	10	4	100%	2.98	2.98
H	10	5	6	50%	3.1	3.12
Mean	10.0			73%		3.06

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.1

Test Organism: Hyallela azteca

Client: Halliburton NUS
Sample Identification: Fishtown Brook (EC-SDFB28-02)

Test Start Date: 5/12/95

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/12/95
T3912	Sample Identification:	Fishtown Brook (EC-SDFB28-02)	End Date:	5/22/95

Test System

EPA/600/R-94/024 Method 100.1

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from Fishtown Brook was used in the control treatment. Test organisms were fed with YCT food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Hyallela azteca*
Source: Aquatic Biosystems (Fort Collins, CO)
Life Stage: 2-3 mm
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/11/95
Culturing: as received
Rec'd 5/11/95
Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Surface Water
Collection Date 5/11/95
Preparation Method:
Grab sample
Evidence of Water Quality:

Control Sediment

Source: Fishtown Brook (EC-SDFB28-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 5 PM
Observations: organic
Collection Method: ponar grab
Disposal:

Test Sediment

Source: N/A
Collection Date N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: Trout Chow (Glencoe Mills); Cerophyl (Sigma
Purchase Date: **Preparation Date:** 5/11/95
Preservation: kept at 0-4°C
Preparation Method: Trout Chow aerated 7 days
Cerophyl, yeast aerated overnight
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: continual

10 DAY AMPHIPOD SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/12/95
T3912	Sample Identification:	Fishtown Brook (EC-SDFB28-02)	End Date:	5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Aeration start	Aeration end
Start	24.5		7.3	85%	continual	
1	22.6		7.6	87%		
2	23.6		7.7	90%		
3	22.8		8.3	95%		
4	23.1		8.0	93%		
5	23.8		8.0	93%		
6	22.6		6.6	76%		
7	22.8		7.7	89%		
8	22.5		8.2	94%		
9	23.0		7.9	92%		
10	22.4	7.02	7.2	83%		

SAMPLE TREATMENT

	NH3 mg/L				
	2.9				
	5.0				

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A	10	10	0	100%	3.49	3.49
B	10	10	1	100%	3.13	3.13
C	10	6	0	60%	3.29	3.29
D	10	8	2	80%	3.29	3.29
E	10	8	3	80%	2.70	2.70
F	10	8	3	80%	3.30	3.30
G	10	6	4	60%	3.60	3.60
H	10	9	6	90%	2.92	2.92
Mean	10.0			81%		3.22

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Mean Length (mm)	Mean Length (mm)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Pequot Woods (EC-SDPP26-02)

Test Start Date: 5/12/95

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3806	Sample Identification: Pequot Woods (EC-SDPP26-02)	End Date: 5/22/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Pequot Woods was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms (Rec'd 5/9/95)
Life Stage: 2nd instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Overlying Water

Type: Stream Water (S. Tyger River)
Collection Date: 5/08/95

Preparation Method:
Grab sample

Evidence of Water Quality:

Control Sediment

Source: Pequot Woods (EC-SDPP26-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: N/A
Collection Date: N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 5/8/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3806	Sample Identification: Pequot Woods (EC-SDPP26-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Test Day	NH3 end	Cond. umhos/cm
Start	23.3	7.60	6.8	79%	Start	5.02	
1	23.1		7.0	81%	1		
2	23.7		7.2	84%	2		
3	24.0		7.8	91%	3		
4	23.9		6.9	80%	4		
5	23.3		7.0	81%	5		
6	23.3		7.2	84%	6		
7	23.6		8.0	93%	7		
8	23.5		7.4	86%	8		
9	22.7		7.2	83%	9		
10	22.8	7.66	7.6	87%	10		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	4	6	40%	54.5	13.63
B	10	6	0	60%	58.8	9.80
C	10	9	9	90%	122.9	13.66
D	10	8	7	80%	132.1	16.51
E	10	8	10	80%	135.6	16.95
F	10	6	5	60%	89.7	14.95
G	10	6	10	60%	91.9	15.32
H	10	8	10	80%	95.2	11.90
Mean	10.0			69%		14.09

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Fishtown Brook (SDFB29-02)

Test Start Date: 5/12/95

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3809	Sample Identification: Fishtown Brook (SDFB29-02)	End Date: 5/22/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Fishtown Brook was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms (Rec'd 5/9/95)
Life Stage: 2nd instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Overlying Water

Type: Stream Water (S. Tyger River)
Collection Date: 5/08/95

Preparation Method:
Grab sample

Evidence of Water Quality:

Control Sediment

Source: Fishtown Brook (SDFB29-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 5 PM
Observations: organic
Collection Method: ponar grab
Disposal:

Test Sediment

Source: N/A
Collection Date: N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 5/8/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3809	Sample Identification: Fishtown Brook (SDFB29-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Test Day	NH3 end	Cond. umhos/cm
Start	23.5		6.6	77%	Start	4.06	
1	23.6		6.8	79%	1		
2	23.9		7.4	86%	2		
3	23.8		7.2	84%	3		
4	23.4		7.5	87%	4		
5	22.8		8.0	92%	5		
6	23.0		8.6	100%	6		
7	22.9		7.8	90%	7		
8	23.1		8.0	93%	8		
9	22.3		7.6	87%	9		
10	22.6	7.28	7.6	87%	10		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	10	6	100%	105.7	10.57
B	10	5	0	50%	48.4	9.68
C	10	9	9	90%	116.1	12.90
D	10	9	7	90%	74.8	8.31
E	10	10	10	100%	79.2	7.92
F	10	9	5	90%	119.9	13.32
G	10	6	10	60%	56.5	9.42
H	10	6	10	60%	85.2	14.20
Mean	10.0			80%		10.79

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

EPA/600/R-94/024 Method 100.2

Test Organism: Chironomus tentans

Client: Halliburton NUS
Sample Identification: Fishtown Brook (EC-SDFB28-02)

Test Start Date: 5/12/95

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3812	Sample Identification: Fishtown Brook (EC-SDFB28-02)	End Date: 5/22/95

Test System

EPA/600/R-94/024 Method 100.2

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 100 g of sediment and 175 mL of dilution water. There were eight replicates for each treatment. Ten test organisms were placed in each replicate. Sediment from a Fishtown Brook was used in the control treatment. Test organisms were fed with Tetrafin food. The test was conducted at a temperature of 23°C and a light cycle of 16 hr light/8 hr dark. Test vessels were 500 mL plastic beakers placed in a constant temperature incubator room.

Test Organisms

Order: Diptera
Species: *Chironomus tentans*
Source: Aquatic Research Organisms (Rec'd 5/9/95)
Life Stage: 2nd instar
% Mortality During 48 Hr Prior to Test:: 0%
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Overlying Water

Type: Stream Water (S. Tyger River)
Collection Date: 5/08/95

Preparation Method:
Grab sample

Evidence of Water Quality:

Control Sediment

Source: Fishtown Brook (EC-SDFB28-02)
Collection Date: 4/10/95
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 5 PM
Observations: organic
Collection Method: grab
Disposal:

Test Sediment

Source: N/A
Collection Date: N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: Pet Store
Purchase Date: **Preparation Date:** 5/8/95
Preservation: kept at 0-4°C
Preparation Method: 1 g / 250 mL suspension of Tetrafin
Feeding Rate: 1.5 mL / day / replicate
Hold Time: 5 days

Test Chambers

Type: Plastic 500 mL beakers
Sediment Volume: 100 mL
Sediment Depth 4 cm
Overlying Water Volume: 175 mL
Overlying Water Depth: 5 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY CHIRONOMUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3812	Sample Identification: Fishtown Brook (EC-SDFB28-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Test Day	NH3 end	Cond. umhos/cm
Start	23.2		7.0	81%	Start	4.51	
1	23.6		6.8	79%	1		
2	23.4		6.9	80%	2		
3	23.7		7.5	87%	3		
4	23.3		7.3	85%	4		
5	23.1		7.0	81%	5		
6	22.8		8.3	95%	6		
7	23.3		7.8	91%	7		
8	23.4		7.6	88%	8		
9	22.5		8.0	92%	9		
10	22.5	7.17	7.8	90%	10	5.12	

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	10	6	6	60%	107.6	17.93
B	10	9	0	90%	124.4	13.82
C	10	8	9	80%	139.2	17.40
D	10	1	7	10%	4.3	4.30
E	10	9	10	90%	131	14.56
F	10	6	5	60%	75.8	12.63
G	10	9	10	90%	111.5	12.39
H	10	7	10	70%	66.3	9.47
Mean	10.0			69%		12.81

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

APPENDIX G.2.5

LABORATORY DATA FOR FETAX TESTING
(STOVER GROUP)

TABLE 1

SUMMARY OF FROG EMBRYO TERATOGENESIS ASSAY-*XENOPUS* (FETAX) TEST CONDITIONS

1.	Test type:	Static renewal
2.	Temperature:	23° ± 1°C
3.	Light quality:	Ambient laboratory illumination
4.	Light intensity:	10-20 uE/m²/s (50-100 ft-c) (ambient laboratory levels)
5.	Photoperiod:	12 hours light, 12 hours dark
6.	Test chamber size:	9 ounces
7.	Test solution volume:	35 g sediment, 140 mL Fetax Solution
8.	Renewal of test solutions:	Daily
9.	Age of test organisms:	Small cell blastulae (Stage 8-10)
10.	No. of larvae per chamber:	10
11.	No. of replicate test chambers per concentration:	Negative Control – 4 Positive Control – 2 Treatments – 8
12.	No. larvae per concentration:	Negative Control – 100 Positive Control – 50 Treatments – 160
13.	Test vessel randomization:	Randomization chart #3 was utilized for this test
14.	Feeding regime:	None
15.	Cleaning:	Siphoned daily, immediately before solution renewal
16.	Aeration:	None

(continued)

TABLE 1

SUMMARY OF FROG EMBRYO TERATOGENESIS ASSAY-*XENOPUS* (FETAX) TEST CONDITIONS (CONTINUED)

17.	Dilution water:	FETAX Solution was prepared using E-PURE[R] deionized water and reagent grade chemicals.
18.	Number of concentrations:	Controls plus treatments
19.	Test duration:	4 days
20.	Endpoints:	Survival, malformation, growth (length)
21.	Test acceptability:	Mortality and malformation rates in control $\leq 10\%$ and $\leq 10\%$, respectively.

Table 2. Results of FETAX Control Treatments.[1]

Control Treatment	% Mortality (N)	% Malformation (N)	Mean Growth[2] (N)
FETAX Solution	2.1 (320)	1.3 (315)	0.94 (315)
5.5 mg/L 6-AN[3]	0 (160)	46.3 (160)	0.93 (160)
2.500 mg/L 6-AN[3]	100 (160)	- (-)	- (-)

[1] Represents pooled results from four separate sets of experiments performed during study.
[2] Expressed as cm.
[3] 6-aminonicotinamide, positive control.

Table 3. Effects of Blasting Sand Reference Sediment on *Xenopus* Embryo/Larval Development - Test 1.

Replicate	% Mortality	ENDPOINT % Malformation	Mean Growth[1]
1	0.0	0.0	1.02
2	5.0	5.3	0.94
3	10.0	11.1	0.95
4	5.0	15.8	0.88
5	5.0	15.8	0.93
6	0.0	25.0	0.91
7	15.0	0.0	0.95
8	0.0	0.0	0.92
Mean	5.0	9.1	0.94
% CV[2]	0.7	1.2	0.50

[1] Expressed as cm.
[2] Percent coefficient of variation.

000004

Table 4. Effects of Blasting Sand Reference Sediment on *Xenopus* Embryo/Larval Development - Test 2.

Replicate	% Mortality	ENDPOINT % Malformation	Mean Growth[1]
1	15.0	0.0	0.96
2	20.0	0.0	0.96
3	0.0	0.0	1.02
4	10.0	11.1	0.96
5	15.0	5.9	0.96
6	5.0	5.3	0.93
7	0.0	0.0	0.97
8	0.0	5.0	0.90
Mean	8.1	3.4	0.96
% CV[2]	1.0	0.5	0.50

[1] Expressed as cm.
[2] Percent coefficient of variation.

Table 5. Effects of Blasting Sand Reference Sediment on *Xenopus* Embryo/Larval Development - Test 3.

Replicate	% Mortality	ENDPOINT % Malformation	Mean Growth[1]
1	0.0	5.0	0.99
2	5.0	5.3	0.96
3	5.0	10.5	0.97
4	10.0	0.0	0.98
5	5.0	0.0	0.97
6	15.0	0.0	0.99
7	5.0	0.0	0.95
8	0.0	5.0	0.95
Mean	5.6	3.2	0.97
% CV[2]	0.6	0.5	0.19

[1] Expressed as cm.
[2] Percent coefficient of variation.

000006

Table 6. Effects of Blasting Sand Reference Sediment on *Xenopus* Embryo/Larval Development - Test 4.

Replicate	% Mortality	ENDPOINT % Malformation	Mean Growth[1]
1	5.0	0.0	0.93
2	0.0	5.0	0.97
3	0.0	0.0	0.98
4	10.0	11.1	0.*92
5	0.0	5.0	0.93
6	15.0	0.0	0.93
7	0.0	10.0	0.97
8	0.0	10.0	0.93
Mean	3.8	5.1	0.95
% CV[2]	0.7	0.6	0.30

[1] Expressed as cm.
[2] Percent coefficient of variation.

Table 7. Effects of Sample No. EC-SDLP11-2 (Lower Pond) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Niantic Pond[2]	Lower Pond	Niantic Pond[2]	Lower Pond	Niantic Pond[2]	Lower Pond
1	10.0	10.0	22.0	16.7	0.92	-
2	5.0	25.0	21.1	20.0	0.90	0.88
3	15.0	15.0	11.8	11.8	0.93	0.93
4	15.0	25.0	17.6	13.3	0.92	0.91
5	0.0	10.0	25.0	22.2	0.90	0.86
6	10.0	20.0	16.7	18.8	0.89	0.85
7	15.0	5.0	5.9	15.6	0.86	0.93
8	10.0	25.0	5.6	13.3	0.93	0.90
Mean	10.0	16.9[3]	15.7	16.5	0.91	0.89
% CV[4]	0.7	1.0	0.9	0.5	0.30	0.35

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDNP23-2.
[3] Test site response significantly greater than reference site, Dunnett's test (P = 0.05).
[4] Percent coefficient of variation.

000008

Table 8. Effects of Sample No. EC-SDS102-02 (Stream 01) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Fishtown Brook[2]	Stream 01	Fishtown Brook[2]	Stream 01	Fishtown Brook[2]	Stream 01
1	25.0	35.0	26.7	23.1	0.90	0.94
2	15.0	15.0	5.9	11.8	0.90	0.93
3	20.0	15.0	6.3	5.9	0.94	0.92
4	30.0	40.0	28.6	11.1	0.94	0.94
5	20.0	20.0	6.3	6.3	0.90	0.92
6	0.0	25.0	15.0	20.0	0.93	0.94
7	40.0	15.0	41.7	29.4	0.91	0.89
8	25.0	15.0	13.3	5.9	0.94	0.90
Mean	21.9	22.5	18.0	14.2	0.92	0.92
% CV[3]	1.5	1.3	1.6	1.1	0.25	0.25

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDFB29-02.
[3] Percent coefficient of variation.

Table 9. Effects of Sample No. EC-SDS209-02 (Stream 02) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Fishtown Brook[2]	Stream 02	Fishtown Brook[2]	Stream 02	Fishtown Brook[2]	Stream 02
1	25.0	25.0	26.7	20.0	0.90	0.92
2	15.0	25.0	5.9	13.3	0.90	0.92
3	20.0	20.0	6.3	18.8	0.94	0.93
4	30.0	45.0	28.6	9.1	0.94	0.93
5	20.0	25.0	6.3	6.7	0.90	0.96
6	0.0	25.0	15.0	33.3	0.93	0.92
7	40.0	35.0	41.7	15.4	0.91	0.89
8	25.0	15.0	13.3	17.6	0.94	0.94
Mean	21.9	26.9	18.0	16.8	0.92	0.93
% CV[3]	1.5	1.2	1.6	1.0	0.25	0.25

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDFB29-02.
[3] Percent coefficient of variation.

Table 10. Effects of Sample No. EC-SDS313-02 (Stream 03) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Fishtown Brook[2]	Stream 03	Fishtown Brook[2]	Stream 03	Fishtown Brook[2]	Stream 03
1	0.0	20.0	5.0	6.3	0.97	0.95
2	15.0	35.0	5.9	0.0	0.97	0.92
3	10.0	10.0	11.0	5.6	0.93	0.97
4	15.0	25.0	0.0	13.3	0.97	0.95
5	10.0	0.0	17.0	0.0	0.95	0.95
6	5.0	10.0	5.3	5.6	0.94	0.95
7	25.0	5.0	13.3	10.5	0.97	0.93
8	0.0	0.0	5.0	0.0	0.93	0.96
Mean	10.0	13.1	7.8	5.2	0.95	0.95
% CV[3]	1.1	1.6	1.0	5.0	0.20	0.20

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDFB28-02.
[3] Percent coefficient of variation.

Table 11. Effects of Sample No. EC-SDS420-02 (Stream 04) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Fishtown Brook[2]	Stream 04	Fishtown Brook[2]	Stream 04	Fishtown Brook[2]	Stream 04
1	0.0	10.0	5.0	16.6	0.97	0.92
2	15.0	10.0	5.9	11.1	0.97	0.93
3	10.0	15.0	11.0	0.0	0.93	0.96
4	15.0	5.0	0.0	0.0	0.97	0.96
5	10.0	10.0	17.0	11.1	0.95	0.96
6	5.0	0.0	5.3	15.0	0.94	0.96
7	25.0	0.0	13.3	0.0	0.97	0.97
8	0.0	0.0	5.0	0.0	0.93	0.99
Mean	10.0	6.3	7.8	6.7	0.95	0.96
% CV[3]	1.1	0.7	1.0	0.90	0.20	0.30

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDFB28-02.
[3] Percent coefficient of variation.

Table 12. Effects of Sample No. EC-SDOP05-02 (OBD, [illegible]nd) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Pequot Woods[2]	OBDA Pond	Pequot Woods[2]	OBDA Pond	Pequot Woods[2]	OBDA Pond
1	5.0	5.0	5.3	11.0	0.86	0.91
2	0.0	45.0	10.0	27.3	0.89	0.90
3	0.0	45.0	5.0	18.0	0.88	0.92
4	0.0	40.0	0.0	25.0	0.90	0.95
5	0.0	10.0	15.0	11.0	0.87	0.91
6	0.0	10.0	10.0	22.0	0.90	0.83
7	0.0	10.0	10.0	11.0	0.93	0.93
8	15.0	5.0	5.9	0.0	0.89	0.95
Mean	2.5	21.3[3]	7.7	15.7[3]	0.89	0.91
% CV[4]	0.7	2.3	0.6	1.1	0.3	0.5

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDPP26-02.
[3] Test site response significantly greater than reference site, Steele's Many-One Rank Test ($p = 0.05$).
[4] Percent coefficient of variation.

Table 13. Effects of Sample No. EC-SDUP18-02 (Upper Pond) on *Xenopus* Embryo/Larval Development.

	ENDPOINT					
	% Mortality		% Malformation		Mean Growth[1]	
Replicate	Pequot Woods[2]	Upper Pond	Pequot Woods[2]	Upper Pond	Pequot Woods[2]	Upper Pond
1	5.0	0.0	5.3	10.0	0.86	0.93
2	0.0	0.0	10.0	5.0	0.89	0.92
3	0.0	0.0	5.0	10.0	0.88	0.92
4	0.0	0.0	0.0	5.0	0.90	0.92
5	0.0	0.0	15.0	25.0	0.87	0.91
6	0.0	0.0	10.0	20.0	0.90	0.90
7	0.0	5.0	10.0	11.0	0.93	0.92
8	15.0	0.0	5.9	15.0	0.89	0.94
Mean	2.5	2.0	7.7	12.6	0.89	0.92
% CV[3]	0.7	0.3	0.6	0.9	0.30	0.10

[1] Expressed as cm.
[2] Associated reference site, sample No. EC-SDPP26-02.
[3] Percent coefficient of variation.

Table 14. Dissolved Oxygen (D.O.) and pH Prior to and Following Renewal of FETAX Test.

Sample No.	Sample Name	Day 0 D.O.[1]	Day 0 pH[2]	Day 1 D.O.[1]	Day 1 pH[2]	Day 2 D.O.	Day 2 pH[2]	Day 3 D.O.	Day 3 pH[2]	Day 4 D.O.[1]	Day 4 pH[2]
EC-SDNP23-2	Niantic Pond	8.6	7.8	7.4	6.9	7.6	6.9	7.7	6.8	7.4	6.6
EC-SDLP11-2	Lower Pond	8.6	7.8	7.4	6.9	7.6	6.8	7.4	7.0	7.4	6.8
EC-SDFB29-02	Fishtown Brook	8.8	7.8	7.7	6.9	7.6	7.0	7.4	6.6	7.9	6.4
EC-SDS102-02	Stream 01	8.8	7.8	7.5	6.9	7.5	6.9	7.2	6.8	7.8	6.8
EC-SDS209-02	Stream 02	8.8	7.8	7.6	6.7	7.7	6.8	7.2	6.6	7.6	6.7
EC-SDFB28-02	Fishtown Brook	8.4	8.0	6.5	6.6	6.1	6.7	6.2	6.6	5.8	6.8
ECSDS313-02	Stream 03	8.4	8.0	6.2	6.9	5.6	6.9	5.4	6.9	6.0	7.0
EC-SDS420-02	Stream 04	8.4	8.0	6.2	7.5	5.8	7.4	5.5	7.3	5.9	7.4
EC-SDPP26-02	PQ Woods	8.2	8.0	5.6	6.5	3.6	6.5	3.2	6.6	4.3	7.0
EC-SDOP05-02	OBDA Pond	8.2	8.0	5.0	7.1	3.8	7.0	3.6	7.1	4.6	7.0
EC-SDUP18-02	Lower Pond	8.2	8.0	5.2	6.7	4.4	6.7	3.6	6.7	4.8	6.9

[1] Expressed as mg/L.
[2] Expressed as S.U.

APPENDIX G.3

THAMES RIVER/GOSS COVE ECOLOGICAL DATA

G.3.1 WATER QUALITY DATA
G.3.2 LABORATORY DATA FOR MACROBENTHIC TAXONOMY (COVE CORPORATION)
G.3.3 LABORATORY DATA FOR ESTUARINE TOXICITY TESTING (ETT ENVIRONMENTAL)
G.3.4 FEDERAL OR STATE ENDANGERED, THREATENED OR SPECIAL CONCERN SPECIES
G.3.5 STATISTICAL ANALYSES OF BENTHIC DATA

APPENDIX G.3.1

WATER QUALITY DATA

- SURFACE WATER QUALITY DATA
  - PHASE II RI
  - PHASE II RI - SUPPLEMENTAL ECOLOGICAL SAMPLING
- WATER QUALITY PARAMETERS VERSUS DEPTH PROFILES (PHASE II RI)

SURFACE WATER - WATER QUALITY PARAMETERS
THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT

Water Quality Data
Collected 12/17-18/1993
Thames River

Location Description	6SW1S upstream surface	6SW1B upstream bottom	T3SW1S at DRMO surface	T3SW1AS 200' off DRMO surface	T3SW1AB 200' off DRMO bottom
Sample depth, feet	0-4	8-12	0-1	0-4	9-13
pH	8.06	8.01	7.17	7.97	8.06
Temperature, C.	5.5	7.7	4.6	6.2	9.1
Salinity, ppt.	11	22.1	9	11.8	25.7
Dissolved oxygen, mg/l	10.27	9.16	10.67	12.69	10.84
Turbidity, NTU	2	125	0	1	118

Water Quality Data
Collected 11/9-12/1993
Thames River

Location Description	6SW1S upstream surface	6SW1B upstream bottom	T3SW1S at DRMO surface	T3SW1AS 200' off DRMO surface	T3SW1AB 200' off DRMO bottom
Sample depth, feet	0-4	8-12	0-4	0-4	10-14
pH	7.5	8	7.5	7.5	8
Temp	9	13	9	9	18
Salinity	13	27	14	13	24
Sechi Depth, feet	6.5		5 (bottom)	10	

Water Quality Data
Collected 5/3-2/1995
Thames River

Location Description	EC-SDTR01-02 upstream	EC-T3504-02 west of DRMO	EC--SDTR02-02 100' off Quay Wall	EC-SDTR03-02 between pier 32 and pier 33	EC-SDTR04-02 between pier 15 and pier 17
Sample depth, feet	33	8	34	38	29
pH	8.21	7.94	8.21	8.23	8.21
Temperature, C.	8	12.6	8.1	7.9	8
Salinity, ppt.	2.99	1.29	2.97	3	2.99
Dissolved oxygen, mg/l	12.74	12.74	12.79	12.72	12.94
Turbidity, NTU	1	1	1	1	1
S.C., mS/cm	46.61	21.22	46.22	46.67	46.42

SURFACE WATER - WATER QUALITY PARAMETERS
THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT

Water Quality Data
Collected 12/17-18/1993
Thames River

Location Description	T3SW1BS 400' off DRMO surface	T3SW1BB 400' off DRMO bottom	2DSW13 at stream outlet surface	T3SW2S at Lower Base surface	T3SW2B at Lower Base bottom
Sample depth, feet	0-4	12.5-16.5	0-4	0-4	34-38
pH	8.08	8.1	8.18	8.14	8.12
Temperature, C.	5.8	8.4	4.8	6.4	8
Salinity, ppt.	11.7	26.2	12.4	15	26.2
Dissolved oxygen, mg/l	12.57	9.57	10.41	12.16	9.93
Turbidity, NTU	122	115	123	187	122

Water Quality Data
Collected 11/9-12/1993
Thames River

Location Description	T3SW1BS 400' off DRMO surface	T3SW1BB 400' off DRMO bottom	2DSW13 at stream outlet surface	T3SW2S at Lower Base surface	T3SW2B at Lower Base bottom
Sample depth, feet	0-4	29-33	2-6	0-4	34-38
pH	7.5	8	7.5	7	8
Temp	10	13	9	10	13
Salinity	15	31	15	15	29
Sechi Depth, feet	8.5		7 (bottom)	not measured	

Water Quality Data
Collected 5/3-2/1995
Thames River

Location Description	EC-SDTR05-02 between pier 10 and pier 12	EC-T4S02-02 between pier 8 and pier 10	EC-SDTR06-02	EC-8SD3-02 Goss Cove	EC-TESD1-02
Sample depth, feet	35	45	35	1.5	33
pH	8.23	8.25	8.24	8.71	8.21
Temperature, C.	7.9	7.9	8	12	7.9
Salinity, ppt.	2.99	2.98	2.99	1.54	2.94
Dissolved oxygen, mg/l	12.78	12.04	12.39	15.82	12.03
Turbidity, NTU	1	140	1	6	2
S.C., mS/cm	46.74	47.41	46.5	25.09	45.48

SURFACE WATER - WATER QUALITY PARAMETERS
THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT

Water Quality Data
Collected 12/17-18/1993
Thames River

Location Description	T3SW3S off Goss Cove surface	T3SW3B off Goss Cove bottom	8SW1S downstream surface	8SW1B downstream bottom
Sample depth, feet	0-4	29-33	0-4	16-20
pH	8.08	8.07	7.97	8.06
Temperature, C.	5.9	7.9	6.5	7.1
Salinity, ppt.	16.1	26.5	17	26.7
Dissolved oxygen, mg/l	9.94	7	10.01	7.38
Turbidity, NTU	NA	NA	NA	NA

Water Quality Data
Collected 11/9-12/1993
Thames River

Location Description	T3SW3S off Goss Cove surface	T3SW3B off Goss Cove bottom	8SW1S downstream surface	8SW1B downstream bottom
Sample depth, feet	0-4	16-20	0-4	10-14
pH	8	8	8	8
Temp	10	12	9	13
Salinity	19	31	17	26
Sechi Depth, feet	10		7.5	

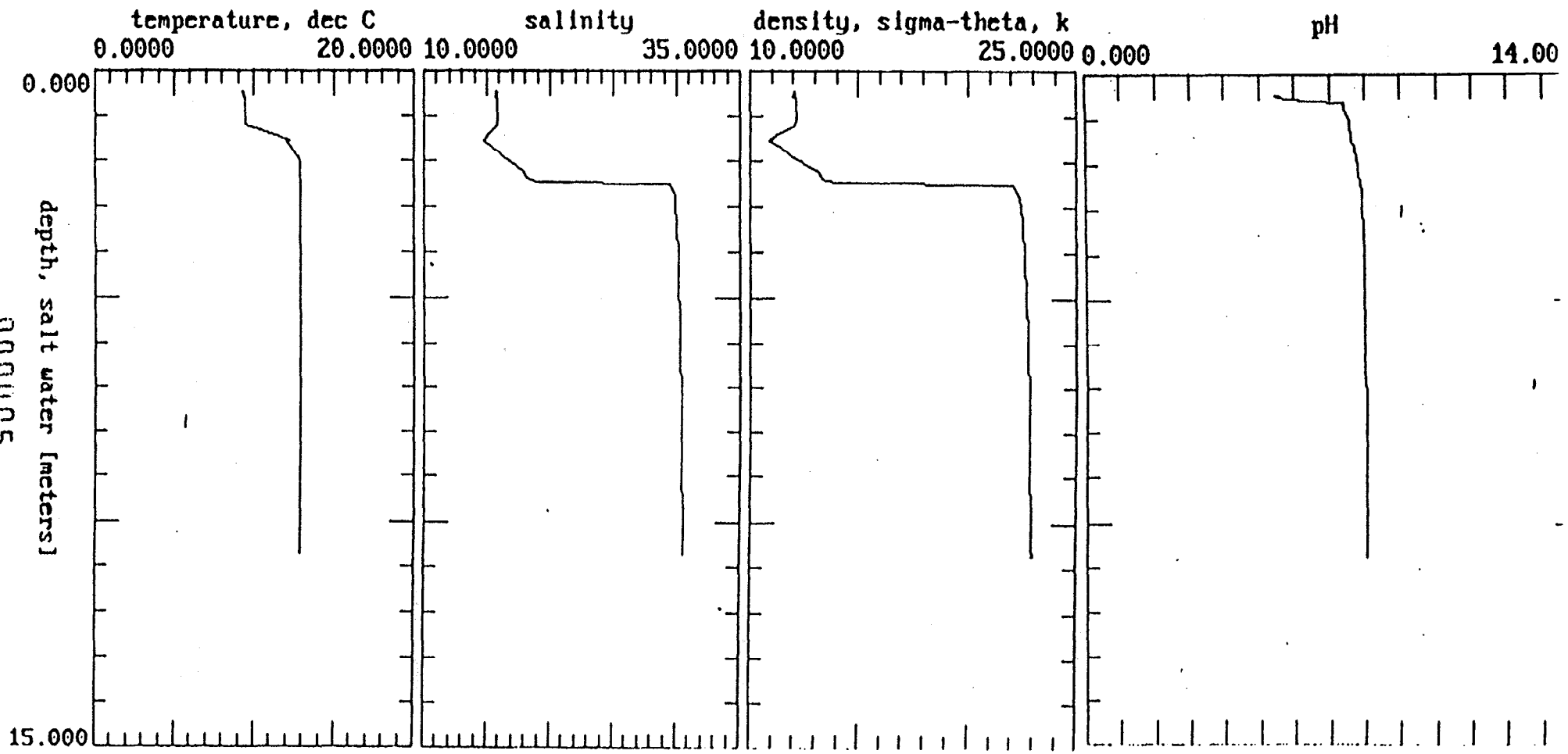
Water Quality Data
Collected 5/3-2/1995
Thames River

Location Description	EC-SDTR07-02
Sample depth, feet	39
pH	8.22
Temperature, C.	7.9
Salinity, ppt.	2.99
Dissolved oxygen, mg/l	12.45
Turbidity, NTU	2
S.C., mS/cm	46.56

SURFACE WATER - WATER QUALITY PARAMETERS
THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT

Water Quality Data
Collected 12/7 and 12/15/1993
Goss Cove

Location	8SW2	8SW3	8SW4	8SW5	8SW6
Date	12/15/93	15-Dec	7-Dec	12/14/93	12/14/93
pH	6.72	7.68	6.95	7.45	6..98
Temperature, C.	7.2	7.2	9.2	6.7	7.6
Salinity, ppt.	14.8	14.9	7.9	15.9	16.1
Dissolved oxygen, mg/l	9.02	9.58	8.85	8.28	8.89
Turbidity, NTU	0	3	10	1	6



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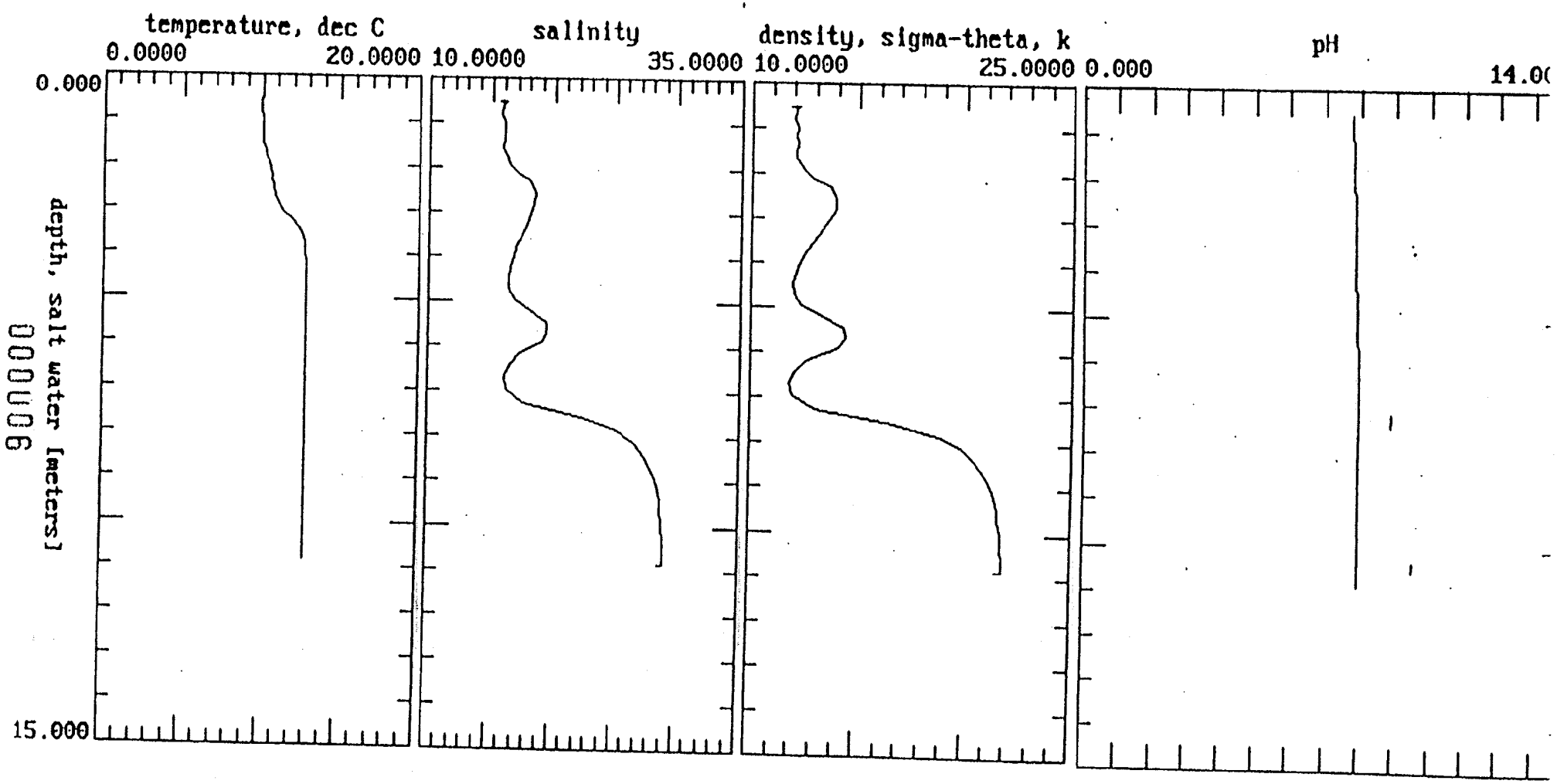
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15.000
depth, salt water [meters]

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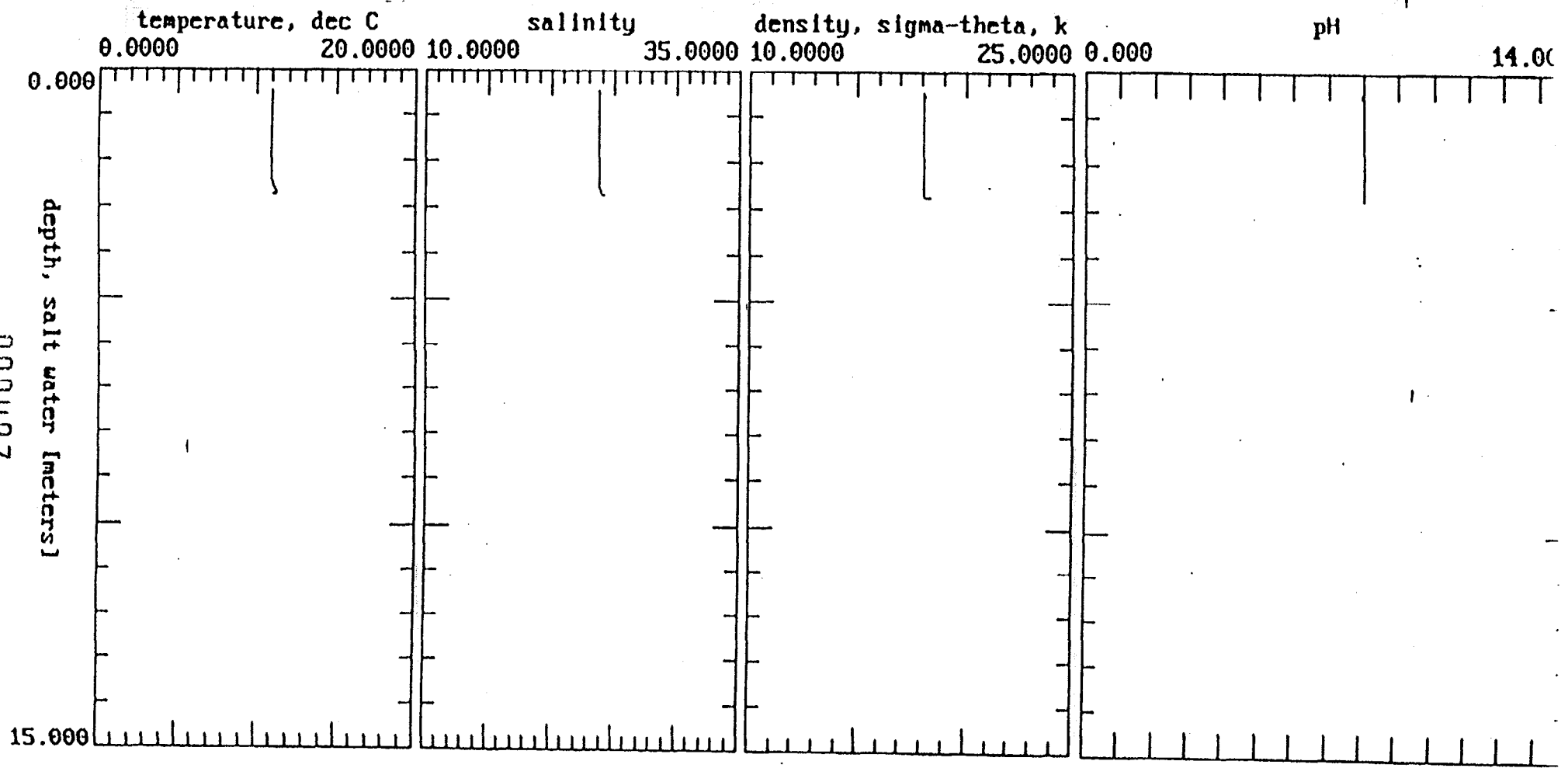
SD1



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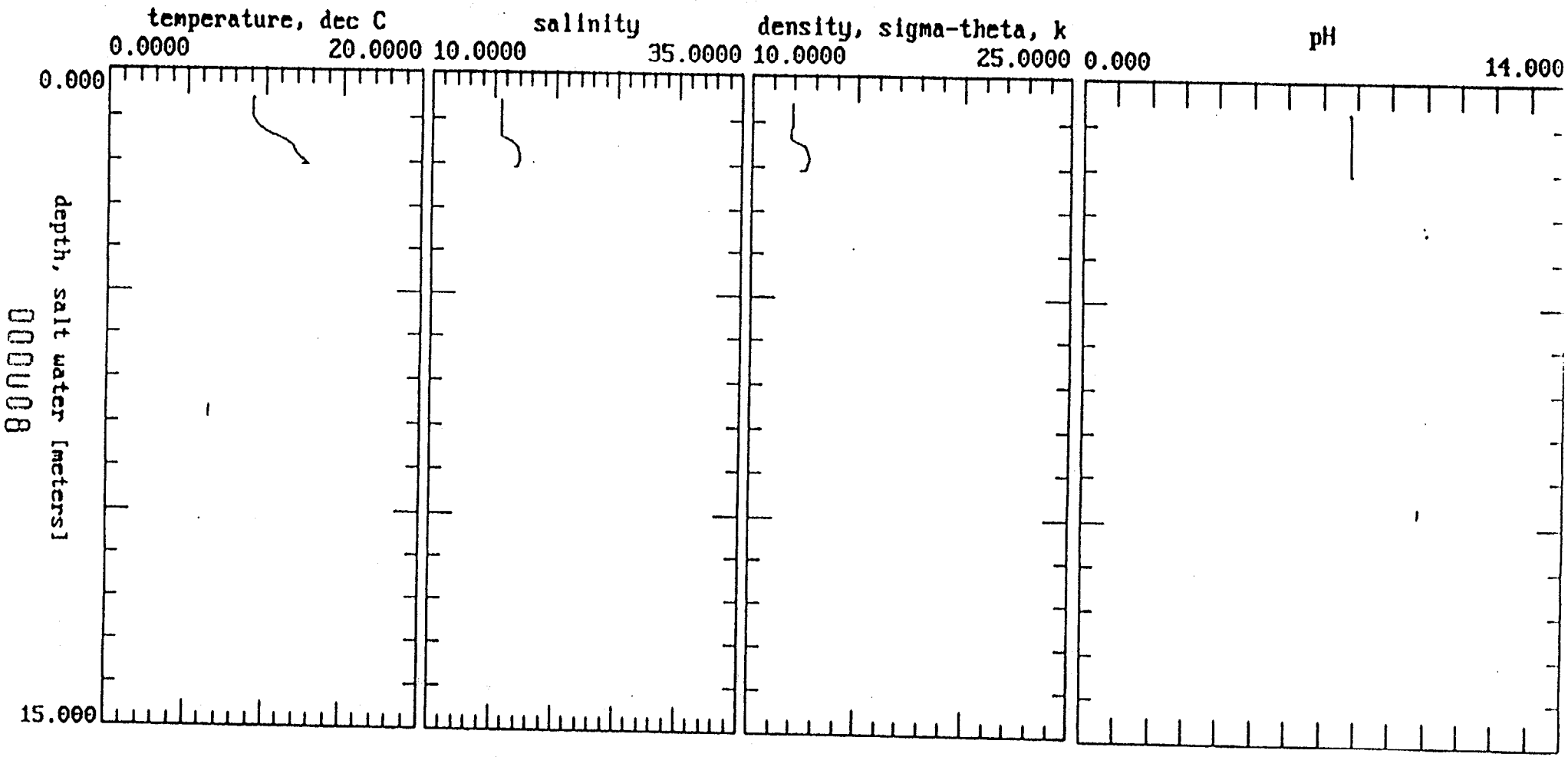
11/12/93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pH
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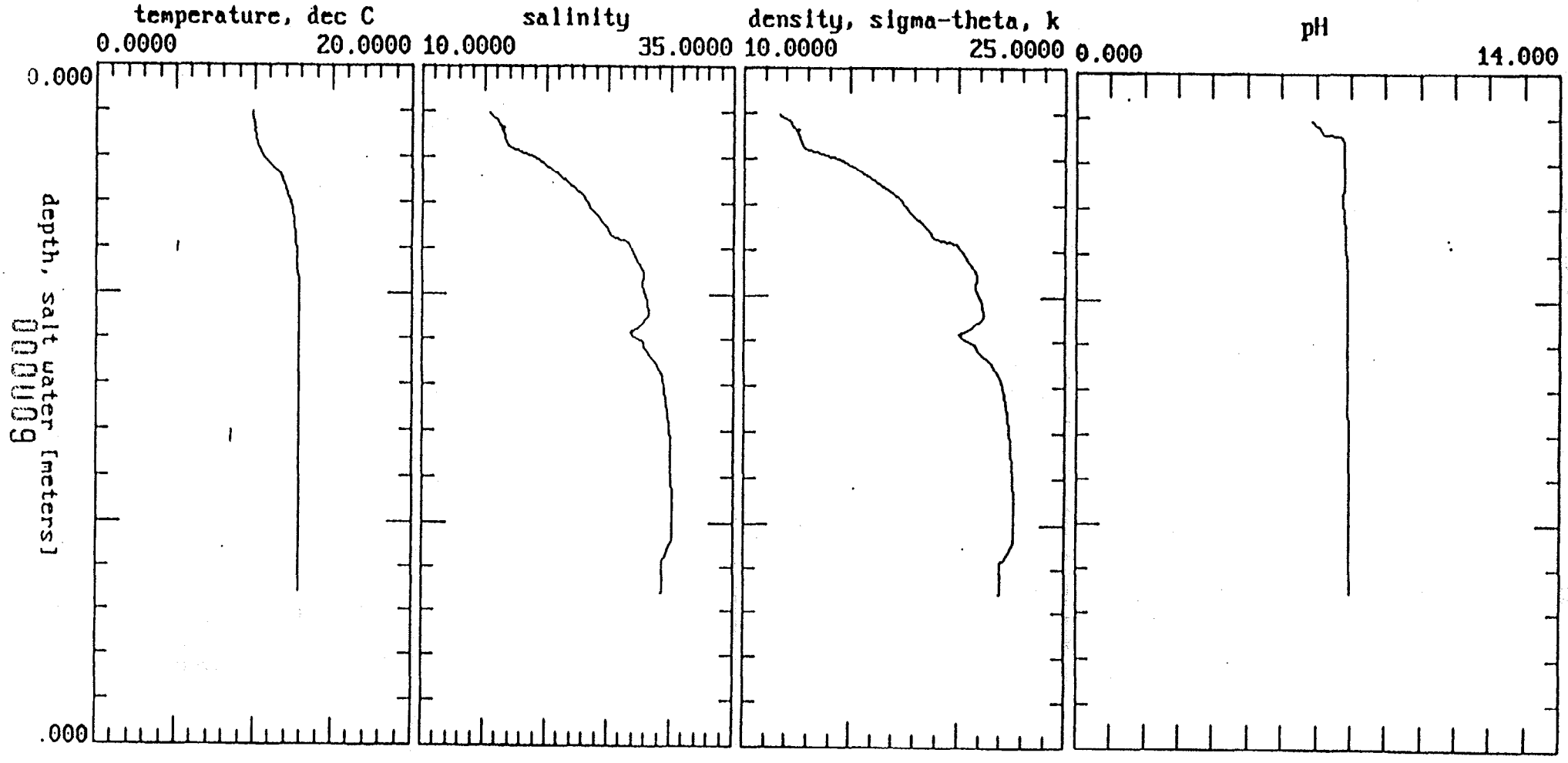
0.000
15.000
depth, salt water [meters]

000008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pH
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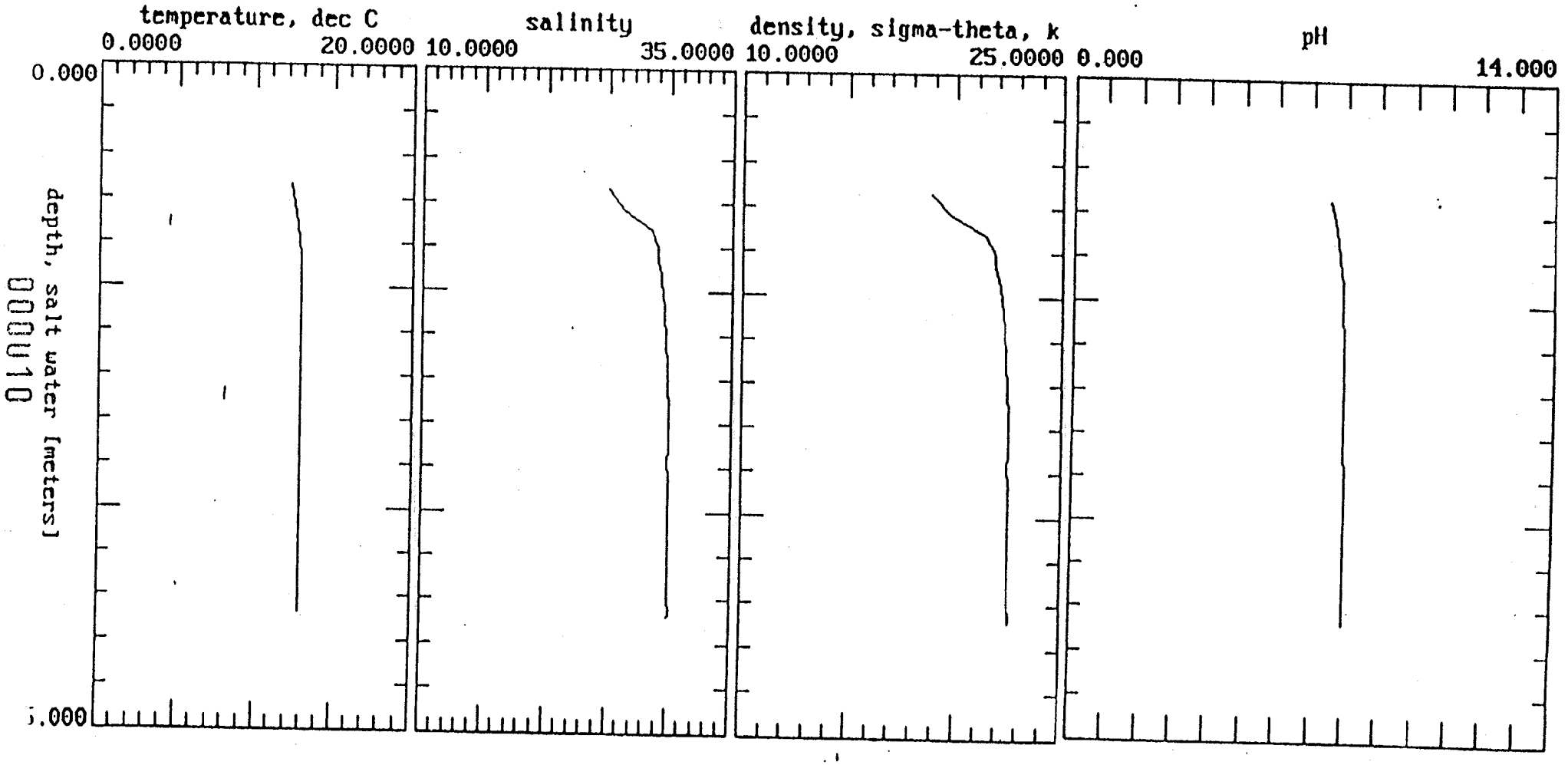
0.000
.000
depth, salt water [meters]

T3SW2/T35D2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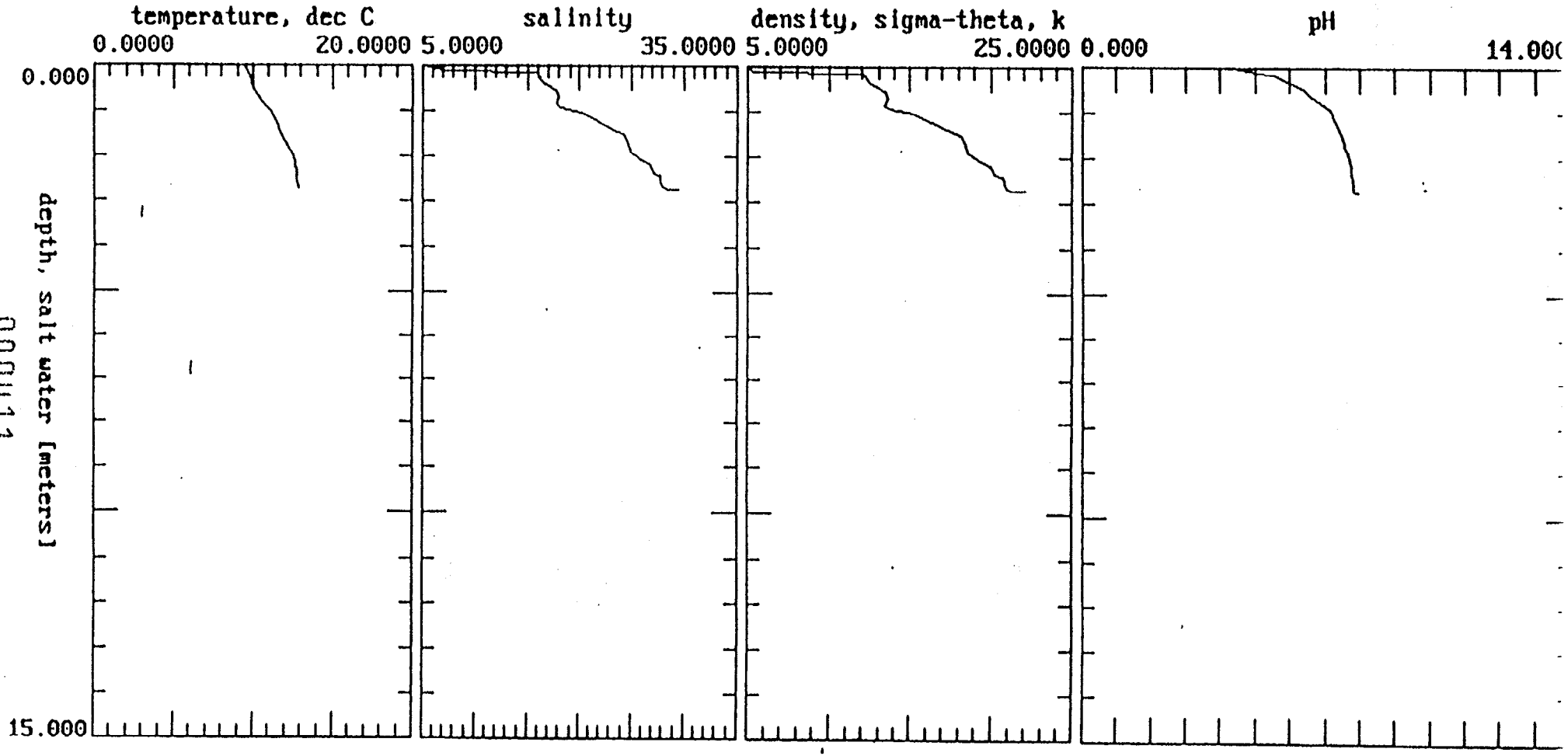
depth, salt water [meters]

000010



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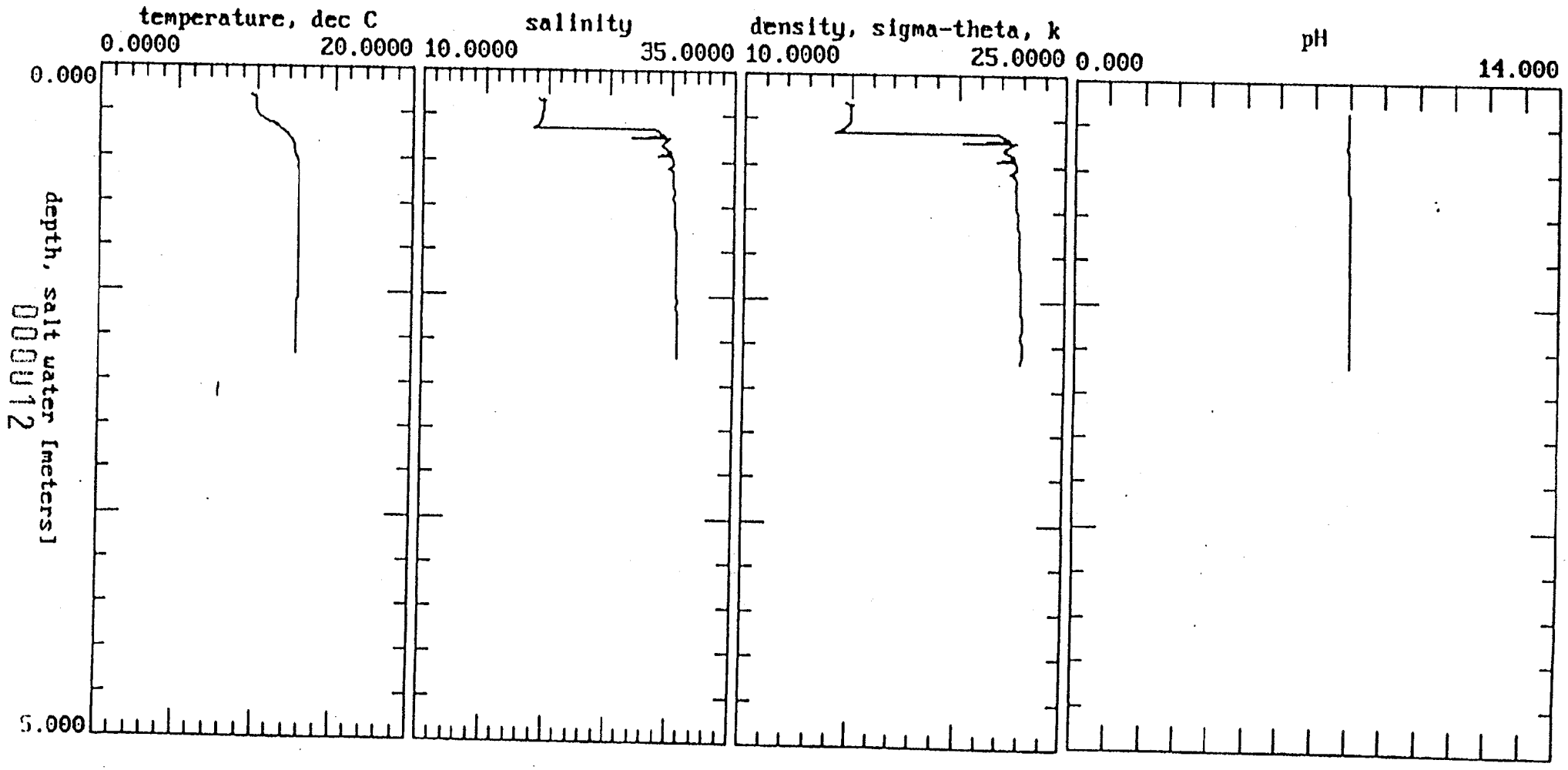
11/9/93 20



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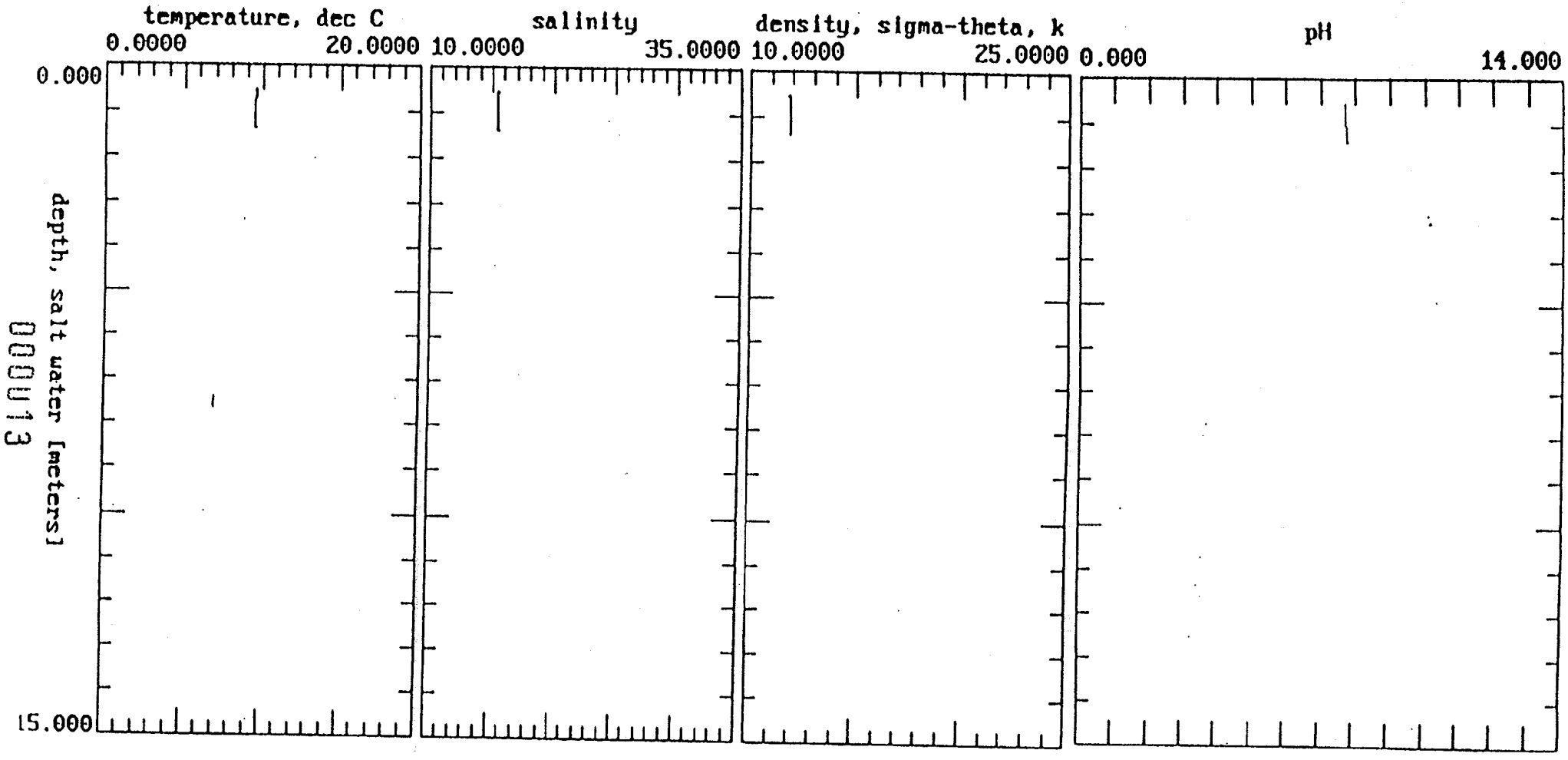

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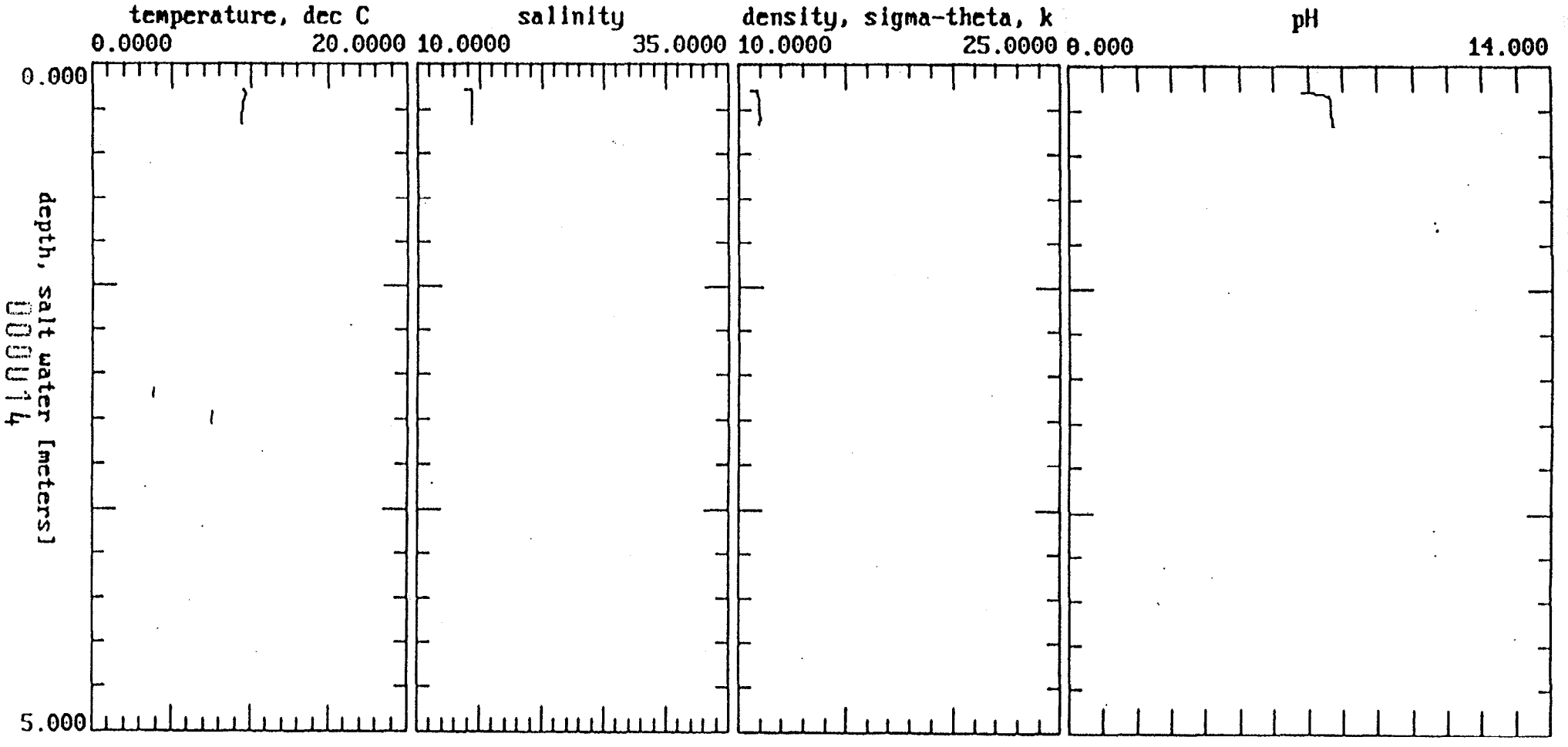
2DSW13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salinity
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35.0000
density, sigma-theta, k
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25.0000
pH
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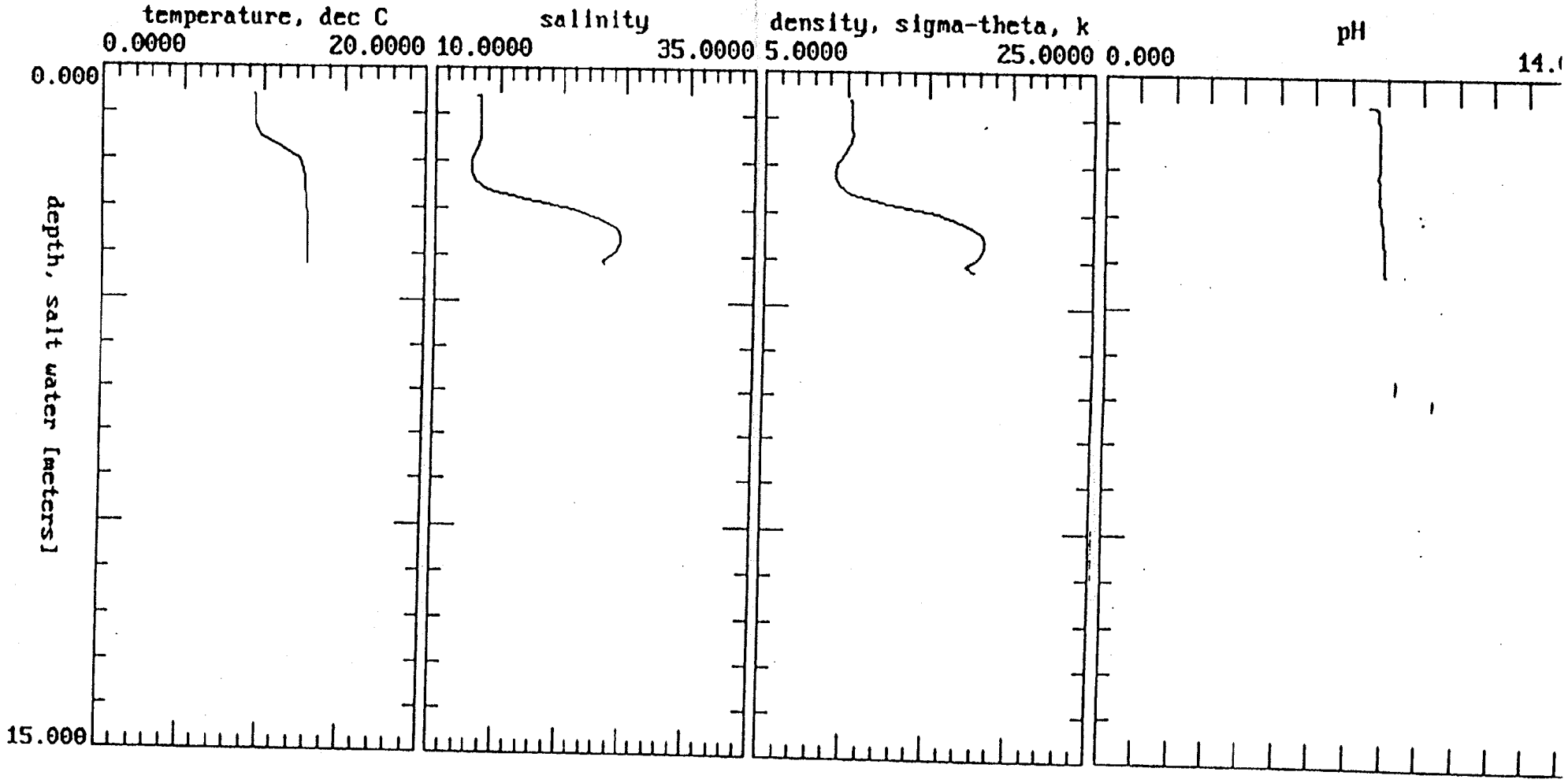
14.000
0.000
5.000
depth, salt water [meters]

000014

T3 1



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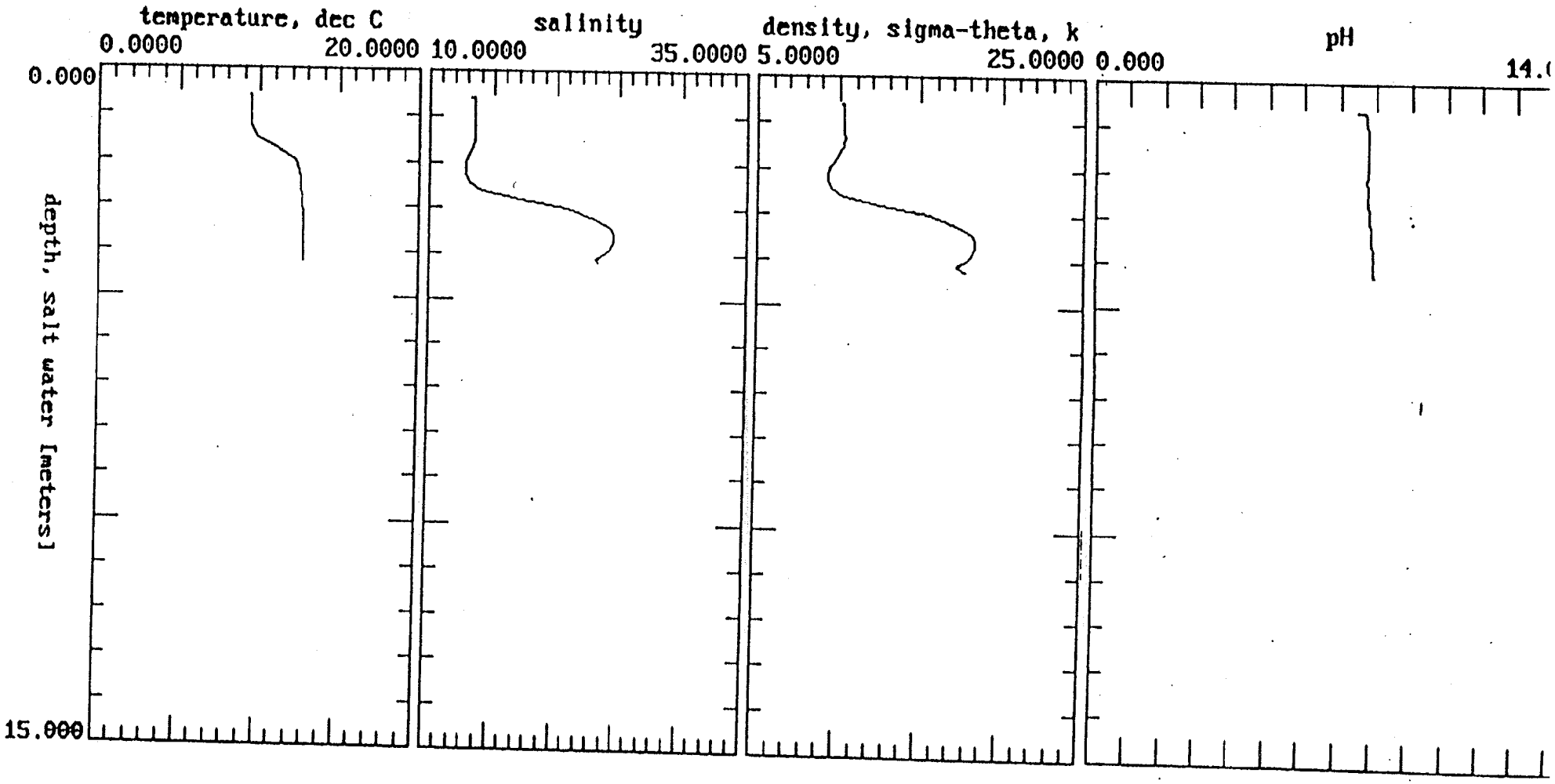

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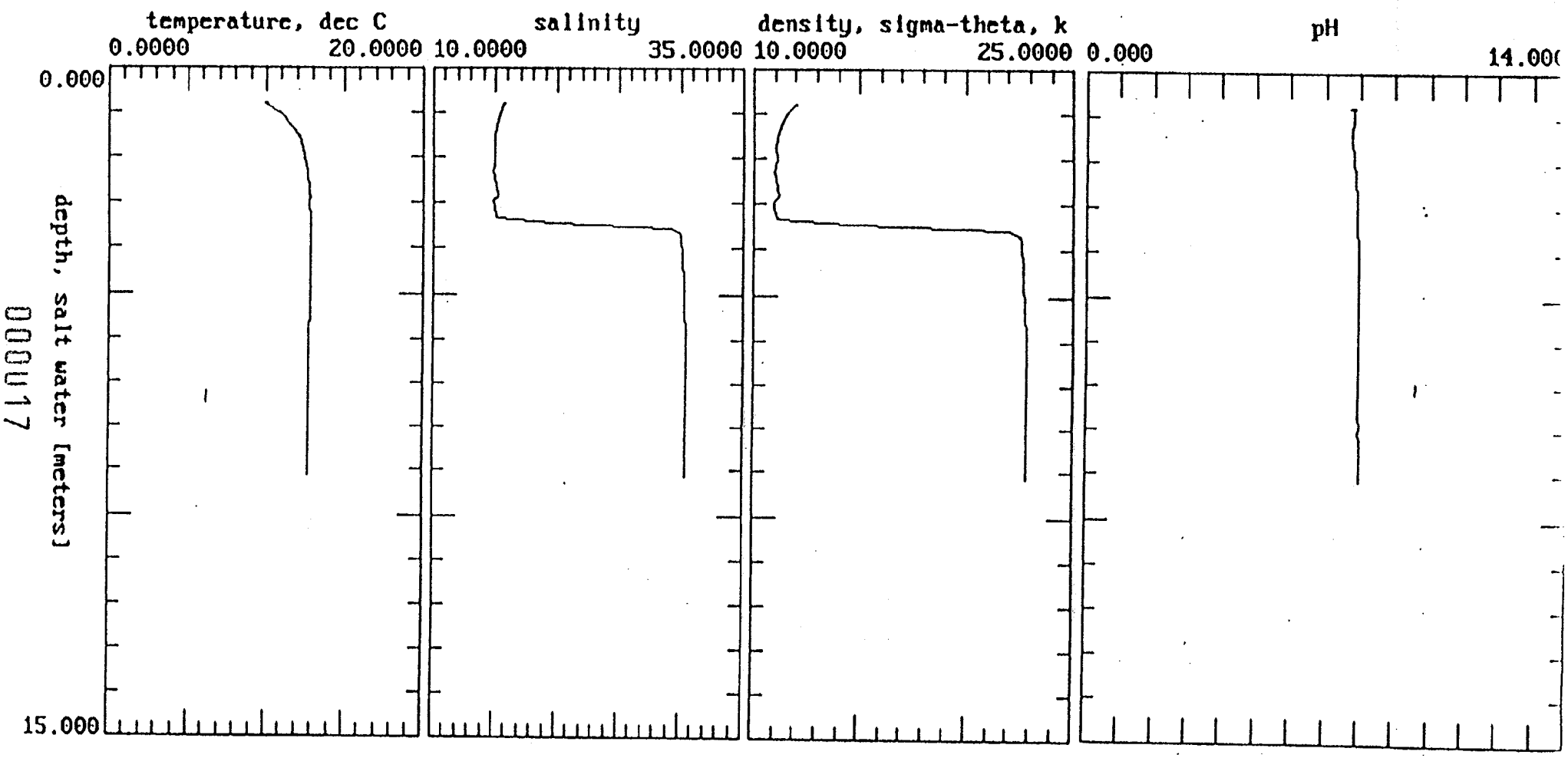

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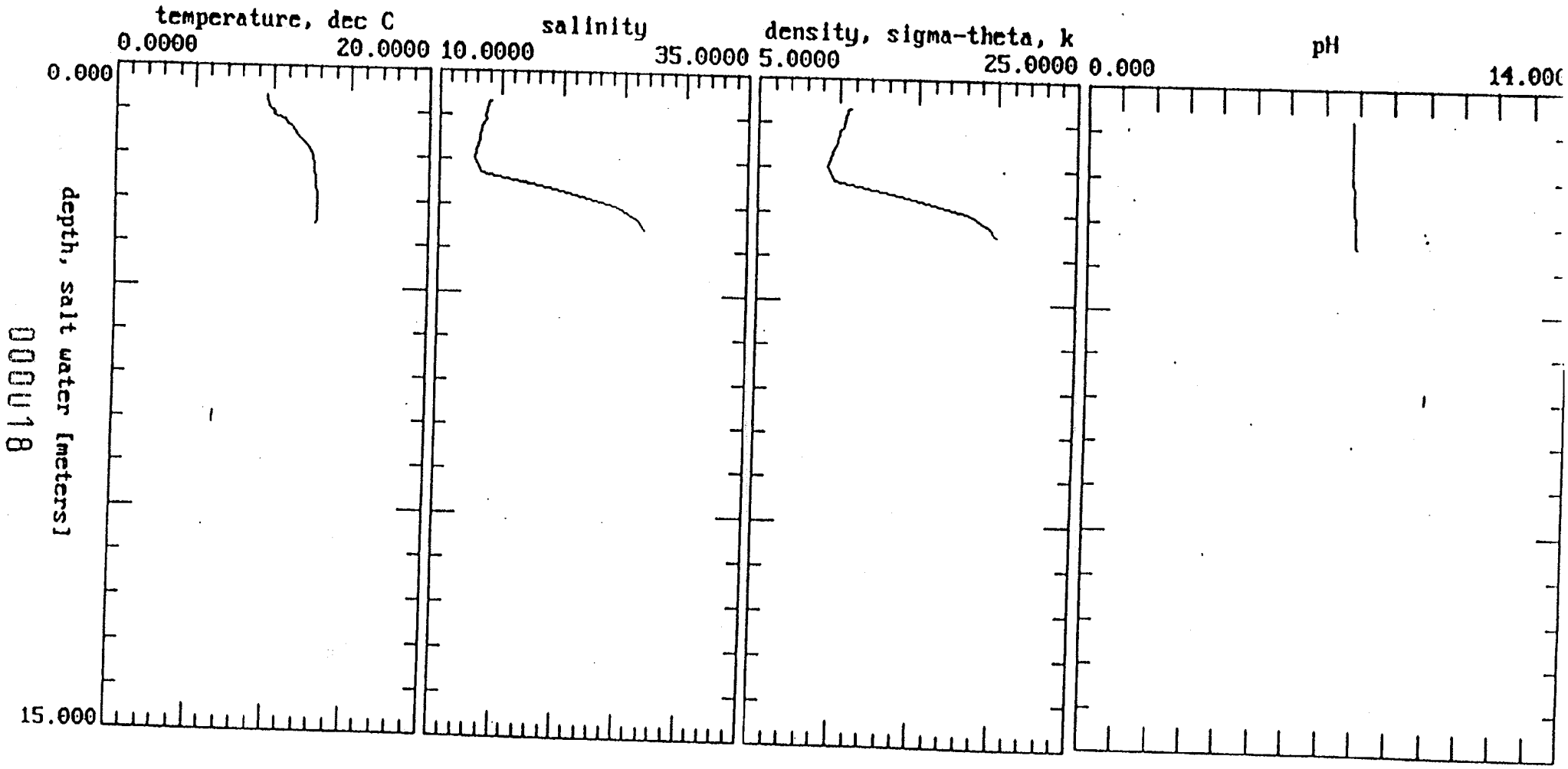
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salinity
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density, sigma-theta, k
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pH
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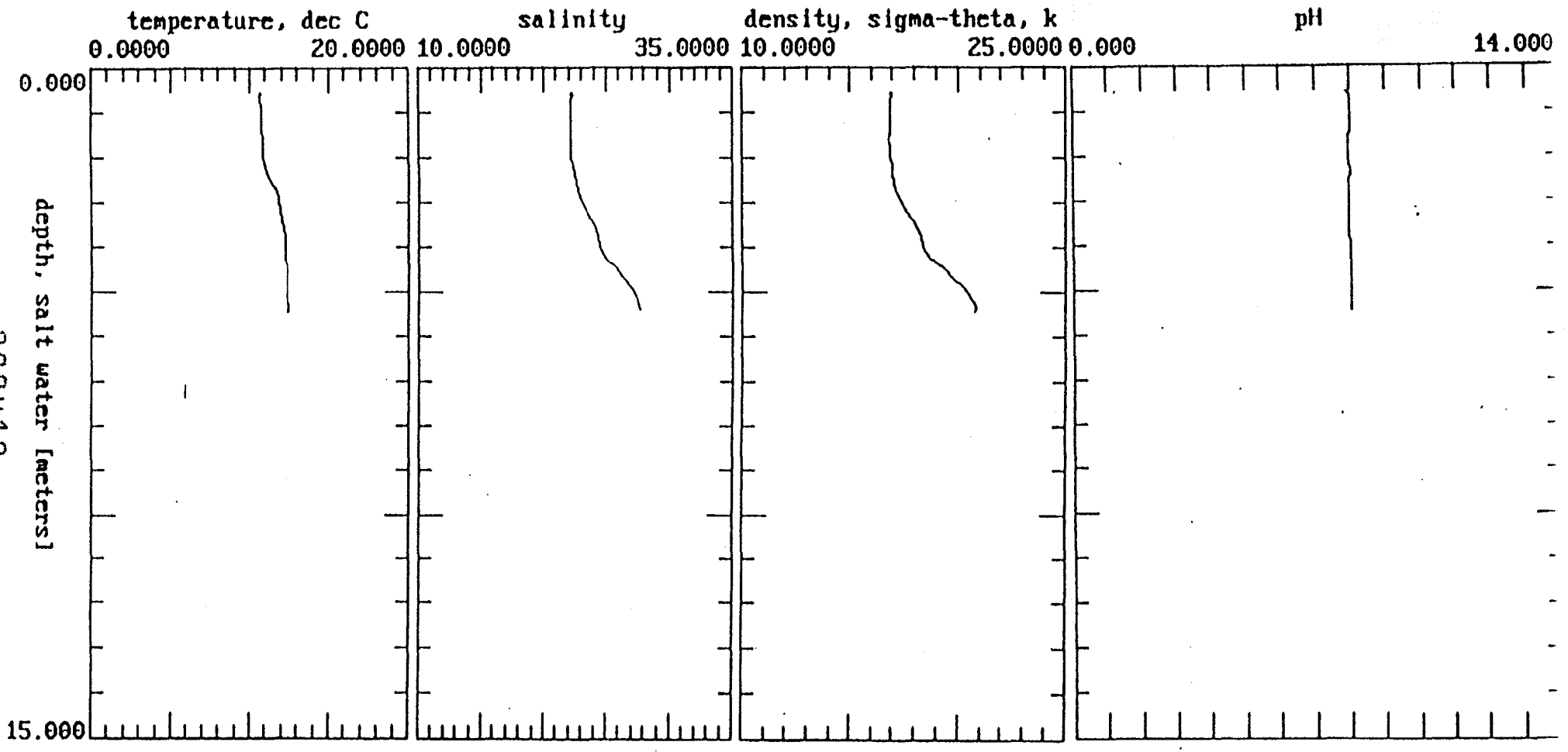
14.000
0.000
15.000
depth, salt water [meters]

000018



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11/11/93

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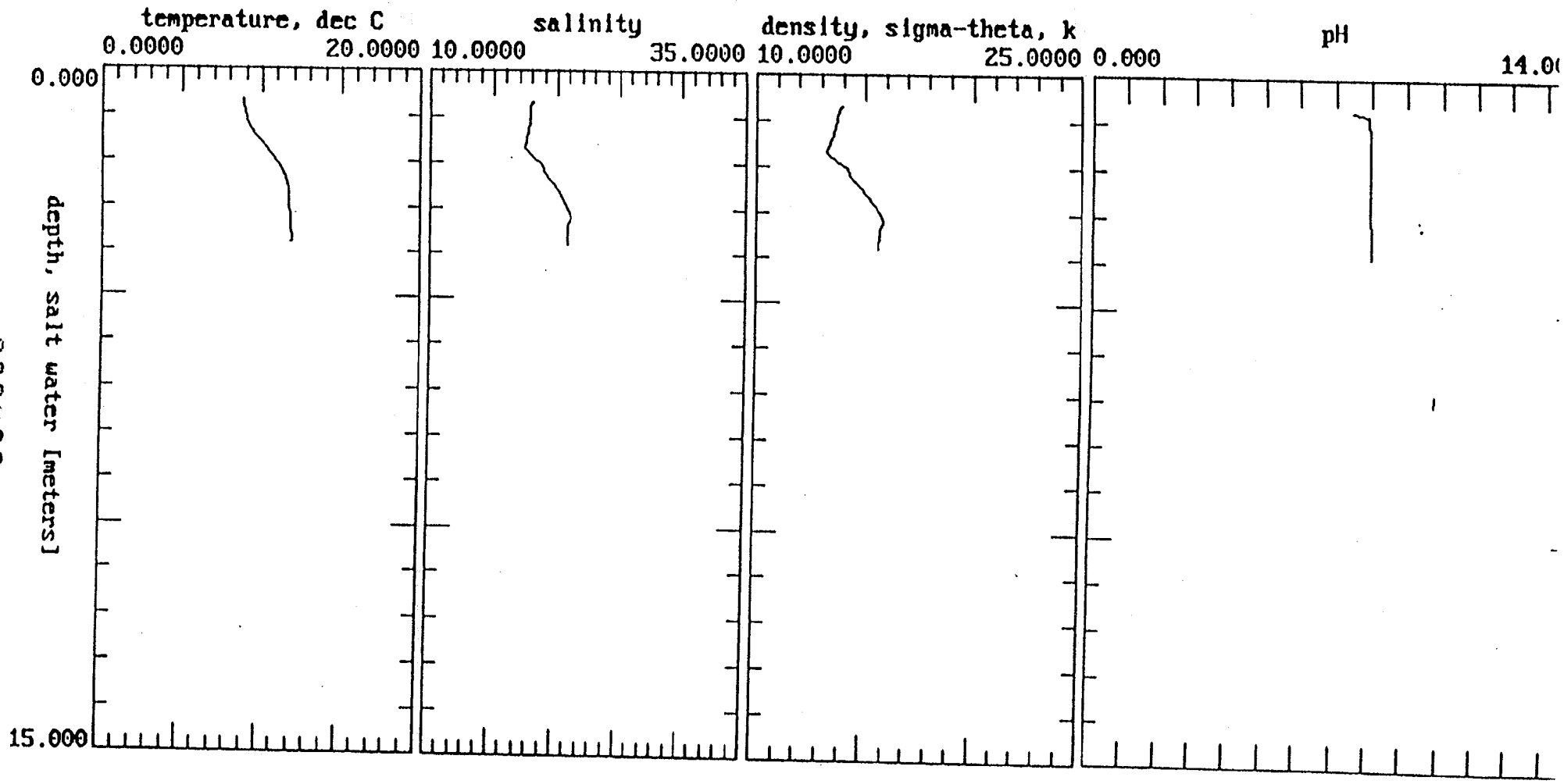

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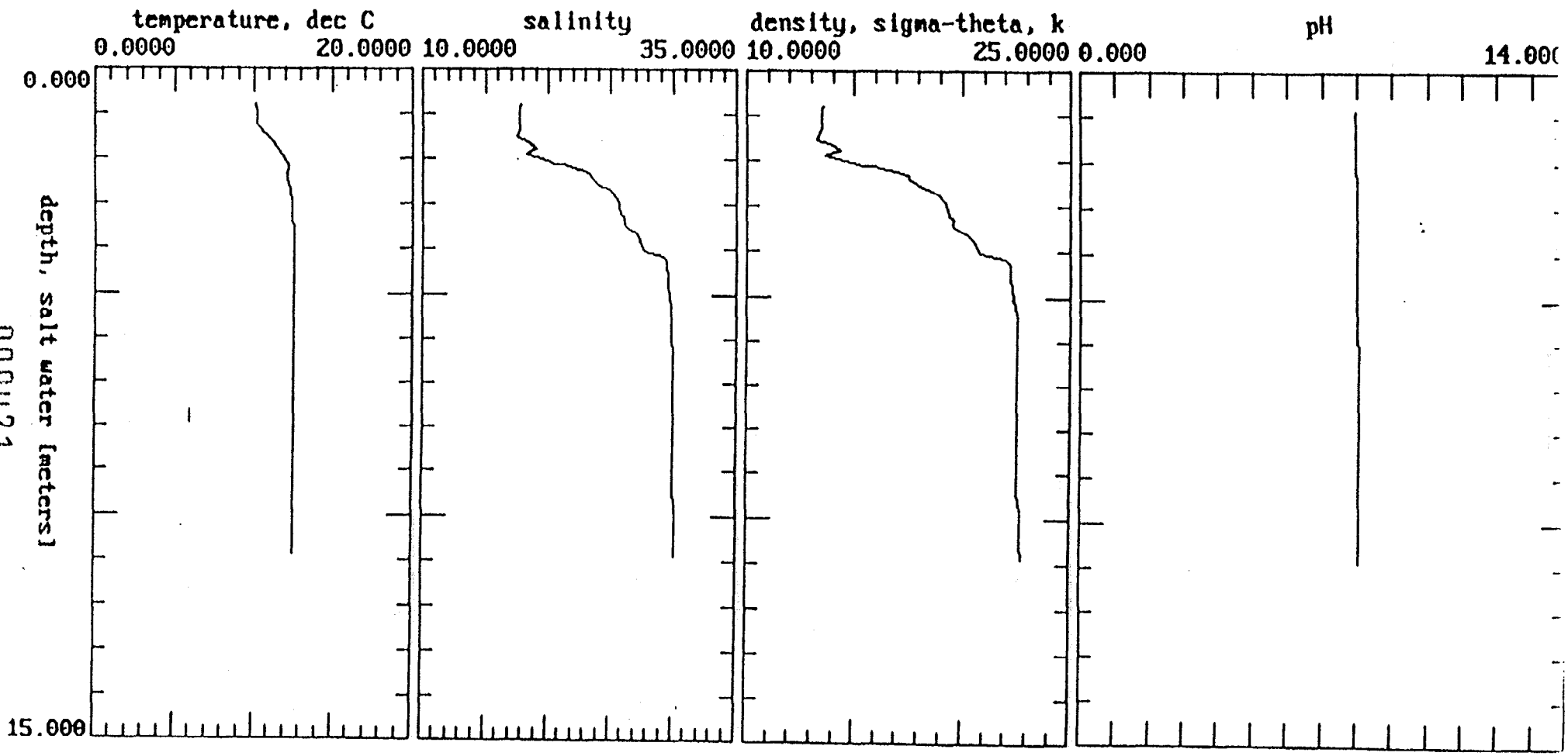

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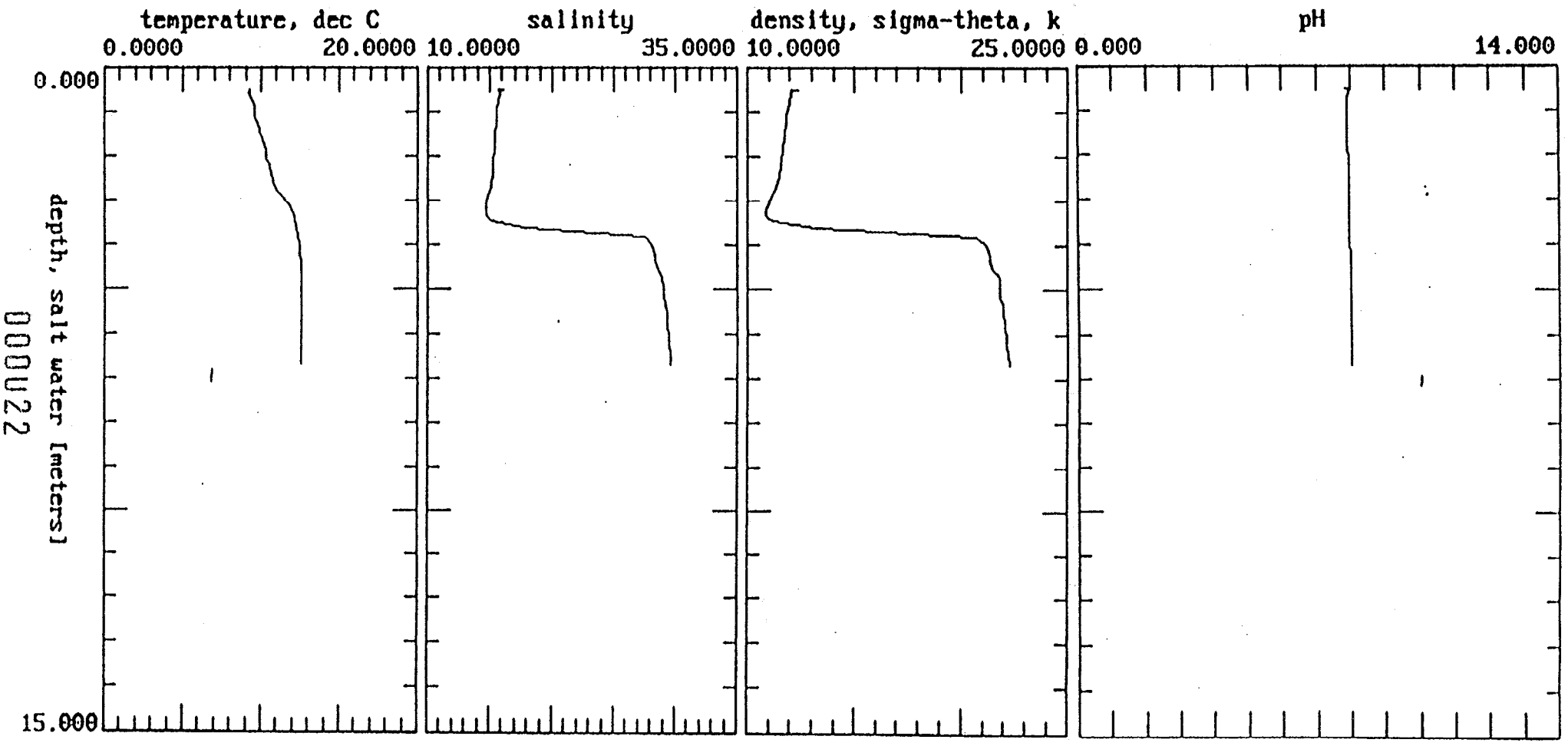
T4SD3

11/11/92 12



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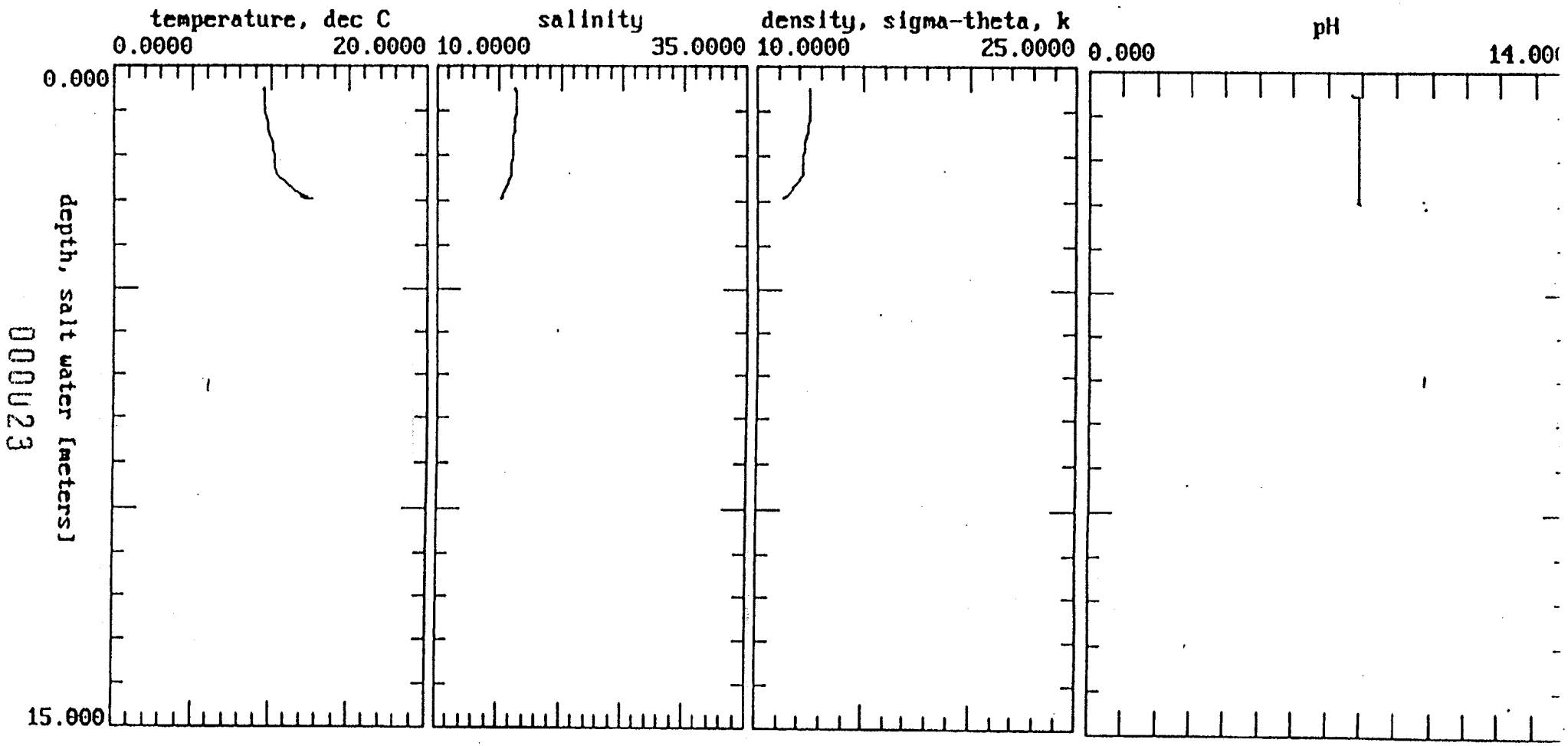

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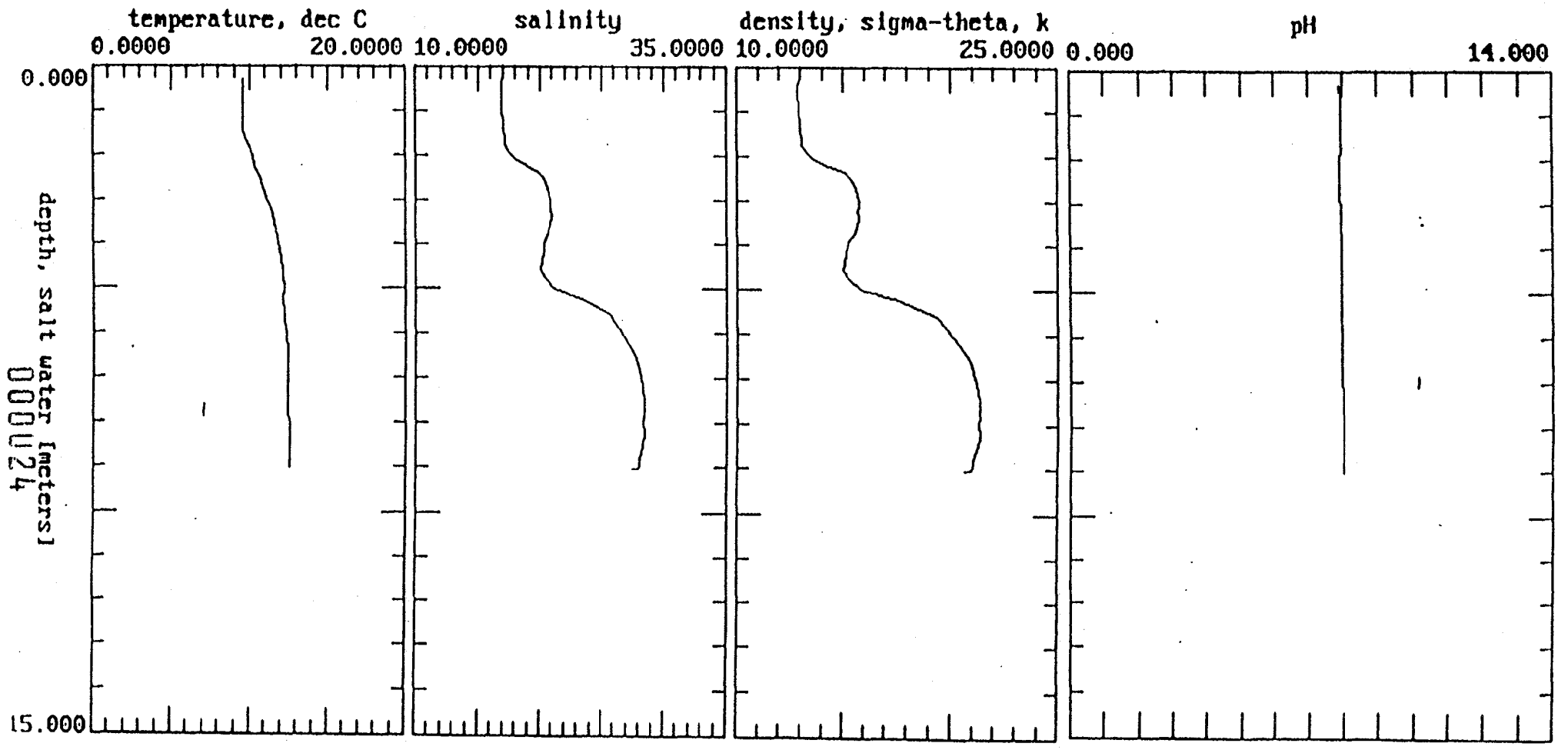
T5SD4

11/11/93



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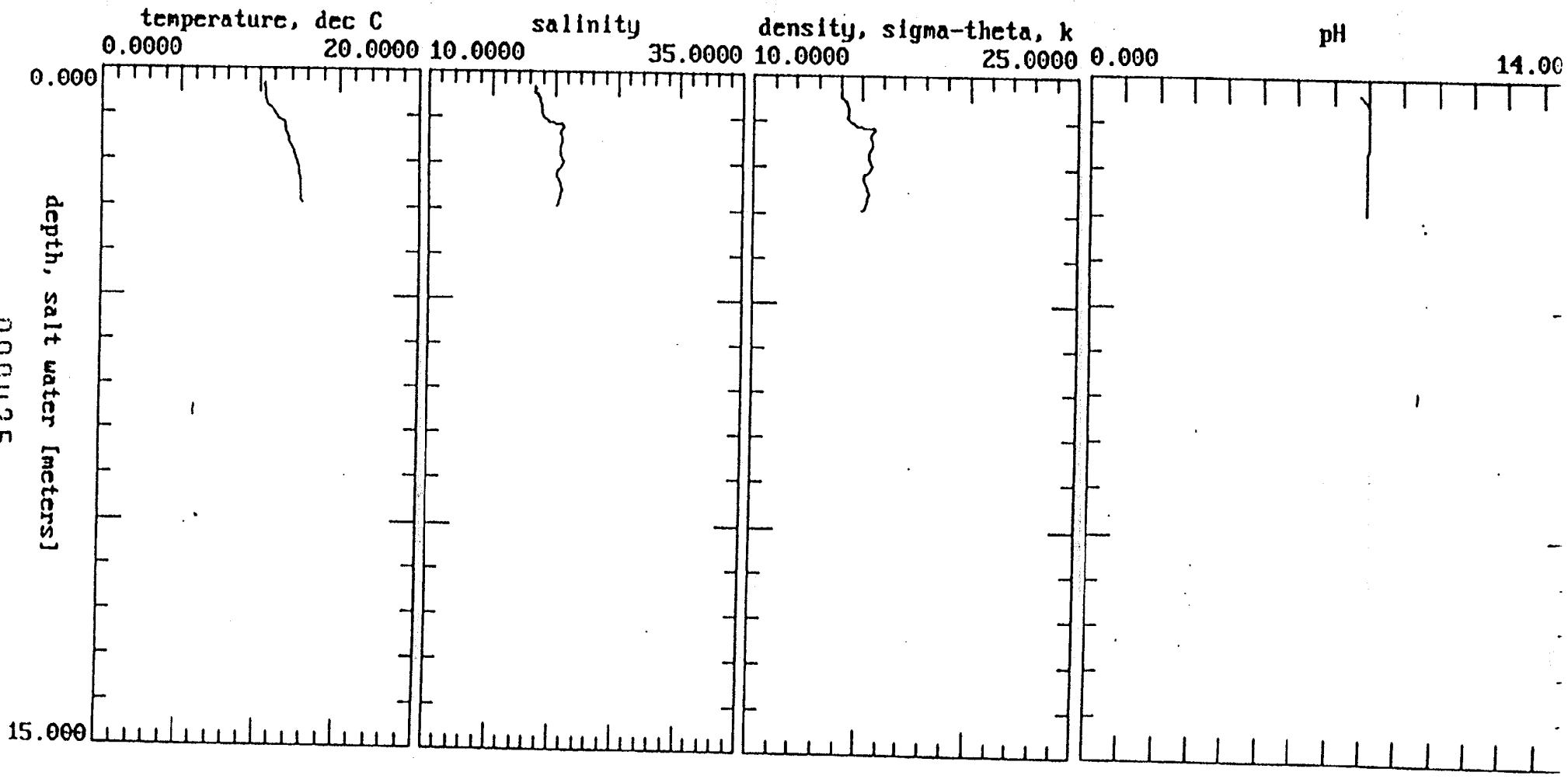

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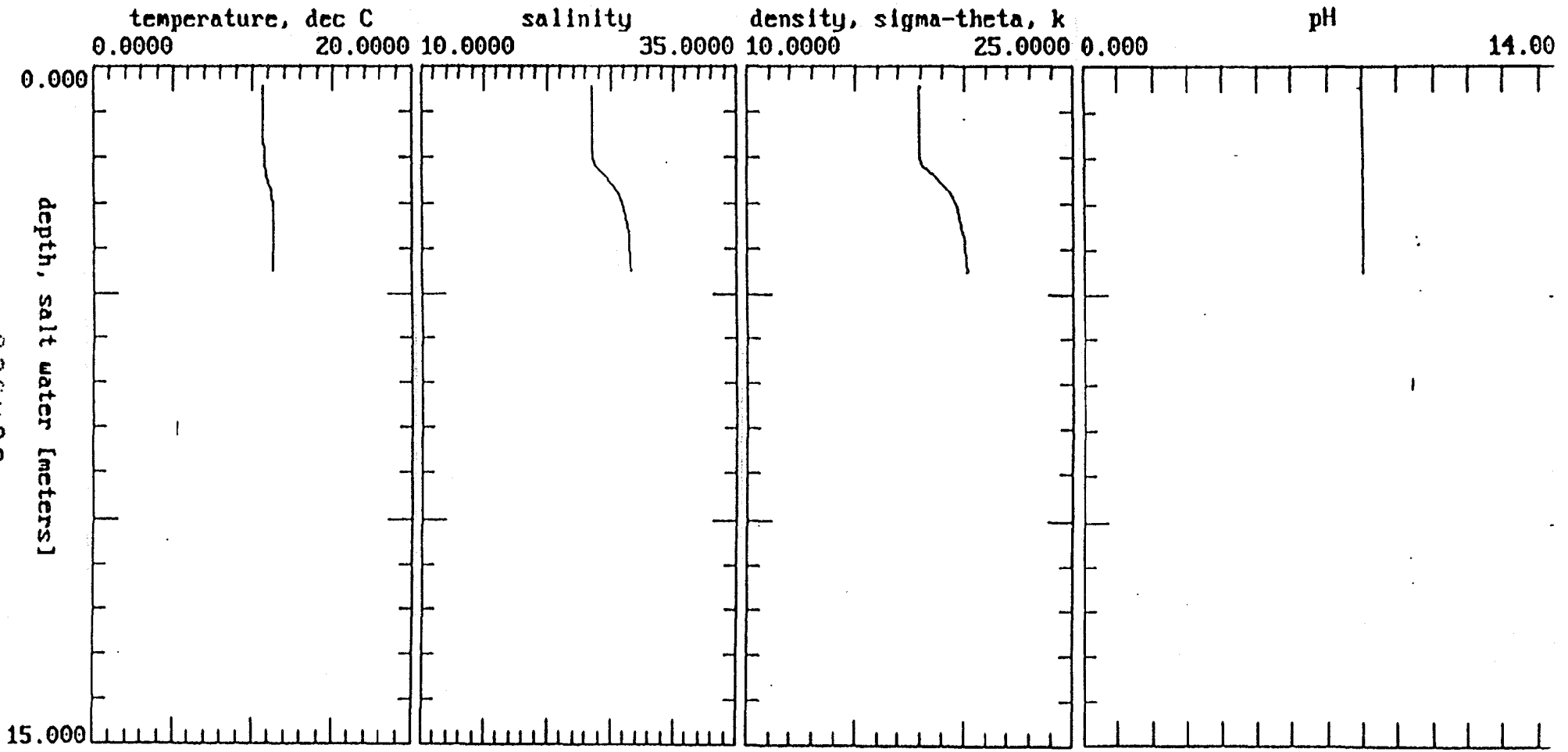
T5SD3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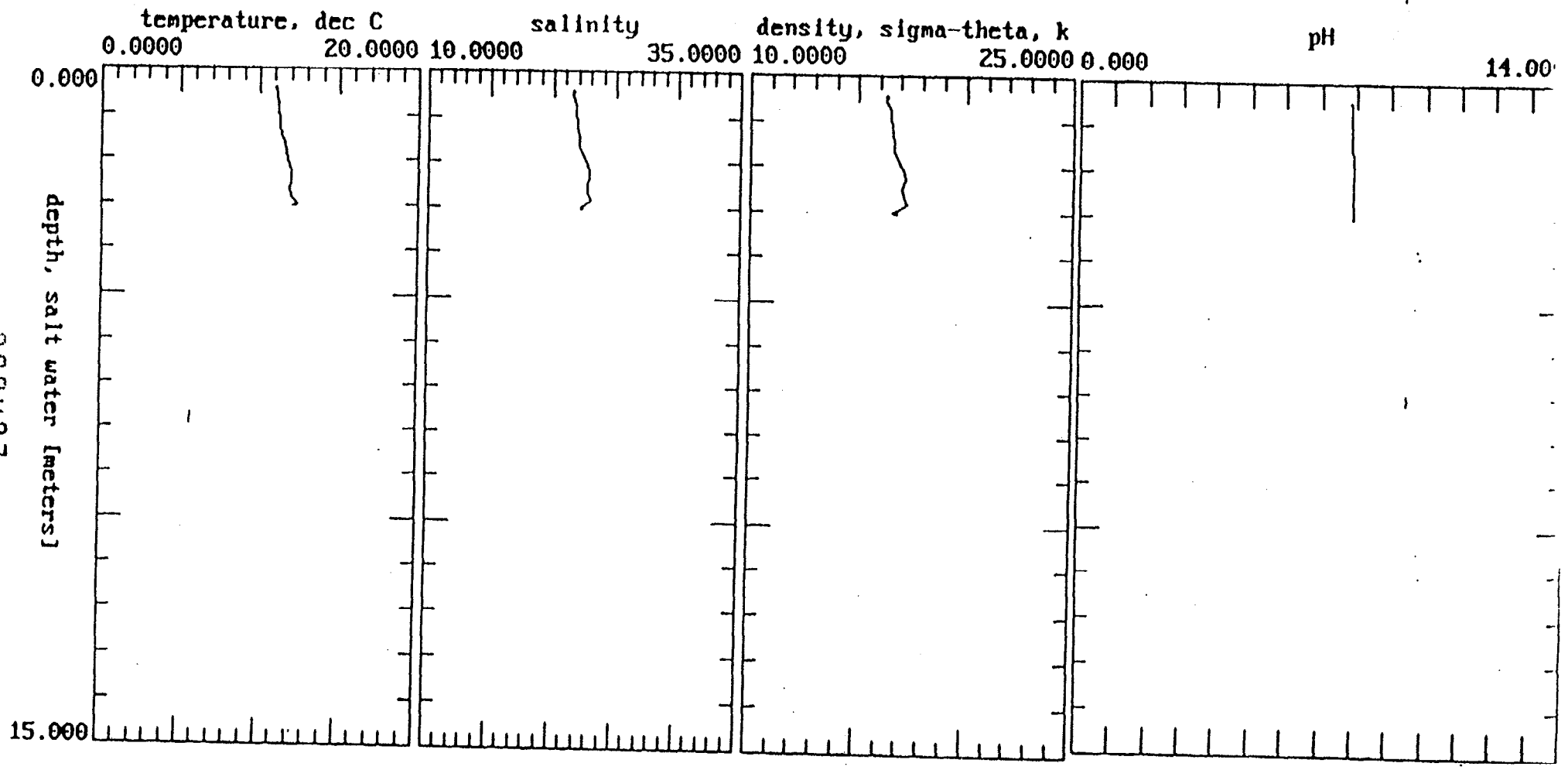
14.00
0.000
15.000
depth, salt water [meters]

000026



000027

T1SD1
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APPENDIX G.3.2

LABORATORY DATA FOR MACROBENTHIC TAXONOMY (COVE CORPORATION)

Cove Corporation

10200 BREEDEN ROAD, LUSBY, MARYLAND 20657
TELEPHONE: (301) 326-4577
FAX No. (301) 326-4767

February 8, 1994

Ms. Katherine A. Fogarty
Menzie-Cura and Associates, Inc.
1 Courthouse Lane, Suite Two
Chelmsford, MA 01824

Re: November 1993 macrobenthic data for the Thames River Project (Project No. 342.2).

Dear Ms. Fogarty,

Enclosed are (1) species abundance tables, (2) QA/QC sample processing results, and (an IBM formatted diskette. QA/QC sample processing results are presented on the following tv pages. A list of diskette files can be found in the table below. We will send you the specimer in a few days. If you have any questions or comments, please call.

Sincerely,

C. Timothy Morris
Laboratory Manager

DISKETTE FILES

File Name	Contents of File	Format
GROTON93.DAT	abundance data for all stations	ASCII
GROTON93.PRT	abundance tables for all stations	WordPerfect 5.1
NEWENG.SPL	list of taxa with NODC numerical codes	ASCII

PART I - SORTING QA/QC RESULTS

A total of 48 macrobenthic samples were sorted by Barbara Weems (16), Sandy Baki (9), Karen Westly (8), Janice Darling (6), Cindy Statter (5), and Denise Henderson (4). Approximately 10% of each technician's samples were resorted for QA/QC purposes. All samples passed the sorting QA/QC check. Please note that Denise's samples were not checked because she sorted so few samples.

Summary of Sorting Performance

total number of samples sorted	48
total number of QA/QC samples	6
total number of QA/QC failures	0
total number of samples resorted	0
average QA/QC error (percentage)	1.2
range of QA/QC errors (percentage)	0.3 - 2.1

Detailed Sorting QA/QC Results

Sorter	Batch	Sample	QA/QC Inspector and Inspection Date		Number Found	Total Number	Percent Error
BAW	1	T3SD4-2	CLS	17DEC93	3	360	0.8
BAW	2	T4SD3-2	CLS	20DEC93	1	316	0.3
SLB	1	T3SD2-3	CLS	20DEC93	6	296	2.0
KLW	1	T1SD2-1	BAW	20DEC93	6	303	2.0
JRD	1	T3SD3-1	BAW	20DEC93	5	1035	0.5
CLS	1	T3SD2-2	BAW	20DEC93	12	559	2.1

PART II - IDENTIFICATION AND ENUMERATION QA/QC RESULTS

All macrobenthic samples were collectively identified by Sue Arcuri (polychaetes), Tim Mor (polychaetes, arthropods, and sundry taxa), and Nancy Mountford (polychaetes and molluscs). Fi samples (10.4% of the total number) were checked for unacceptable identification/enumerati errors. All samples passed the identification QA/QC check.

Summary of Identification Performance

total number of samples identified	48
total number of QA/QC samples	5
total number of QA/QC failures	0
total number of samples reidentified and/or recounted	0
average QA/QC error (percentage)	1.2
range of QA/QC errors (percentage)	0.7 - 2.9

Detailed Identification QA/QC Results

Batch	Sample	QA/QC Inspectors and Inspection Date	Errors	Total Number	Percent Error
1	T2SD1-2	CTM/SLA 07JAN94	8	274	2.9
2	T3SD1-3	CTM/SLA 07JAN94	18	1362	1.3
3	T4SD1-1	NKM/SLA 07JAN94	6	853	0.7
4	T5SD1-3	CTM/SLA 07JAN94	4	312	1.3
5	T5SD2-3	NKM/SLA 07JAN94	6	617	1.0

STUDY SITE = THAMES RIVER, CT
STATION = T1SD1
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
ANNELIDA				
Mediomastus ambiseta	83	85	60	76.0
Cossura longocirrata	37	40	45	40.7
Streblospio benedicti	20	43	50	37.7
Oligochaeta	19	9	10	12.7
Leitoscoloplos sp.	6	12	12	10.0
Pectinaria gouldii	2	4	1	2.3
Aricidea (Acmira) catherinae	3	2	1	2.0
Hypereteone heteropoda	2	2	0	1.3
Clymenella torquata	1	1	0	0.7
Tharyx sp. A	1	1	0	0.7
Polydora cornuta	1	0	1	0.7
Terebellidae	1	0	0	0.3
Podarkeopsis levifuscina	0	0	1	0.3
Nephtys incisa	1	0	0	0.3
GASTROPODA				
Ilyanassa obsoleta	6	1	23	10.0
BIVALVIA				
Mulinia lateralis	52	25	33	36.7
Mya arenaria	3	5	5	4.3
Yoldia limatula	0	1	0	0.3
Macoma tenta	0	1	0	0.3
CRUSTACEA				
Ampelisca abdita	3	1	1	1.7
Callinectes sapidus	1	0	0	0.3
TOTAL NUMBER OF TAXA	18	16	13	
TOTAL NUMBER OF INDIVIDUALS	242	233	243	
SHANNON-WEINER DIVERSITY	1.952	1.874	1.950	
SIMPSON'S DOMINANCE INDEX	0.202	0.213	0.170	
SPECIES RICHNESS	3.10	2.75	2.18	
EVENNESS	0.68	0.68	0.76	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	21
MEAN NUMBER OF INDIVIDUALS	239.3
SHANNON-WEINER DIVERSITY	1.990
SIMPSON'S DOMINANCE INDEX	0.185
SPECIES RICHNESS	3.04
EVENNESS	0.65

STUDY SITE = THAMES RIVER, CT
STATION = T1SD2
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	2	0	0	0.7
ANNELIDA				
Mediomastus ambiseta	106	85	93	94.7
Cossura longocirrata	95	106	19	73.3
Oligochaeta	23	15	14	17.3
Streblospio benedicti	13	14	22	16.3
Polycirrus spp.	9	17	18	14.7
Polycirrus eximius	0	12	20	10.7
Aricidea (Acmira) catherinae	11	7	7	8.3
Leitoscoloplos sp.	2	5	1	2.7
Podarkeopsis levifuscina	1	5	1	2.3
Microphthalmus aberrans	2	1	3	2.0
Tharyx sp. A	3	2	0	1.7
Nephtys incisa	2	0	0	0.7
Pectinaria gouldii	0	2	0	0.7
Scolelepis bousfieldi	0	0	2	0.7
Hypereteone heteropoda	0	1	0	0.3
Paranaitis speciosa	0	0	1	0.3
Maldanidae	1	0	0	0.3
Syllidae	0	0	1	0.3
Clymenella torquata	0	1	0	0.3
Polydora cornuta	0	0	1	0.3
BIVALVIA				
Mulinia lateralis	6	13	8	9.0
Yoldia limatula	1	2	9	4.0
Tellina agilis	0	4	0	1.3
Aligena elevata	0	1	0	0.3
Nucula annulata	0	0	1	0.3
CRUSTACEA				
Ampelisca abdita	17	9	19	15.0
Hutchinsoniella macracantha	9	0	0	3.0
Leptocheirus pinguis	0	0	2	0.7
TOTAL NUMBER OF TAXA	17	19	19	
TOTAL NUMBER OF INDIVIDUALS	303	302	242	
SHANNON-WEINER DIVERSITY	1.865	2.002	2.157	
SIMPSON'S DOMINANCE INDEX	0.235	0.216	0.188	
SPECIES RICHNESS	2.80	3.15	3.28	
EVENNESS	0.66	0.68	0.73	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	29
MEAN NUMBER OF INDIVIDUALS	282.3
SHANNON-WEINER DIVERSITY	2.118
SIMPSON'S DOMINANCE INDEX	0.196
SPECIES RICHNESS	4.15
EVENNESS	0.63

STUDY SITE = THAMES RIVER, CT
STATION = T2SD1
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
ANNELIDA				
Mediomastus ambiseta	27	65	55	49.0
Streblospio benedicti	20	78	38	45.3
Cossura longocirrata	13	45	34	30.7
Oligochaeta	10	48	28	28.7
Leitoscoloplos sp.	10	17	7	11.3
Tharyx sp. A	1	2	3	2.0
Hypereteone heteropoda	0	1	1	0.7
Nephtys caeca	0	1	1	0.7
Polydora cornuta	1	0	0	0.3
Lumbrineridae	1	0	0	0.3
Ampharetidae	0	1	0	0.3
Spiochaetopterus costarum	0	0	1	0.3
Melinna sp.	0	1	0	0.3
Nephtys incisa	0	0	1	0.3
GASTROPODA				
Fargoa bushiana	1	0	0	0.3
Ilyanassa obsoleta	0	0	1	0.3
BIVALVIA				
Mulinia lateralis	0	3	2	1.7
Yoldia limatula	0	1	2	1.0
Tellina agilis	0	1	0	0.3
Bivalvia	1	0	0	0.3
CRUSTACEA				
Ampelisca abdita	1	10	1	4.0
Leucon americanus	0	0	1	0.3
TOTAL NUMBER OF TAXA	11	14	15	
TOTAL NUMBER OF INDIVIDUALS	86	274	176	
SHANNON-WEINER DIVERSITY	1.800	1.802	1.810	
SIMPSON'S DOMINANCE INDEX	0.203	0.200	0.209	
SPECIES RICHNESS	2.24	2.32	2.71	
EVENNESS	0.75	0.68	0.67	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	22
MEAN NUMBER OF INDIVIDUALS	178.7
SHANNON-WEINER DIVERSITY	1.852
SIMPSON'S DOMINANCE INDEX	0.200
SPECIES RICHNESS	3.34
EVENNESS	0.60

STUDY SITE = THAMES RIVER, CT
STATION = T2SD2
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
ANNELIDA				
Streblospio benedicti	106	69	71	82.0
Mediomastus ambiseta	126	51	39	72.0
Cossura longocirrata	60	26	33	39.7
Oligochaeta	44	23	9	25.3
Polycirrus spp.	1	0	10	3.7
Polycirrus eximius	0	0	7	2.3
Leitoscoloplos sp.	2	1	3	2.0
Tharyx sp. A	1	2	2	1.7
Nephtys incisa	3	0	1	1.3
Ampharete arctica	0	0	3	1.0
Maldanidae	0	0	2	0.7
Scolelepis bousfieldi	2	0	0	0.7
Levinsenia gracilis	1	0	1	0.7
Microphthalmus aberrans	0	0	2	0.7
Nephtys caeca	2	0	0	0.7
Syllides sp.	0	1	0	0.3
Polydora cornuta	0	1	0	0.3
Hypereteone heteropoda	0	1	0	0.3
Lumbrineridae	0	0	1	0.3
Pectinaria gouldii	1	0	0	0.3
Spiochaetopterus costarum	0	1	0	0.3
Paraprionospio pinnata	0	0	1	0.3
GASTROPODA				
Eupleura caudata	0	0	1	0.3
BIVALVIA				
Mulinia lateralis	18	17	13	16.0
Nucula annulata	9	9	18	12.0
Yoldia limatula	7	8	8	7.7
Tellina agilis	0	2	1	1.0
Pandora gouldiana	2	0	1	1.0
CRUSTACEA				
Ampelisca abdita	5	4	19	9.3
Leptocheirus pinguis	0	0	1	0.3
Balanus sp.	0	0	1	0.3
TOTAL NUMBER OF TAXA	17	15	24	
TOTAL NUMBER OF INDIVIDUALS	390	216	248	
SHANNON-WEINER DIVERSITY	1.817	1.938	2.344	
SIMPSON'S DOMINANCE INDEX	0.218	0.194	0.144	
SPECIES RICHNESS	2.68	2.60	4.17	
EVENNESS	0.64	0.72	0.74	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	31
MEAN NUMBER OF INDIVIDUALS	284.7
SHANNON-WEINER DIVERSITY	2.096
SIMPSON'S DOMINANCE INDEX	0.181
SPECIES RICHNESS	4.44
EVENNESS	0.61

STUDY SITE = THAMES RIVER, CT
STATION = T3SD1
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	0	0	1	0.3
ANNELIDA				
Mediomastus ambiseta	212	652	433	432.3
Cossura longocirrata	110	711	423	414.7
Oligochaeta	10	19	49	26.0
Maldanidae	0	12	15	9.0
Streblospio benedicti	4	10	13	9.0
Nephtys incisa	6	11	8	8.3
Aricidea (Acmira) catherinae	0	2	18	6.7
Scolelepis bousfieldi	1	7	10	6.0
Polycirrus spp.	1	0	7	2.7
Levinsenia gracilis	0	0	7	2.3
Tharyx sp. A	0	1	4	1.7
Streptosyllis pettiboneae	0	1	3	1.3
Pectinaria gouldii	1	1	0	0.7
Nephtyidae	0	1	1	0.7
Spiophanes bombyx	0	2	0	0.7
Lumbrineridae	0	1	1	0.7
Polycirrus eximius	0	0	1	0.3
Melinna maculata	0	0	1	0.3
Spiochaetopterus costarum	0	0	1	0.3
Hypereteone heteropoda	0	1	0	0.3
Sigambra tentaculata	0	0	1	0.3
Microphthalmus aberrans	0	0	1	0.3
Prionospio steenstrupi	0	1	0	0.3
GASTROPODA				
Acteocina canaliculata	1	1	0	0.7
Eupleura caudata	0	1	0	0.3
Odostomia sp.	0	1	0	0.3
BIVALVIA				
Nucula annulata	167	282	304	251.0
Mulinia lateralis	18	69	40	42.3
Yoldia limatula	17	24	16	19.0
Macoma tenta	1	1	2	1.3
Tellina agilis	0	2	1	1.0
Lyonsia sp.	0	1	0	0.3
Mya arenaria	1	0	0	0.3
Bivalvia	0	1	0	0.3
HEMICHORDATA				
Saccoglossus kowalevskii	0	0	1	0.3

TOTAL NUMBER OF TAXA	14	28	28
TOTAL NUMBER OF INDIVIDUALS	550	1816	1362
SHANNON-WEINER DIVERSITY	1.497	1.444	1.702
SIMPSON'S DOMINANCE INDEX	0.283	0.308	0.250
SPECIES RICHNESS	2.06	3.33	3.46
EVENNESS	0.57	0.44	0.52

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	36
MEAN NUMBER OF INDIVIDUALS	1242.7
SHANNON-WEINER DIVERSITY	1.581
SIMPSON'S DOMINANCE INDEX	0.275
SPECIES RICHNESS	4.26
EVENNESS	0.44

STUDY SITE = THAMES RIVER, CT
STATION = T3SD2
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	1	0	0	0.3
ANNELIDA				
Cossura longocirrata	196	423	147	255.3
Mediomastus ambiseta	68	34	43	48.3
Oligochaeta	45	47	35	42.3
Streblospio benedicti	37	28	43	36.0
Sigambra tentaculata	4	1	8	4.3
Nephtyidae	0	1	0	0.3
Syllidae	0	1	0	0.3
Podarkeopsis levifuscina	1	0	0	0.3
GASTROPODA				
Astyris lunata	0	1	0	0.3
Gastropoda	0	1	0	0.3
BIVALVIA				
Nucula annulata	5	7	12	8.0
Yoldia limatula	1	8	4	4.3
Mulinia lateralis	4	5	3	4.0
Tellina agilis	2	0	1	1.0
Gemma gemma	1	0	0	0.3
CRUSTACEA				
Microdeutopus gryllotalpa	0	1	0	0.3
Paracaprella tenuis	0	1	0	0.3
TOTAL NUMBER OF TAXA	12	14	9	
TOTAL NUMBER OF INDIVIDUALS	365	559	296	
SHANNON-WEINER DIVERSITY	1.388	0.976	1.512	
SIMPSON'S DOMINANCE INDEX	0.349	0.586	0.305	
SPECIES RICHNESS	1.86	2.05	1.41	
EVENNESS	0.56	0.37	0.69	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	18
MEAN NUMBER OF INDIVIDUALS	406.7
SHANNON-WEINER DIVERSITY	1.282
SIMPSON'S DOMINANCE INDEX	0.428
SPECIES RICHNESS	2.39
EVENNESS	0.44

STUDY SITE = THAMES RIVER, CT
STATION = T3SD3
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
ANNELIDA				
Cossura longocirrata	690	901	307	632.7
Mediomastus ambiseta	188	251	47	162.0
Streblospio benedicti	44	65	19	42.7
Oligochaeta	46	40	18	34.7
Leitoscoloplos sp.	4	10	7	7.0
Pectinaria gouldii	4	5	3	4.0
Aricidea (Acmira) catherinae	2	4	0	2.0
Hypereteone heteropoda	2	2	0	1.3
Tharyx sp. A	2	1	0	1.0
Typosyllis alternata	2	0	0	0.7
Polydora cornuta	0	2	0	0.7
Streptosyllis pettiboneae	0	1	0	0.3
Nephtys incisa	0	1	0	0.3
BIVALVIA				
Mulinia lateralis	39	26	8	24.3
Yoldia limatula	4	5	3	4.0
Tellina agilis	2	1	1	1.3
Mya arenaria	0	2	1	1.0
Nucula annulata	1	1	0	0.7
Petricola pholadiformis	2	0	0	0.7
Mysella planulata	1	0	0	0.3
Mytilus edulis	1	0	0	0.3
CRUSTACEA				
Ampelisca abdita	0	1	0	0.3
Leptocheirus pinguis	1	0	0	0.3
Leucon americanus	0	1	0	0.3
TOTAL NUMBER OF TAXA	18	19	10	
TOTAL NUMBER OF INDIVIDUALS	1035	1320	414	
SHANNON-WEINER DIVERSITY	1.140	1.072	0.992	
SIMPSON'S DOMINANCE INDEX	0.483	0.506	0.568	
SPECIES RICHNESS	2.45	2.51	1.49	
EVENNESS	0.39	0.36	0.43	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	24
MEAN NUMBER OF INDIVIDUALS	923.0
SHANNON-WEINER DIVERSITY	1.098
SIMPSON'S DOMINANCE INDEX	0.505
SPECIES RICHNESS	2.90
EVENNESS	0.35

STUDY SITE = THAMES RIVER, CT
STATION = T3SD4
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	0	1	0	0.3
ANNELIDA				
Streblospio benedicti	80	89	127	98.7
Cossura longocirrata	70	76	129	91.7
Oligochaeta	65	36	90	63.7
Mediomastus ambiseta	47	59	83	63.0
Leitoscoloplos sp.	5	15	3	7.7
Hypereteone heteropoda	1	0	6	2.3
Aricidea (Acmira) catherinae	1	1	4	2.0
Pectinaria gouldii	0	3	3	2.0
Polycirrus spp.	0	3	0	1.0
Tharyx sp. A	0	1	0	0.3
Paranaitis speciosa	0	0	1	0.3
Nephtys caeca	1	0	0	0.3
Nereididae	0	1	0	0.3
GASTROPODA				
Haminoea solitaria	2	1	2	1.7
Crepidula spp.	0	1	0	0.3
BIVALVIA				
Mulinia lateralis	36	47	38	40.3
Yoldia limatula	8	13	11	10.7
Mya arenaria	7	3	3	4.3
Nucula annulata	0	0	2	0.7
Tellina agilis	0	1	0	0.3
Mercenaria mercenaria	1	0	0	0.3
CRUSTACEA				
Ampelisca abdita	2	9	8	6.3
TOTAL NUMBER OF TAXA	14	18	15	
TOTAL NUMBER OF INDIVIDUALS	326	360	510	
SHANNON-WEINER DIVERSITY	1.890	2.045	1.873	
SIMPSON'S DOMINANCE INDEX	0.180	0.164	0.190	
SPECIES RICHNESS	2.25	2.89	2.25	
EVENNESS	0.72	0.71	0.69	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	23
MEAN NUMBER OF INDIVIDUALS	398.7
SHANNON-WEINER DIVERSITY	1.967
SIMPSON'S DOMINANCE INDEX	0.176
SPECIES RICHNESS	3.10
EVENNESS	0.63

STUDY SITE = THAMES RIVER, CT
STATION = T4SD1
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
PLATYHELMINTHES				
Turbellaria	0	0	1	0.3
ANNELIDA				
Mediomastus ambiseta	259	112	109	160.0
Cossura longocirrata	176	86	45	102.3
Aricidea (Acmira) catherinae	71	17	50	46.0
Oligochaeta	23	27	8	19.3
Polycirrus spp.	14	8	29	17.0
Levinsenia gracilis	11	14	11	12.0
Streblospio benedicti	20	4	12	12.0
Nephtys incisa	10	10	11	10.3
Maldanidae	16	5	9	10.0
Scolelepis bousfieldi	6	7	3	5.3
Lumbrineridae	4	3	2	3.0
Tharyx sp. A	2	3	2	2.3
Microphthalmus aberrans	0	0	4	1.3
Streptosyllis pettiboneae	3	0	1	1.3
Ninoe nigripes	0	2	1	1.0
Eumida sanguinea	2	0	1	1.0
Leitoscoloplos sp.	1	1	1	1.0
Macroclymene zonalis	0	0	3	1.0
Melinna maculata	1	1	1	1.0
Polycirrus eximius	1	1	0	0.7
Typosyllis alternata	1	0	0	0.3
Polydora socialis	1	0	0	0.3
Sabellidae	0	0	1	0.3
Ampharete arctica	0	0	1	0.3
Pherusa affinis	0	0	1	0.3
Pholoe minuta	0	0	1	0.3
Sigambra tentaculata	0	0	1	0.3
Cirrophorus sp.	0	1	0	0.3
GASTROPODA				
Acteocina canaliculata	1	2	0	1.0
Eupleura caudata	0	1	1	0.7
Crepidula spp.	0	0	1	0.3
Natica pusilla	0	0	1	0.3
BIVALVIA				
Nucula annulata	195	92	157	148.0
Yoldia limatula	15	14	22	17.0
Mulinia lateralis	8	9	20	12.3
Tellina agilis	0	2	1	1.0
Macoma tenta	1	0	1	0.7
Pandora gouldiana	0	0	1	0.3
Petricola pholadiformis	0	0	1	0.3

CHELICERATA				
Anoplodactylus petiolatus	1	0	0	0.3
CRUSTACEA				
Leptocheirus pinguis	1	3	0	1.3
Ampelisca abdita	1	1	1	1.0
Leucon americanus	1	0	0	0.3
Microprotopus raneyi	0	1	0	0.3
Balanus sp.	1	0	0	0.3
PHORONIDA				
Phoronis sp.	0	1	0	0.3
HEMICHORDATA				
Saccoglossus kowalevskii	6	4	3	4.3

TOTAL NUMBER OF TAXA	30	28	37
TOTAL NUMBER OF INDIVIDUALS	853	432	519
SHANNON-WEINER DIVERSITY	2.020	2.261	2.331
SIMPSON'S DOMINANCE INDEX	0.197	0.162	0.161
SPECIES RICHNESS	4.30	4.45	5.76
EVENNESS	0.59	0.68	0.65

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	48
MEAN NUMBER OF INDIVIDUALS	601.3
SHANNON-WEINER DIVERSITY	2.230
SIMPSON'S DOMINANCE INDEX	0.171
SPECIES RICHNESS	6.27
EVENNESS	0.58

STUDY SITE = THAMES RIVER, CT
STATION = T4SD2
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	1	0	3	1.3
ANNELIDA				
Cossura longocirrata	117	162	232	170.3
Mediomastus ambiseta	213	111	168	164.0
Streblospio benedicti	79	20	78	59.0
Oligochaeta	31	17	62	36.7
Leitoscoloplos sp.	19	11	9	13.0
Hypereteone heteropoda	2	1	6	3.0
Pectinaria gouldii	4	1	3	2.7
Tharyx sp. A	2	2	3	2.3
Polycirrus spp.	2	0	3	1.7
Streptosyllis pettiboneae	1	0	3	1.3
Maldanidae	0	1	2	1.0
Scolelepis bousfieldi	2	0	0	0.7
Aricidea (Acmira) catherinae	0	1	0	0.3
Cirrophorus sp.	1	0	0	0.3
Levinsenia gracilis	0	0	1	0.3
Spiochaetopterus costarum	0	0	1	0.3
Nephtys incisa	0	0	1	0.3
Macroclymene zonalis	0	0	1	0.3
BIVALVIA				
Nucula annulata	1	1	4	2.0
Yoldia limatula	0	0	1	0.3
Aligena elevata	1	0	0	0.3
CRUSTACEA				
Ampelisca abdita	1	0	1	0.7
TOTAL NUMBER OF TAXA	16	11	19	
TOTAL NUMBER OF INDIVIDUALS	477	328	582	
SHANNON-WEINER DIVERSITY	1.518	1.272	1.600	
SIMPSON'S DOMINANCE INDEX	0.293	0.366	0.272	
SPECIES RICHNESS	2.43	1.73	2.83	
EVENNESS	0.55	0.53	0.54	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	23
MEAN NUMBER OF INDIVIDUALS	462.3
SHANNON-WEINER DIVERSITY	1.540
SIMPSON'S DOMINANCE INDEX	0.285
SPECIES RICHNESS	3.04
EVENNESS	0.49

STUDY SITE = THAMES RIVER, CT
STATION = T4SD3
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
PLATYHELMINTHES				
Turbellaria	1	0	0	0.3
ANNELIDA				
Mediomastus ambiseta	392	169	203	254.7
Cossura longocirrata	276	120	103	166.3
Streblospio benedicti	14	7	4	8.3
Oligochaeta	16	2	4	7.3
Maldanidae	2	1	2	1.7
Nephtys incisa	2	0	1	1.0
Aricidea (Acmira) catherinae	0	1	1	0.7
Scolelepis bousfieldi	2	0	0	0.7
Pherusa affinis	0	1	0	0.3
Pectinaria gouldii	1	0	0	0.3
Sigambra tentaculata	1	0	0	0.3
GASTROPODA				
Acteocina canaliculata	2	0	0	0.7
BIVALVIA				
Yoldia limatula	15	11	9	11.7
Mulinia lateralis	14	4	13	10.3
Nucula annulata	2	0	2	1.3
Petricola pholadiformis	1	0	0	0.3
CHELICERATA				
Anoplodactylus petiolatus	1	0	0	0.3
TOTAL NUMBER OF TAXA	16	9	10	
TOTAL NUMBER OF INDIVIDUALS	742	316	342	
SHANNON-WEINER DIVERSITY	1.141	1.046	1.089	
SIMPSON'S DOMINANCE INDEX	0.419	0.432	0.446	
SPECIES RICHNESS	2.27	1.39	1.54	
EVENNESS	0.41	0.48	0.47	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	18
MEAN NUMBER OF INDIVIDUALS	466.7
SHANNON-WEINER DIVERSITY	1.121
SIMPSON'S DOMINANCE INDEX	0.427
SPECIES RICHNESS	2.35
EVENNESS	0.39

STUDY SITE = THAMES RIVER, CT
STATION = T4SD4
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
ANNELIDA				
Mediomastus ambiseta	215	247	282	248.0
Aricidea (Acmira) catherinae	92	132	69	97.7
Streblospio benedicti	108	84	56	82.7
Cossura longocirrata	2	12	104	39.3
Tharyx sp. A	34	19	17	23.3
Clymenella torquata	10	14	7	10.3
Leitoscoloplos sp.	1	8	8	5.7
Spio setosa	4	7	0	3.7
Ampharete arctica	2	6	1	3.0
Maldanidae	1	6	1	2.7
Macroclymene zonalis	3	0	4	2.3
Oligochaeta	1	3	3	2.3
Polycirrus spp.	2	3	2	2.3
Glycera spp.	1	3	2	2.0
Phyllodoce mucosa	1	3	0	1.3
Spiophanes bombyx	3	1	0	1.3
Nephtyidae	3	0	0	1.0
Spiochaetopterus costarum	0	2	1	1.0
Polydora quadrilobata	1	1	0	0.7
Polydora cornuta	0	2	0	0.7
Glycera dibranchiata	1	0	1	0.7
Hypereteone heteropoda	1	1	0	0.7
Polygordius sp.	0	1	0	0.3
Nephtys caeca	0	0	1	0.3
Paraprionospio pinnata	0	0	1	0.3
Glycera americana	0	1	0	0.3
Glycinde solitaria	0	1	0	0.3
Scalibregma inflatum	1	0	0	0.3
Cirrophorus sp.	1	0	0	0.3
GASTROPODA				
Crepidula maculosa	0	0	2	0.7
BIVALVIA				
Tellina agilis	21	52	38	37.0
Mulinia lateralis	19	22	5	15.3
Yoldia limatula	2	8	6	5.3
Mercenaria mercenaria	5	3	1	3.0
Mya arenaria	2	4	1	2.3
Nucula annulata	1	1	5	2.3
Ensis directus	2	4	1	2.3
Aligena elevata	1	3	0	1.3
Petricola pholadiformis	0	2	0	0.7
Pandora gouldiana	2	0	0	0.7

CRUSTACEA				
Ampelisca abdita	4	2	28	11.3
Unciola sp.	0	3	0	1.0
Pagurus longicarpus	0	0	2	0.7
HEMICHORDATA				
Saccoglossus kowalevskii	1	0	1	0.7

TOTAL NUMBER OF TAXA	33	33	28
TOTAL NUMBER OF INDIVIDUALS	548	661	650
SHANNON-WEINER DIVERSITY	1.967	2.134	1.950
SIMPSON'S DOMINANCE INDEX	0.228	0.205	0.239
SPECIES RICHNESS	5.07	4.93	4.17
EVENNESS	0.56	0.61	0.59

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	44
MEAN NUMBER OF INDIVIDUALS	619.7
SHANNON-WEINER DIVERSITY	2.125
SIMPSON'S DOMINANCE INDEX	0.213
SPECIES RICHNESS	5.71
EVENNESS	0.56

STUDY SITE = THAMES RIVER, CT
STATION = T5SD1
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
PLATYHELMINTHES				
Turbellaria	1	0	0	0.3
NEMERTINEA				
Nemertinea	0	1	0	0.3
ANNELIDA				
Mediomastus ambiseta	40	114	61	71.7
Cossura longocirrata	25	84	91	66.7
Oligochaeta	49	31	48	42.7
Streblospio benedicti	37	47	27	37.0
Leitoscoloplos sp.	21	12	16	16.3
Tharyx sp. A	0	2	4	2.0
Polydora cornuta	0	0	6	2.0
Hypereteone heteropoda	0	1	1	0.7
Paranaitis speciosa	0	0	2	0.7
Polycirrus spp.	0	1	0	0.3
Pectinaria gouldii	0	0	1	0.3
Maldanidae	0	0	1	0.3
Nephtyidae	1	0	0	0.3
Microphthalmus sczelkowii	1	0	0	0.3
GASTROPODA				
Littoridinops tenuipes	0	2	4	2.0
Ilyanassa obsoleta	3	0	0	1.0
Eupleura caudata	0	0	3	1.0
Gastropoda	0	0	2	0.7
BIVALVIA				
Mulinia lateralis	7	0	22	9.7
Gemma gemma	0	0	13	4.3
Mya arenaria	0	0	4	1.3
Nucula annulata	0	2	0	0.7
Yoldia limatula	2	0	0	0.7
CRUSTACEA				
Ampelisca abdita	9	14	6	9.7
Leptocheirus pinguis	0	1	0	0.3
TOTAL NUMBER OF TAXA	12	13	18	
TOTAL NUMBER OF INDIVIDUALS	196	312	312	
SHANNON-WEINER DIVERSITY	1.940	1.671	2.134	
SIMPSON'S DOMINANCE INDEX	0.171	0.242	0.165	
SPECIES RICHNESS	2.08	2.09	2.96	
EVENNESS	0.78	0.65	0.74	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	27
MEAN NUMBER OF INDIVIDUALS	273.3
SHANNON-WEINER DIVERSITY	2.040
SIMPSON'S DOMINANCE INDEX	0.178
SPECIES RICHNESS	3.88
EVENNESS	0.62

STUDY SITE = THAMES RIVER, CT
STATION = T5SD2
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	4	2	3	3.0
ANNELIDA				
Mediomastus ambiseta	209	220	190	206.3
Cossura longocirrata	133	61	92	95.3
Streblospio benedicti	69	135	61	88.3
Oligochaeta	71	50	45	55.3
Hypereteone heteropoda	110	6	2	39.3
Polycirrus spp.	33	51	18	34.0
Leitoscoloplos sp.	47	29	25	33.7
Streptosyllis pettiboneae	19	8	8	11.7
Polydora cornuta	6	1	10	5.7
Polycirrus eximius	2	12	2	5.3
Eumida sanguinea	2	2	7	3.7
Podarkeopsis levifuscina	11	0	0	3.7
Neanthes succinea	2	4	3	3.0
Microphthalmus sczelkowii	5	4	0	3.0
Tharyx sp. A	1	3	2	2.0
Pectinaria gouldii	3	2	1	2.0
Amphitrite ornata	1	0	4	1.7
Glycera americana	0	2	1	1.0
Odontosyllis fulgurans	1	0	2	1.0
Harmothoe extenuata	2	0	1	1.0
Aricidea (Acmira) catherinae	0	1	1	0.7
Polydora socialis	0	2	0	0.7
Glycera spp.	0	1	1	0.7
Nephtyidae	0	1	0	0.3
Syllidae	0	0	1	0.3
Pygospio elegans	0	1	0	0.3
Spio setosa	0	1	0	0.3
Spiochaetopterus costarum	1	0	0	0.3
Sthenelais boa	0	0	1	0.3
Scolelepis bousfieldi	1	0	0	0.3
GASTROPODA				
Ilyanassa obsoleta	1	4	0	1.7
Crepidula maculosa	1	0	1	0.7
Astyris lunata	0	0	2	0.7
Fargoa bushiana	0	2	0	0.7
Eupleura caudata	1	0	0	0.3
Crepidula spp.	0	0	1	0.3
Odostomia sp.	0	1	0	0.3
Haminoea solitaria	0	1	0	0.3
BIVALVIA				
Mulinia lateralis	6	13	7	8.7
Mya arenaria	2	13	4	6.3

Tellina agilis	1	9	1	3.7
Yoldia limatula	4	2	1	2.3
Lyonsia arenosa	3	0	3	2.0
Petricola pholadiformis	0	2	2	1.3
CRUSTACEA				
Ericthonius brasiliensis	0	1	53	18.0
Microdeutopus gryllotalpa	2	4	19	8.3
Ampelisca abdita	2	7	10	6.3
Corophium spp.	2	0	8	3.3
Paracaprella tenuis	0	1	8	3.0
Edotea tribola	0	3	2	1.7
Rhithropanopeus harrisii	0	1	0	0.3
Luconacia incerta	0	0	1	0.3
UROCHORDATA				
Styela partita	0	0	11	3.7
Molgula manhattensis	0	2	2	1.3

TOTAL NUMBER OF TAXA	33	39	41
TOTAL NUMBER OF INDIVIDUALS	758	665	617
SHANNON-WEINER DIVERSITY	2.256	2.301	2.510
SIMPSON'S DOMINANCE INDEX	0.152	0.174	0.145
SPECIES RICHNESS	4.83	5.85	6.23
EVENNESS	0.65	0.63	0.68

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	55
MEAN NUMBER OF INDIVIDUALS	680.0
SHANNON-WEINER DIVERSITY	2.503
SIMPSON'S DOMINANCE INDEX	0.145
SPECIES RICHNESS	7.09
EVENNESS	0.62

STUDY SITE = THAMES RIVER, CT
STATION = T5SD3
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
ANNELIDA				
Cossura longocirrata	12	51	136	66.3
Mediomastus ambiseta	10	58	60	42.7
Streblospio benedicti	35	35	42	37.3
Oligochaeta	11	14	27	17.3
Leitoscoloplos sp.	5	1	12	6.0
Polydora cornuta	0	6	3	3.0
Hypereteone heteropoda	1	3	1	1.7
Pectinaria gouldii	0	1	2	1.0
Tharyx sp. A	0	0	1	0.3
Microphthalmus sczelkowii	0	0	1	0.3
Nephtys incisa	0	1	0	0.3
Neanthes succinea	1	0	0	0.3
GASTROPODA				
Eupleura caudata	0	0	1	0.3
BIVALVIA				
Mulinia lateralis	11	27	23	20.3
Yoldia limatula	0	2	7	3.0
Mya arenaria	0	1	3	1.3
Tellina agilis	1	0	0	0.3
CRUSTACEA				
Ampelisca abdita	4	6	5	5.0
Microdeutopus gryllotalpa	0	0	1	0.3
TOTAL NUMBER OF TAXA	10	13	16	
TOTAL NUMBER OF INDIVIDUALS	91	206	325	
SHANNON-WEINER DIVERSITY	1.834	1.869	1.810	
SIMPSON'S DOMINANCE INDEX	0.212	0.193	0.240	
SPECIES RICHNESS	2.00	2.25	2.59	
EVENNESS	0.80	0.73	0.65	

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	19
MEAN NUMBER OF INDIVIDUALS	207.3
SHANNON-WEINER DIVERSITY	1.918
SIMPSON'S DOMINANCE INDEX	0.196
SPECIES RICHNESS	2.80
EVENNESS	0.65

STUDY SITE = THAMES RIVER, CT
STATION = T5SD4
COLLECTION DATE = NOVEMBER 1993
SIEVE SIZE = 0.5mm

TAXA	REP 1	REP 2	REP 3	MEAN
NEMERTINEA				
Nemertinea	1	1	4	2.0
ANNELIDA				
Mediomastus ambiseta	396	375	376	382.3
Streblospio benedicti	220	127	105	150.7
Leitoscoloplos sp.	47	50	30	42.3
Oligochaeta	22	32	33	29.0
Pygospio elegans	27	26	25	26.0
Spio setosa	23	21	22	22.0
Polydora cornuta	12	24	8	14.7
Clymenella torquata	12	2	10	8.0
Hypereteone heteropoda	6	3	4	4.3
Tharyx sp. A	5	3	2	3.3
Maldanidae	8	0	2	3.3
Aricidea (Acmira) catherinae	3	2	2	2.3
Cossura longocirrata	6	1	0	2.3
Neanthes succinea	0	3	3	2.0
Polycirrus spp.	1	2	2	1.7
Marenzelleria viridis	2	2	0	1.3
Eumida sanguinea	0	0	4	1.3
Glycera americana	1	1	2	1.3
Podarkeopsis levifuscina	1	0	2	1.0
Glycera spp.	2	0	0	0.7
Polydora socialis	0	2	0	0.7
Phyllodoce mucosa	0	1	0	0.3
Streptosyllis pettiboneae	0	0	1	0.3
Amphitrite ornata	0	0	1	0.3
Harmothoe extenuata	0	0	1	0.3
Nephtyidae	1	0	0	0.3
Microphthalmus sczelkowii	0	0	1	0.3
Pectinaria gouldii	1	0	0	0.3
GASTROPODA				
Ilyanassa obsoleta	0	3	1	1.3
Eupleura caudata	2	0	0	0.7
Urosalpinx cinerea	0	0	1	0.3
Crepidula maculosa	0	1	0	0.3
BIVALVIA				
Mulinia lateralis	26	22	20	22.7
Mya arenaria	13	8	26	15.7
Tellina agilis	12	11	2	8.3
Lyonsia arenosa	0	2	1	1.0
Yoldia limatula	2	1	0	1.0
Aligena elevata	0	0	2	0.7

CRUSTACEA

Ampelisca abdita	7	4	13	8.0
Paracaprella tenuis	0	7	0	2.3
Ericthonius brasiliensis	0	2	2	1.3
Microdeutopus gryllotalpa	0	2	2	1.3
Corophium spp.	0	2	2	1.3
Balanus sp.	1	1	0	0.7
Hutchinsoniella macracantha	1	0	0	0.3
Crangon septemspinosa	0	0	1	0.3
Corophium acherusicum	0	0	1	0.3
Neomysis americana	1	0	0	0.3
Luconacia incerta	0	1	0	0.3

UROCHORDATA

Molgula manhattensis	0	1	0	0.3

TOTAL NUMBER OF TAXA	30	34	35
TOTAL NUMBER OF INDIVIDUALS	862	746	714
SHANNON-WEINER DIVERSITY	1.839	1.889	1.897
SIMPSON'S DOMINANCE INDEX	0.284	0.293	0.308
SPECIES RICHNESS	4.29	4.99	5.17
EVENNESS	0.54	0.54	0.53

TOTAL STATION STATISTICS

TOTAL NUMBER OF TAXA	51
MEAN NUMBER OF INDIVIDUALS	774.0
SHANNON-WEINER DIVERSITY	1.920
SIMPSON'S DOMINANCE INDEX	0.290
SPECIES RICHNESS	6.45
EVENNESS	0.49

APPENDIX G.3.3

LABORATORY DATA FOR ESTUARINE TOXICITY TESTING (ETT ENVIRONMENTAL)

WATER QUALITY OF SEDIMENT TOXICITY TESTING CONDUCTED ON ESTUARINE SEDIMENTS
THAMES RIVER
NSB-NLON, GROTON, CONNECTICUT

	Ampelisca abdita					*Leptocheirus plumulosus*				
Sample ID #	pH	D.O.	NH3	Salinity	Temp	pH	D.O.	NH3	Salinity	Temp
CONTROL	7.97 - 8.14	6.7 - 8.8			19.8 - 20.7	7.74 - 7.95	4.2 - 4.9			24.4 - 25.9
EC-SDTR07-02	7.97 - 8.17	6.5 - 8.8	2.9 - 6.1	27.5 - 29.0	20.0 - 20.5	7.74 - 8.18	5.8 - 6.0	2.94	20 - 20	22.2 - 25.9
EC-SDTR06-02	7.93 - 8.27	6.6 - 7.6	5.68	26 - 28	19.8 - 20.6	8.08 - 8.49	5.6 - 6.5	5.18 - 6.30	21 - 28	23.7 - 26.0
EC-SDTR05-02	7.89 - 8.16	6.4 - 8.4	5.57 - 6.14	27 - 29	20.1 - 20.6	7.74 - 7.95	5.2 - 6.5	4.40 - 5.91	22 - 27	22.7 - 25.9
EC-T3SD1-02	8.01 - 8.37	6.2 - 8.9	5.46 - 6.08	24 - 27	19.9 - 20.7	7.89 - 8.15	5.6 - 6.2	2.33 - 6.02	21 - 27	23.7 - 26.0
EC-8SD3-02	7.96 - 8.02	6.4 - 8.7	4.18 - 6.25	27.5 - 28	19.8 - 20.6	7.23 - 7.88	4.7 - 5.0	7.23 - 7.88	21 - 27	22.7 - 26.0
EC-SDTR04-02	8.03 - 8.24	5.2 - 6.2	4.06 - 8.48	27 - 28	19.9 - 20.6	7.99 - 8.46	6.0 - 6.7	5.18 - 5.74	21 - 25	22.7 - 26.0
EC-T4SD2-02	7.89 - 8.16	7.2 - 7.4	5.57 - 6.14	26 - 27	19.8 - 20.6	8.05 - 8.27	5.3 - 6.7	4.40 - 5.91	22 - 27	23.7 - 26.0
ECSDTR03-02	8.08 - 8.33	6.4 - 9.2	8.48	28 - 29	19.8 - 20.9	7.98 - 8.37	5.7 - 6.7	6.24	21 - 24	22.7 - 26.0
EC-SDTR02-02	8.09 - 8.39	6.4 - 8.8	4.96 - 6.35	27 - 28	19.7 - 20.7	7.87 - 7.95	4.5 - 4.9	3.50 - 4.90	18 - 25	24.8 - 25.9
EC-T3SD4-02	7.80 - 7.95	5.2 - 8.4	3.50 - 7.03	26 - 26	19.8 - 20.7	8.04 - 8.05	4.2 - 5.3	6.25 - 7.03	22 - 27	24.6 - 25.8
EC-SDTR01-02										
Ref. Sediment	7.89 - 8.11	6.2 - 8.0			20.0 - 20.6	7.89 - 7.90	6.0 - 6.8			24.4 - 26.0
Ref. Sediment						7.75 - 8.00	6.0 - 6.4			24.8 - 25.9

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
	Sample Identification: Reference Control Sediment	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Narrow River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Reference Control Sediment (Narrow River)
Collection Date: 5/8/95
Preservation: kept at 0-4°C in 4 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: fine particulates
Collection Method: grab

Test Sediment

Source: N/A
Collection Date: N/A **Homogenized?:** N/A
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3957	Sample Identification: Thames R. (EC-SDTR07-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	.
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames River (EC-SDTR07-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3958	Sample Identification: Thames R. (EC-T3SD1-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames River (EC-T3SD1-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3959	Sample Identification: Thames R. (EC-SDTR06-02)	End Date: 5/22/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean".
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR06-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3960	Sample Identification: Thames R. (EC-T4SD2-02)	End Date: 5/22/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-T4SD2-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/11/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3961	Sample Identification: Thames R. (EC-SDTR05-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR05-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3962	Sample Identification:	Thames R. (EC-SDTR04-02)	End Date:	5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames River (EC-SDTR04-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3963	Sample Identification: Thames R. (EC-SDTR03-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames River (EC-SDTR03-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3972	Sample Identification: Goss Cove (EC-8SD3-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Goss Cove (EC-8SD3-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3973	Sample Identification: Thames R. (EC-SDTR02-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR02-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3974	Sample Identification: Thames R. (EC-T3SD4-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 20°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Amphipoda
Species: *Ampelisca abdita*
Source: East Coast Amphipod (Rec'd 5/8/95)
Life Stage: 3-5 mm
% Mortality During 48 Hr Prior to Test not determined
Taxonomic Verification: RWK 5/3/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	28.5	
pH	8.11	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-T3SD4-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: N/A
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
	Sample Identification: Reference Sediment Control	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Narrow River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/16/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Reference Sediment (Narrow River)
Collection Date: 5/8/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/9/95 @ 11 AM
Observations: fine particulates
Collection Method: grab

Test Sediment

Source: N/A
Collection Date: N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
	Sample Identification: Reference Sediment Control	End Date: 5/26/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Narrow River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/16/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Reference Sediment (Narrow River)
Collection Date: 5/8/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/9/95 @ 11 AM
Observations: fine particulates
Collection Method: grab

Test Sediment

Source: N/A
Collection Date: N/A **Homogenized?:** N/A
Preservation: N/A
Date/Time Added to Test Chambers: N/A
Observations: N/A
Collection Method: N/A
Shipment: N/A

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3957	Sample Identification: Thames R. (EC-SDTR07-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/15/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR07-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3958	Sample Identification: Thames R. (EC-T3SD1-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-T3SD1-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3959	Sample Identification: Thames R. (EC-SDTR06-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR06-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3960	Sample Identification: Thames R. (EC-T4SD2-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-T4SD2-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3961	Sample Identification: Thames R. (EC-SDTR05-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR05-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3962	Sample Identification: Thames R. (EC-SDTR04-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR04-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3963	Sample Identification: Thames R. (EC-SDTR03-02)	End Date: 5/19/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/8, 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/9/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR03-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/8/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
T3972	Sample Identification: Goss Cove (EC-8SDS-02)	End Date: 5/26/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/16/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Goss Cove (EC-8SDS-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
T3973	Sample Identification: Thames R. (EC-SDTR02-02)	End Date: 5/26/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/16/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-SDTR02-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
T3974	Sample Identification: Thames R. (EC-T3SD4-02)	End Date: 5/26/95

Test System

EPA/600/R-94/025 Method 100.4

The test was set as a Pass/Fail test with a control treatment and one sample treatment. Each treatment replicate consisted of 175 g of sediment and 800 mL of dilution water. There were eight replicates for each treatment. Twenty test organisms were placed in each replicate. Sediment from the Thames River was used in the control treatment. Test organisms were not fed during the test. The test was conducted at a temperature of 25°C and a continuous light cycle. Test vessels were 1 L glass jars placed in a constant temperature incubator room.

Test Organisms

Order: Tanaidacea
Species: *Leptocheirus plumulosus*
Source: Chesapeake Cultures Rec'd: 5/15/95
Life Stage: 2-4 mm
% Mortality During 48 Hr Prior to Test none
Taxonomic Verification: RWK 5/16/95
Culturing: as received

Observations: Cultures healthy
Acclimation: None

Dilution Water

Type: Ultra-Pure Water w/ "Instant Ocean"
Preparation Date: 5/08/95

	Dilution Water	Pore Water
Salinity (ppt)	22	
pH	7.75	7.28
Conductivity (µmhos/cm)		46300

Preparation Method: Instant Ocean added until desired salinity reached. Allowed to equilibrate overnight.

Control Sediment

Source: Thames River (EC-SDTR01-02)
Collection Date: 5/3/95
Preservation: kept at 0-4°C in 1 L plastic jars
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab

Test Sediment

Source: Thames R. (EC-T3SD4-02)
Collection Date: 5/3/95 **Homogenized?:** yes
Preservation: kept at 0-4°C in plastic
Date/Time Added to Test Chambers: 5/15/95 @ 3 PM
Observations: organic
Collection Method: ponar grab
Shipment: Overnight at 4°C

Food Preparation

Source: N/A
Purchase Date: **Preparation Date:** N/A
Preservation: N/A
Preparation Method: N/A

Feeding Rate: Not fed during test
Hold Time: N/A

Test Chambers

Type: Glass 1 L jars
Sediment Volume: 175 mL
Sediment Depth 3 cm
Overlying Water Volume: 800 mL
Overlying Water Depth: 10 cm
Aeration: Continuous w/ 2 mL pipette

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
	Sample Identification: Reference Control Sediment	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Test Day	NH3 end	Salinity ppt
Start	20.3	7.89	8.0	108%	Start		
1	20.2				1		
2	20.0				2	5.85	30
3	20.1				3		
4	20.6				4		
5	20.3				5		
6	20.6				6		
7	20.1				7		
8	20.1				8		25.5
9	20.0				9		
10	20.1	8.11	6.2	84%	10		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	19	1	95%		
B	20	20	0	100%		
C	20	19	1	95%		
D	20	17	3	85%		
E	20	13	7	65%		
F	20	13	7	65%		
G	20	12	8	60%		
H	20	16	4	80%		
Mean	20.0			81%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3957	Sample Identification:	Thames R. (EC-SDTR07-02)	End Date:	5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.5	7.97	8.8	119%		
1			20.2					
2	6.1	29	20.0					
3			20.0					
4			20.3					
5			20.4					
6			20.2					
7			20.2					
8	2.9	27.5	20.2					
9			20.2					
10			20.0	8.17	6.5	88%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	19	1	95%		
B	20	18	2	90%		
C	20	15	5	75%		
D	20	14	6	70%		
E	20	3	17	15%		
F	20	13	7	65%		
G	20	12	8	60%		
H	20	19	1	95%		
Mean	20.0			71%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3958	Sample Identification: Thames R. (EC-T3SD1-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.6	8.01	8.9	120%		
1			20.1					
2	5.46	24	20.1					
3			20.0					
4			20.1					
5			20.3					
6			20.7					
7			20.4					
8	6.08	27	20.2					
9			20.2					
10			19.9	8.37	6.2	82%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Length (mm)	Mean Length (mm)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	20	14	6	70%		
B	20	20	0	100%		
C	20	19	1	95%		
D	20	17	3	85%		
E	20	20	0	100%		
F	20	19	1	95%		
G	20	16	4	80%		
H	20	LOST	20	NA		
Mean	20.0			89%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3959	Sample Identification: Thames R. (EC-SDTR06-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			19.8	7.93	6.6	87%		
1			20.3					
2		26	20.1					
3			20.3					
4			20.5					
5			20.6					
6			20.1					
7			20.3					
8			20.0					
9			20.2					
10	5.68	28	20.4	8.27	7.6	103%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Length (mm)	Mean Length (mm)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	20	19	1	95%		
B	20	20	0	100%		
C	20	19	1	95%		
D	20	20	0	100%		
E	20	15	5	75%		
F	20	20	0	100%		
G	20	15	5	75%		
H	20	17	3	85%		
Mean	20.0			91%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/12/95
T3960	Sample Identification: Thames R. (EC-T4SD2-02)	End Date: 5/22/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			19.8	7.89	7.2	95%		
1			20.3					
2		26	20.1					
3	6.14		20.3					
4			20.5					
5			20.6					
6			20.1					
7			20.3					
8			20.0					
9			20.2					
10	5.57	27	20.4	8.16	7.4	100%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	20	0	100%		
B	20	16	4	80%		
C	20	20	0	100%		
D	20	17	3	85%		
E	20	14	6	70%		
F	20	17	3	85%		
G	20	20	0	100%		
H	20	LOST	20	NA		
Mean	20.0			89%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3961	Sample Identification: Thames R. (EC-SDTR05-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.6	8.05	8.4	114%		
1			20.3					
2	6.13	29	20.1					
3			20.0					
4			20.1					
5			20.3					
6			20.6					
7			20.2					
8	4.96	27	20.2					
9			20.1					
10			20.1	8.46	6.4	86%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Length (mm)	Mean Length (mm)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	20	15	5	75%		
B	20	20	0	100%		
C	20	10	10	50%		
D	20	16	4	80%		
E	20	15	5	75%		
F	20	10	10	50%		
G	20	17	3	85%		
H	20	15	5	75%		
Mean	20.0			74%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3962	Sample Identification: Thames R. (EC-SDTR04-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.5	8.03	6.2	84%		
1			20.2					
2	8.48	27	20.0					
3			19.9					
4			20.2					
5			20.3					
6			20.6					
7			20.2					
8	4.06	28	20.1					
9			20.3					
10			20.1	8.24	5.2	70%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	14	6	70%		
B	20	14	6	70%		
C	20	17	3	85%		
D	20	14	6	70%		
E	20	14	6	70%		
F	20	9	11	45%		
G	20	8	12	40%		
H	20	17	3	85%		
Mean	20.0			67%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3963	Sample Identification: Thames R. (EC-SDTR03-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.6	8.08	9.2	124%		
1			20.0					
2	8.48	29	20.1					
3			20.2					
4			20.2					
5			20.4					
6			20.8					
7			20.9					
8		28	20.3					
9			19.8					
10			19.8	8.33	6.4	85%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	18	2	90%		
C	20	19	1	95%		
D	20	17	3	85%		
E	20	3	17	15%		
F	20	15	5	75%		
G	20	18	2	90%		
H	20	18	2	90%		
Mean	20.0			79%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3972	Sample Identification:	Goss Cove (EC-8SD3-02)	End Date:	5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.6	7.96	8.7	118%		
1			19.8					
2	4.18	28	20.1					
3			19.9					
4			20.1					
5			20.3					
6			20.6					
7			20.3					
8	6.25	27.5	20.1					
9			19.8					
10			19.8	8.02	6.4	85%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	1	19	5%		
B	20	9	11	45%		
C	20	1	19	5%		
D	20	6	14	30%		
E	20	6	14	30%		
F	20	17	3	85%		
G	20	3	17	15%		
H	20	13	7	65%		
Mean	20.0			35%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3973	Sample Identification: Thames R. (EC-SDTR02-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.6	8.09	8.8	119%		
1			19.9					
2	4.96	28	20.1					
3			20.1					
4			20.1					
5			20.4					
6			20.7					
7			20.3					
8	6.35	27	20.2					
9			19.9					
10			19.7	8.39	6.4	85%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	16	4	80%		
B	20	18	2	90%		
C	20	11	9	55%		
D	20	11	9	55%		
E	20	13	7	65%		
F	20	18	2	90%		
G	20	18	2	90%		
H	20	11	9	55%		
Mean	20.0			73%		

* Results of this replicate considered an outlier.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3974	Sample Identification: Thames R. (EC-T3SD4-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	20.6	7.97	8.8	119%
1	20.0			
2	20.1			
3	20.0			
4	20.3			
5	20.2			
6	20.7			
7	20.2			
8	20.1			
9	19.8			
10	19.8	8.14	6.7	89%

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			20.5	7.95	8.4	114%		
1			19.9					
2	3.50	26	20.0					
3			20.1					
4			20.3					
5			20.4					
6			20.7					
7			20.3					
8	7.03	26	20.2					
9			19.9					
10			19.8	7.80	5.2	69%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	16	4	80%		
E	20	16	4	80%		
F	20	14	6	70%		
G	20	19	1	95%		
H	20	*	20	NA		
Mean	20.0			85%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	5	15	25%		
B	20	17	3	85%		
C	20	9	11	45%		
D	20	11	9	55%		
E	20	17	3	85%		
F	20	17	3	85%		
G	20	17	3	85%		
H	20	13	7	65%		
Mean	20.0			66%		

* Results of this replicate considered an outlier.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
	Sample Identification: Reference Sediment Control	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Test Day	NH3 end	Salinity ppt
Start	24.4				Start	7.03	
1	25.5				1		
2	25.1	7.90	6.8	96%	2		23
3	24.6				3		
4	24.9				4		
5	23.9				5		
6	25.5				6		
7	25.8				7		
8	24.8	7.89	6.0	85%	8		23.5
9	26.0				9		
10	25.8				10	6.25	

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	19	1	95%		
B	20	18	2	90%		
C	20	19	1	95%		
D	20	19	1	95%		
E	20	14	6	70%		
F	20	20	0	100%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			93%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
	Sample Identification: Reference Sediment Control	End Date: 5/26/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Test Day	NH3 end	Salinity ppt
Start	25.8				Start	6.07	
1	24.8				1		
2	25.4	7.75	6.4	90%	2		22
3	25.9				3		
4	25.3				4		
5	25.5				5		
6	25.6				6		
7	25.2				7		
8	25.0	8.00	6.0	85%	8		25
9	25.3				9		
10	25.8				10		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	16	4	80%		
B	20	18	2	90%		
C	20	20	0	100%		
D	20	16	4	80%		
E	20	20	0	100%		
F	20	19	1	95%		
G	20	20	0	100%		
H	20	20	0	100%		
Mean	20.0			93%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A						
B						
C						
D						
E						
F						
G						
H						
Mean						

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3957	Sample Identification: Thames R. (EC-SDTR07-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.0					
1			24.5					
2	2.94	20	25.3	7.74	6.0	85%		
3			24.6					
4			25.2					
5			22.2					
6			24.2					
7			25.5					
8			25.9					
9			25.6					
10		20	25.8	8.18	5.8	82%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	8	12	40%		
C	20	19	1	95%		
D	20	18	2	90%		
E	20	16	4	80%		
F	20	18	2	90%		
G	20	18	2	90%		
H	20	20	0	100%		
Mean	20.0			84%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3958	Sample Identification: Thames R. (EC-T3SD1-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.0					
1			24.7					
2	6.02	21	25.1	7.89	6.2	87%		
3			25.5					
4			24.9					
5			23.7					
6			25.0					
7			25.5					
8	2.33		26.0					
9			25.9					
10		27	25.8	8.15	5.6	79%		

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	20	0	100%		
B	20	20	0	100%		
C	20	20	0	100%		
D	20	20	0	100%		
E	20	20	0	100%		
F	20	17	3	85%		
G	20	17	3	85%		
H	20	17	3	85%		
Mean	20.0			94%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3959	Sample Identification: Thames R. (EC-SDTR06-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.0					
1			24.7					
2	5.18	21	25.1	8.08	6.5	92%		
3			25.5					
4			24.9					
5			23.7					
6			25.0					
7			25.5					
8	6.30	28	26.0	8.49	5.6	79%		
9			25.9					
10			25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	19	1	95%		
B	20	20	0	100%		
C	20	16	4	80%		
D	20	20	0	100%		
E	20	19	1	95%		
F	20	20	0	100%		
G	20	20	0	100%		
H	20	15	5	75%		
Mean	20.0			93%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3960	Sample Identification: Thames R. (EC-T4SD2-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.0					
1			24.7					
2	4.40	22	25.1	8.05	6.7	94%		
3			25.5					
4			24.9					
5			23.7					
6			25.0					
7			25.5					
8	5.91	27	26.0	8.27	5.3	75%		
9			25.9					
10			25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	18	2	90%		
B	20	20	0	100%		
C	20	15	5	75%		
D	20	18	2	90%		
E	20	20	0	100%		
F	20	19	1	95%		
G	20	20	0	100%		
H	20	20	0	100%		
Mean	20.0			94%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3961	Sample Identification: Thames R. (EC-SDTR05-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.0					
1			24.4					
2	8.71	19	25.1	7.95	6.5	92%		
3			24.5					
4			25.0					
5			22.7					
6			24.3					
7			25.9					
8	2.66	23	25.9	8.53	5.2	73%		
9			25.8					
10			25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Length (mm)	Mean Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	20	18	2	90%		
B	20	18	2	90%		
C	20	20	0	100%		
D	20	20	0	100%		
E	20	14	6	70%		
F	20	19	1	95%		
G	20	18	2	90%		
H	20	20	0	100%		
Mean	20.0			92%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3962	Sample Identification: Thames R. (EC-SDTR04-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.1					
1			24.4					
2	5.74	21	25.2	7.99	6.7	94%		
3			24.4					
4			24.8					
5			22.7					
6			24.3					
7			25.5					
8	5.18	25	26.0	8.46	6.0	85%		
9			25.6					
10			25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	20	0	100%		
B	20	19	1	95%		
C	20	20	0	100%		
D	20	20	0	100%		
E	20	18	2	90%		
F	20	20	0	100%		
G	20	16	4	80%		
H	20	16	4	80%		
Mean	20.0			93%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3963	Sample Identification: Thames R. (EC-SDTR03-02)	End Date: 5/19/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start			24.0					
1			24.9					
2	6.24	21	25.2	7.98	6.7	94%		
3			24.6					
4			24.8					
5			22.7					
6			25.3					
7			26.0					
8		24	25.8	8.37	5.7	80%		
9			25.8					
10			25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	5	15	25%		
D	20	20	0	100%		
E	20	16	4	80%		
F	20	10	10	50%		
G	20	20	0	100%		
H	20	19	1	95%		
Mean	20.0			80%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/16/95
T3972	Sample Identification:	Goss Cove (EC-8SDS-02)	End Date:	5/26/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	3.28		24.0					
1			24.9					
2		21	25.2	7.23	5.0	70%		
3			24.6					
4			24.8					
5			22.7					
6			25.3					
7			26.0					
8		26	25.8	7.88	4.7	66%		
9			25.8					
10			25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Length (mm)	Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total	Mean
	Initial	Live at End	Dead at End	% Survival	Weight (mg)	Weight (mg)
A	20	16	4	80%		
B	20	14	6	70%		
C	20	18	2	90%		
D	20	15	5	75%		
E	20	1	19	5%		
F	20	1	19	5%		
G	20	3	17	15%		
H	20	0	20	0%		
Mean	20.0			43%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/16/95
T3973	Sample Identification:	Thames R. (EC-SDTR02-02)	End Date:	5/26/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	4.90		24.8					
1			24.8					
2		18	25.6	7.87	4.5	63%		
3			25.9					
4			25.4					
5			25.3					
6			25.3					
7			25.3					
8		25	25.2	7.95	4.9	69%		
9			25.6					
10	3.50		25.3					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Length (mm)	Mean Length (mm)
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms Initial	Live at End	Dead at End	% Survival	Total Weight (mg)	Mean Weight (mg)
A	20	18	2	90%		
B	20	20	0	100%		
C	20	20	0	100%		
D	20	17	3	85%		
E	20	20	0	100%		
F	20	20	0	100%		
G	20	18	2	90%		
H	20	20	0	100%		
Mean	20.0			96%		

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/16/95
T3974	Sample Identification:	Thames R. (EC-T3SD4-02)	End Date:	5/26/95

WATER CHEMISTRY TEST METHODS

Temperature: SM 18th Ed. 2550	Alkalinity: SM 18th Ed. 2320
Dissolved Oxygen: SM 18th Ed. 4500-O	Hardness: SM 18th Ed. 2340
pH: SM 18th Ed. 4500-H+	Conductivity: SM 18th Ed. 2510

WATER CHEMISTRY TEST DATA - OVERLYING WATER

CONTROL TREATMENT

Test Day	Temp. C	pH units	D.O. mg/L	D.O. % sat.
Start	24.4			
1	24.8			
2	25.5	7.74	4.2	59%
3	25.9			
4	25.5			
5	25.4			
6	25.5			
7	25.0			
8	25.3	7.95	4.9	69%
9	25.4			
10	25.7			

SAMPLE TREATMENT

Test Day	NH3 end	Salinity ppt	Temp. C	pH units	D.O. mg/L	D.O. % sat.	Alk. mg/L	Hard. mg/L
Start	6.25		24.7					
1			24.6					
2		22	25.5	8.05	4.2	59%		
3			25.8					
4			25.4					
5			25.3					
6			25.5					
7			25.2					
8		27	25.1	8.04	5.3	75%		
9			25.5					
10	7.03		25.8					

SURVIVAL AND GROWTH RESULTS

CONTROL TREATMENT

	# Organisms				Total Length (mm)	Mean Length (mm)
	Initial	Live at End	Dead at End	% Survival		
A	20	17	3	85%		
B	20	18	2	90%		
C	20	16	4	80%		
D	20	7	13	35%		
E	20	10	10	50%		
F	20	19	1	95%		
G	20	19	1	95%		
H	20	20	0	100%		
Mean	20.0			79%		

SAMPLE TREATMENT

	# Organisms				Total Weight (mg)	Mean Weight (mg)
	Initial	Live at End	Dead at End	% Survival		
A	20	17	3	85%		
B	20	16	4	80%		
C	20	10	10	50%		
D	20	16	4	80%		
E	20	*	20	NA		
F	20	*	20	NA		
G	20	1*	20	NA		
H	20	20	0	100%		
Mean	20.0			79%		

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3957	Sample Identification:	Thames R. (EC-SDTR07-02)	End Date:	5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates		GROWTH DATA Mean Wet Weight (mg)	
	Mean %		Mean
Control	85.0%	Control	
Sample	70.6%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.90
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 3.63
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 1.30
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:**	Aimee L. Arnold	**Date:**	6-8-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:**	[illegible]	**Date:**	6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3958	Sample Identification:	Thames R. (EC-T3SD1-02)	End Date:	5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	89.3%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.97
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.23
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= -0.80
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: [illegible]	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/12/95
T3959	Sample Identification:	Thames R. (EC-SDTR06-02)	End Date:	5/22/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates		GROWTH DATA Mean Wet Weight (mg)	
	Mean %		Mean
Control	85.0%	Control	
Sample	90.6%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.94
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.20
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -1.09
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: Robert W. Kelley	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/12/95
T3960	Sample Identification:	Thames R. (EC-T4SD2-02)	End Date:	5/22/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	88.6%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.93
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.43
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -0.68
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee L. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** [illegible]	**Date:** 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3961	Sample Identification:	Thames R. (EC-SDTR05-02)	End Date:	5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates		GROWTH DATA Mean Wet Weight (mg)	
	Mean %		Mean
Control	85.0%	Control	
Sample	73.8%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.95
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.74
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 1.39
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: [signature]	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3962	Sample Identification: Thames R. (EC-SDTR04-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	66.9%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.96
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.18
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 2.58
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee L. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** [signature]	**Date:** 6-9-95

CONCLUSIONS

The sediment does adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3963	Sample Identification: Thames R. (EC-SDTR03-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	78.8%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.80
Critical value: 0.84
Data are not normal in distribution

Test for Homogeneity of Variance:
F= 3.47
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: Wilcoxon Rank Sum Test
Rank Sum: 64.50
Critical value: 49
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: Robert W. Kelley	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3972	Sample Identification: Goss Cove (EC-8SD3-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	35.0%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.96
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 4.20
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 4.22
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Predacious polychaetes were found in replicates A,D, and H. This could have reduced survival in these replicates.

Principal Analyst:	Aimee Arnold	**Signature:** Aimee F. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** Robert W. Kelley	**Date:** 6-9-95

CONCLUSIONS

The sediment does adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3973	Sample Identification: Thames R. (EC-SDTR02-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	72.5%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.89
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.46
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 1.67
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: Robert W. Kelley	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/09/95
T3974	Sample Identification: Thames R. (EC-T3SD4-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	85.0%	Control	
Sample	66.3%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.93
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 2.35
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 2.07
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee L. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** [illegible]	**Date:** 6-9-95

CONCLUSIONS

The sediment does adversely affect the survival of estuarine amphipods.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/9/95
T3957	Sample Identification:	Thames R. (EC-SDTR07-02)	End Date:	5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	84.4%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.86
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.57
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -0.47
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: Robert W. Kelley	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3958	Sample Identification: Thames R. (EC-T3SD1-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	94.4%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.90
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 3.81
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -1.87
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: [illegible]	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3959	Sample Identification: Thames R. (EC-SDTR06-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	93.1%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.90
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 2.97
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -1.68
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: [illegible]	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3960	Sample Identification: Thames R. (EC-T4SD2-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	93.8%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.91
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 3.67
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -1.77
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee L. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** Robert W. Kelley	**Date:** 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3961	Sample Identification: Thames R. (EC-SDTR05-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates		GROWTH DATA Mean Wet Weight (mg)	
	Mean %		Mean
Control	78.8%	Control	
Sample	91.9%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.91
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 3.23
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -1.46
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: Robert W. Kelley	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3962	Sample Identification: Thames R. (EC-SDTR04-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	93.1%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.92
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 3.38
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -1.66
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: Robert W. Kelley	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/9/95
T3963	Sample Identification: Thames R. (EC-SDTR03-02)	End Date: 5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates		GROWTH DATA Mean Wet Weight (mg)	
	Mean %		Mean
Control	78.8%	Control	
Sample	80.0%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.87
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.47
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -0.23
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee L. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: [signature]	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
T3972	Sample Identification: Goss Cove (EC-8SDS-02)	End Date: 5/26/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	42.5%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.92
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 2.66
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= 2.40
Critical value: 1.75
The sediment significantly reduced survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee L. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** Robert W. Kelley	**Date:** 6-9-95

CONCLUSIONS

The sediment does adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/16/95
T3973	Sample Identification:	Thames R. (EC-SDTR02-02)	End Date:	5/26/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	95.6%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.91
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 5.42
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= -2.10
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature: Aimee R. Arnold	Date: 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature: [illegible]	Date: 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY LEPTOCHEIRUS SEDIMENT TOXICITY TEST

Lab ID#	Client: Halliburton NUS	Start Date: 5/16/95
T3974	Sample Identification: Thames R. (EC-T3SD4-02)	End Date: 5/26/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates	Mean %	GROWTH DATA Mean Wet Weight (mg)	Mean
Control	78.8%	Control	
Sample	79.0%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.90
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 1.45
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: t Test
t= 0.07
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	**Signature:** Aimee L. Arnold	**Date:** 6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	**Signature:** [illegible]	**Date:** 6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine tanaidaceans.

10 DAY AMPELISCA SEDIMENT TOXICITY TEST

Lab ID#	Client:	Halliburton NUS	Start Date:	5/09/95
T3957	Sample Identification:	Thames R. (EC-SDTR07-02)	End Date:	5/19/95

RESULTS

SURVIVAL DATA Mean of Eight Replicates		GROWTH DATA Mean Wet Weight (mg)	
	Mean %		Mean
Control	85.0%	Control	
Sample	70.6%	Sample	

STATISTICAL ANALYSES

SURVIVAL DATA

Test for Normality: W= 0.90
Critical value: 0.84
Data are normal in distribution

Test for Homogeneity of Variance:
F= 3.63
Critical value: 6.64
Data are homogeneous in variance

Test for Differences in Survival: "t" Test
t= 1.30
Critical value: 1.75
The sediment did not significantly reduce survival of the test organisms.

GROWTH DATA

Test for Normality: W= N/A
Critical value: 0.84

Test for Homogeneity of Variance:
F= N/A
Critical value: 6.635

Test for Differences in Survival: Wilcoxon's Test
Sum= N/A
Critical value: 1.94

COMMENTS

Principal Analyst:	Aimee Arnold	Signature:	Aimee L. Arnold	Date:	6-9-95
Report Reviewed By:	Robert W. Kelley, Ph.D.	Signature:	[illegible]	Date:	6-9-95

CONCLUSIONS

The sediment does not adversely affect the survival of estuarine amphipods.

APPENDIX G.3.4

FEDERAL OR STATE ENDANGERED, THREATENED OR SPECIAL CONCERN SPECIES

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NATURAL RESOURCES CENTER
79 Elm Street, Store Level
Hartford, Connecticut 06106-5127
Natural Diversity Data Base

August 16, 1994

AUG 22 1994

Ms. Katherine A. Fogarty
Menzie-Cura & Associates, Inc.
1 Courthouse Lane, Suite 2
Chelmsford, MA 01824-1734

Re: Superfund Phase II
Remedial Investigation
U.S. Navy Submarine Base
Groton, Connecticut

Dear Ms. Fogarty:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided and listed above. According to our information, there are a number of populations of Federal or State Endangered, Threatened or Special Concern Species occurring in the area in question. These are listed below:

Species	Status	Last Date of Observation
Acipenser oxyrhynchus (Atlantic Sturgeon)	State Threatened	1968
Zizia aptera (Golden Alexanders)	State Endangered	1993
Ranunculus cymbalacia (Seaside Crowfoot)	State Endangered	1902
Lespedeza repens (Creeping Bush-clover)	State Special Conc	1932
Aster prenanthoides (Crooked-stem Aster)	State Special Conc Historic	1937
Carex crawfordii	State Special Conc Historic	1933

Natural Diversity Data Base information includes all information regarding critical biologic resources available to us at the time of the request. This information is a compilation of data collected over the years by the Natural Resources Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substituted for on-site surveys required

for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions (424-3585). Thank you for consulting the Natural Diversity Data Base. Also be advised that this is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Kenneth J. Metzler
Environmental Analyst III

KJM/dmt

APPENDIX G.3.5

STATISTICAL ANALYSES OF BENTHIC DATA

Correlation Coefficients for 1994 Thames River Sediment Chemistry and Benthic Survey

	PAH	DDTR	ANTIMONY	COPPER	LEAD	ZINC	TOC	SAND_SIL	NO_OF_IN	MEAN_TAX	RICHNESS
PAH	1.0000 (16) P= .	-.2691 (10) P= .452	.4681 (16) P= .067	.5054 (16) P= .046	.4755 (16) P= .063	.4309 (16) P= .096	.5224 (16) P= .038	.3799 (16) P= .147	-.1030 (16) P= .704	-.3951 (16) P= .130	-.4165 (16) P= .109
DDTR	-.2691 (10) P= .452	1.0000 (10) P= .	.6460 (10) P= .044	.2248 (10) P= .532	.0599 (10) P= .869	-.0127 (10) P= .972	.3734 (10) P= .288	.4540 (10) P= .187	.3902 (10) P= .265	.4671 (10) P= .173	.1460 (10) P= .687
ANTIMONY	.4681 (16) P= .067	.6460 (10) P= .044	1.0000 (16) P= .	.7555 (16) P= .001	.6912 (16) P= .003	.7187 (16) P= .002	.7231 (16) P= .002	.7502 (16) P= .001	-.1919 (16) P= .477	-.5798 (16) P= .019	-.5941 (16) P= .015
COPPER	.5054 (16) P= .046	.2248 (10) P= .532	.7555 (16) P= .001	1.0000 (16) P= .	.9487 (16) P= .000	.9602 (16) P= .000	.6805 (16) P= .004	.5535 (16) P= .026	-.4033 (16) P= .121	-.7884 (16) P= .000	-.7340 (16) P= .001
LEAD	.4755 (16) P= .063	.0599 (10) P= .869	.6912 (16) P= .003	.9487 (16) P= .000	1.0000 (16) P= .	.9607 (16) P= .000	.6973 (16) P= .003	.6277 (16) P= .009	-.5288 (16) P= .035	-.7594 (16) P= .001	-.6478 (16) P= .007
ZINC	.4309 (16) P= .096	-.0127 (10) P= .972	.7187 (16) P= .002	.9602 (16) P= .000	.9607 (16) P= .000	1.0000 (16) P= .	.6075 (16) P= .013	.5204 (16) P= .039	-.4421 (16) P= .086	-.7049 (16) P= .002	-.6153 (16) P= .011
TOC	.5224 (16) P= .038	.3734 (10) P= .288	.7231 (16) P= .002	.6805 (16) P= .004	.6973 (16) P= .003	.6075 (16) P= .013	1.0000 (16) P= .	.7452 (16) P= .001	-.3166 (16) P= .232	-.6274 (16) P= .009	-.5587 (16) P= .024
SAND_SIL	.3799 (16) P= .147	.4540 (10) P= .187	.7502 (16) P= .001	.5535 (16) P= .026	.6277 (16) P= .009	.5204 (16) P= .039	.7452 (16) P= .001	1.0000 (16) P= .	-.3541 (16) P= .178	-.4823 (16) P= .059	-.4431 (16) P= .086
NO_OF_IN	-.1030 (16) P= .704	.3902 (10) P= .265	-.1919 (16) P= .477	-.4033 (16) P= .121	-.5288 (16) P= .035	-.4421 (16) P= .086	-.3166 (16) P= .232	-.3541 (16) P= .178	1.0000 (16) P= .	.4804 (16) P= .060	.3632 (16) P= .167
MEAN_TAX	-.3951 (16) P= .130	.4671 (10) P= .173	-.5798 (16) P= .019	-.7884 (16) P= .000	-.7594 (16) P= .001	-.7049 (16) P= .002	-.6274 (16) P= .009	-.4823 (16) P= .059	.4804 (16) P= .060	1.0000 (16) P= .	.9678 (16) P= .000
RICHNESS	-.4165 (16) P= .109	.1460 (10) P= .687	-.5941 (16) P= .015	-.7340 (16) P= .001	-.6478 (16) P= .007	-.6153 (16) P= .011	-.5587 (16) P= .024	-.4431 (16) P= .086	.3632 (16) P= .167	.9678 (16) P= .000	1.0000 (16) P= .
SHANNON	-.3571 (16) P= .174	.0643 (10) P= .860	-.3097 (16) P= .243	-.3720 (16) P= .156	-.2218 (16) P= .409	-.2710 (16) P= .310	-.1407 (16) P= .603	-.0620 (16) P= .820	-.2502 (16) P= .350	.6014 (16) P= .014	.7056 (16) P= .002

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Correlation Coefficients for 1994 Thames River Sediment Chemistry and Benthic Survey

	SHANNON
PAH	-.3571 (16) P= .174
DDTR	.0643 (10) P= .860
ANTIMONY	-.3097 (16) P= .243
COPPER	-.3720 (16) P= .156
LEAD	-.2218 (16) P= .409
ZINC	-.2710 (16) P= .310
TOC	-.1407 (16) P= .603
SAND_SIL	-.0620 (16) P= .820
NO_OF_IN	-.2502 (16) P= .350
MEAN_TAX	.6014 (16) P= .014
RICHNESS	.7056 (16) P= .002
SHANNON	1.0000 (16) P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

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Controlling for.. PERCENT TOC

	COPPER	LEAD	ZINC	PAH	TOTAL TAXA	MEAN TAXA	RICHNESS	# OF IND.
COPPER	1.0000	.9028	.9395	.2400	-.6101	-.6335	-.5822	-.2703
	(0)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
	P= .	P= .000	P= .000	P= .389	P= .016	P= .011	P= .023	P= .330
LEAD	.9028	1.0000	.9434	.1820	-.5113	-.5768	-.4344	-.4531
	(13)	(0)	(13)	(13)	(13)	(13)	(13)	(13)
	P= .000	P= .	P= .000	P= .516	P= .051	P= .024	P= .106	P= .090
ZINC	.9395	.9434	1.0000	.1677	-.4750	-.5234	-.4187	-.3314
	(13)	(13)	(0)	(13)	(13)	(13)	(13)	(13)
	P= .000	P= .000	P= .	P= .550	P= .074	P= .045	P= .120	P= .228
PAH	.2400	.1820	.1677	1.0000	-.1351	-.1015	-.1762	.0771
	(13)	(13)	(13)	(0)	(13)	(13)	(13)	(13)
	P= .389	P= .516	P= .550	P= .	P= .631	P= .719	P= .530	P= .785
TOTAL TAXA	-.6101	-.5113	-.4750	-.1351	1.0000	.9773	.9831	.4016
	(13)	(13)	(13)	(13)	(0)	(13)	(13)	(13)
	P= .016	P= .051	P= .074	P= .631	P= .	P= .000	P= .000	P= .138
MEAN TAXA	-.6335	-.5768	-.5234	-.1015	.9773	1.0000	.9557	.3815
	(13)	(13)	(13)	(13)	(13)	(0)	(13)	(13)
	P= .011	P= .024	P= .045	P= .719	P= .000	P= .	P= .000	P= .161
RICHNESS	-.5822	-.4344	-.4187	-.1762	.9831	.9557	1.0000	.2368
	(13)	(13)	(13)	(13)	(13)	(13)	(0)	(13)
	P= .023	P= .106	P= .120	P= .530	P= .000	P= .000	P= .	P= .395
# OF IND.	-.2703	-.4531	-.3314	.0771	.4016	.3815	.2368	1.0000
	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(0)
	P= .330	P= .090	P= .228	P= .785	P= .138	P= .161	P= .395	P= .

(Coefficient / (D.F.) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

- - - - - - - - - - - - - - - - P A R T I A L C O R R E L A T I O N C O E F F I C I E N T S - - - - - - - - - - - - - - - -

Controlling for.. PERCENT CLAY/SILT

	COPPER	LEAD	ZINC	PAH	TOTAL TAXA	MEAN TAXA	RICHNESS	# OF IND.
COPPER	1.0000	.9274	.9451	.3831	-.6786	-.7147	-.6546	-.2662
	(0)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
	P= .	P= .000	P= .000	P= .159	P= .005	P= .003	P= .008	P= .337
LEAD	.9274	1.0000	.9539	.3291	-.5939	-.6697	-.5297	-.4211
	(13)	(0)	(13)	(13)	(13)	(13)	(13)	(13)
	P= .000	P= .	P= .000	P= .231	P= .020	P= .006	P= .042	P= .118
ZINC	.9451	.9539	1.0000	.2953	-.5509	-.6068	-.5025	-.3228
	(13)	(13)	(0)	(13)	(13)	(13)	(13)	(13)
	P= .000	P= .000	P= .	P= .285	P= .033	P= .016	P= .056	P= .241
PAH	.3831	.3291	.2953	1.0000	-.2677	-.2614	-.2992	.0364
	(13)	(13)	(13)	(0)	(13)	(13)	(13)	(13)
	P= .159	P= .231	P= .285	P= .	P= .335	P= .347	P= .279	P= .897
TOTAL TAXA	-.6786	-.5939	-.5509	-.2677	1.0000	.9794	.9857	.3965
	(13)	(13)	(13)	(13)	(0)	(13)	(13)	(13)
	P= .005	P= .020	P= .033	P= .335	P= .	P= .000	P= .000	P= .143
MEAN TAXA	-.7147	-.6697	-.6068	-.2614	.9794	1.0000	.9602	.3780
	(13)	(13)	(13)	(13)	(13)	(0)	(13)	(13)
	P= .003	P= .006	P= .016	P= .347	P= .000	P= .	P= .000	P= .165
RICHNESS	-.6546	-.5297	-.5025	-.2992	.9857	.9602	1.0000	.2461
	(13)	(13)	(13)	(13)	(13)	(13)	(0)	(13)
	P= .008	P= .042	P= .056	P= .279	P= .000	P= .000	P= .	P= .377
# OF IND.	-.2662	-.4211	-.3228	.0364	.3965	.3780	.2461	1.0000
	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(0)
	P= .337	P= .118	P= .241	P= .897	P= .143	P= .165	P= .377	P= .

(Coefficient / (D.F.) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

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APPENDIX H

ECOLOGICAL TOXICOLOGICAL PROFILES

Acetone

Although not a large sink, small amounts of acetone will be removed from the atmosphere by wet deposition, which will transport acetone from the atmosphere to surface water and soil. The complete miscibility of acetone in water suggests that partitioning of acetone from the water column to sediments and suspended solids in water is not significant. In the absence of water, acetone vapor adsorbs rather strongly to the clay component of soil by hydrogen bonding. The sorption is dependent on relative humidity, and increasing the humidity decreases sorption drastically. In water-saturated soil or sediment, only organic carbon, and not hydrogen bonding may control the sorption of acetone (ATSDR, 1994a).

The two significant transport properties for acetone in soil are volatilization and leaching. Leaching transports acetone from soil to groundwater. The rate of leaching from soil by rainwater depends on the sorption characteristics of acetone in soil. Volatilization transports acetone from soil to the atmosphere. The volatility rate of acetone from soil depends on the soil characteristics (moisture content, soil porosity, etc.). Since the acetone is weakly sorbed to soil, the volatility depends primarily on the moisture content of the soil. In dry soil, the volatilization rate from soil surfaces is high due to the high vapor pressure of acetone. In moist soil, the rate of volatilization is similar to acetone in water and depends on the Henry's law constant. Acetone volatilizes moderately under these conditions. The detection of acetone at higher concentrations in downwind air of a landfill site, compared to upwind air, indicates the importance of volatilization as a transport process in soil (ATSDR, 1994a).

No data regarding the transport of acetone from soil to plants were located. No data regarding the biomagnification potential of acetone in aquatic organisms were located; however, the low Kow value suggests that biomagnification of acetone from animals of lower to higher trophic level is unlikely (ATSDR, 1994a).

Aluminum

Because of its reactivity, aluminum is not found as a free metal in nature. Aluminum has only one oxidation state (+3), thus its behavior or fate and transport in the environment depends upon its coordination chemistry and the characteristics of the local environmental system. The transport and partitioning of aluminum in the environment is determined by the chemical properties of the element itself and the characteristics of the environmental matrix that affect solubility. At a pH greater than 5.5, naturally occurring aluminum compounds exist predominantly in an undissolved form, except in the presence of high amounts of dissolved organic material or fulvic acid, which binds with aluminum and can cause increased dissolved aluminum concentrations in streams and lakes. Organic acids have been found to be important weathering

agents for dissolving and transporting aluminum in an alpine soil environment. In general, decreasing pH results in an increase in mobility for monomeric forms of aluminum which is of concern with respect to the occurrence of acid rain and the release of acid mine drainage (ATSDR, 1992a).

In groundwater or surface water systems, an equilibrium with a solid phase or form is established that largely controls the extent of aluminum dissolution which can occur. In addition to the effect of pH on mobility, the type of acid entering environmental systems may also be important (ATSDR, 1992a).

Although present in food in varying amounts, aluminum (Al) is not an essential element for mammals. The aluminum content of plants typically depends on the soil aluminum concentration and ranges from 10 to 30 mg/kg fresh weight; studies have indicated that this element stimulates the growth of several pasture plant species (Hackett 1962). As summarized in Venugopal and Luckey (1978), aluminum is not readily absorbed through the skin and gastrointestinal absorption of ingested aluminum is poor due to the transformation of aluminum salts into insoluble aluminum phosphate. The lack of accumulation of aluminum in animals with age or of any increase in tissue levels of aluminum following fairly high dietary intake, suggests that mammals posses a homeostatic mechanism for this element. For most terrestrial organisms, aluminum compounds are generally not harmful and are considered to be toxicologically inert, except in cases of high experimental doses or prolonged inhalation (Venugopal and Luckey 1978).

Data on the toxicity of aluminum to aquatic organisms is somewhat limited. EPA (1988b) stated that freshwater organisms should not be adversely affected if aluminum concentrations do not exceed 87 μg/L when pH is between 6.5 and 9.0. Some studies have shown that the acute toxicity of aluminum increases with pH, whereas other studies found the opposite to be true (EPA 1988b). The occurrence of pH effects in fish depends on aluminum and calcium concentrations in the water. Laboratory studies have established that low pH is toxic to fish, that aluminum concentrations found in acidified waters (particularly inorganic monomeric aluminum) are toxic, and that calcium is ameliorative (Suter 1993).

Sublethal effects were also reviewed by EPA (1988b). It was found that 169 μg Al/L at a pH of 6.5 to 6.6 caused a 24 percent reduction in the growth of young brook trout (*Salvelinus fontinalis*). Cleveland et al. (1991) determined that brook trout accumulated significantly higher aluminum residues at pH 5.3 than at pH 6.1 or pH 7.2. They also determined that elimination of aluminum during depuration was more rapid at pH 5.3 than at pH 6.1 or pH 7.2.

Aluminum is not expected to biomagnify in terrestrial food chains. Aluminum has been studied in several aquatic species. Data reported in EPA (1988b) indicated this metal does not bioconcentrate; bioconcentration factors range from 50 to 231 for brook trout (geometric mean value = 82).

Bioconcentration of aluminum in fish is a function of the water quality (e.g., pH and total organic carbon). Aluminum residue analyses in brook trout have shown that whole-body aluminum content decreases as the fish advance from larvae to juveniles. No information was found on the biomagnification of aluminum in aquatic food chains (ATSDR, 1992a).

Antimony

Antimony is released to the atmosphere in the form of particulate matter or adsorbed to particulate matter. It is dispersed by wind and removed by gravitational settling and dry and wet deposition. The removal rate and distance traveled from the source will depend on source characteristics (e.g., stack height), particle size and density, and meteorological conditions. Little is known of the adsorptive behavior of antimony, its compounds, and ions. The binding of antimony to soil is determined by the nature of the soil and the form of antimony deposited on the soil. Some forms of antimony may bind to inorganic and organic ligands. On the other hand, a mineral form would be unavailable for binding. Some studies suggest that antimony is fairly mobile under diverse environmental conditions, while others suggest that it is strongly adsorbed to soil (ATSDR, 1992b).

These studies indicated that antimony deposited on the soil surface accumulates primarily in the surface layer, and that aquifers beneath antimony waste piles are not grossly contaminated. Mobilization of elements deposited on soil in fly ash is a potential source of terrestrial and aquatic pollution. Leaching of antimony is low. Antimony does not appear to bioconcentrate appreciably in fish and aquatic organisms. No detectable bioconcentration occurred during a 28-day test in bluegills. Only low levels of antimony have been reported in fish and aquatic organisms collected off the coast of Africa, Australia, and the Danube River in Austria. Uptake from soil is minor and appears to be correlated with the amount of available antimony (that which is soluble or easily exchangeable). Antimony bioconcentration was measured in voles, shrews, rabbits, and invertebrates around a smelter. Analysis of antimony in organs of the small mammals, compared with estimates of their antimony intake from food, showed that, although the amount of antimony in the organs was elevated, it was low compared to the amount ingested. The results suggest that antimony does not biomagnify from lower to higher trophic levels in the food chain (ATSDR, 1992b).

Arsenic

Arsenic may be released to the atmosphere as a gas or vapor, or adsorbed to particulate matter and transported to other media by dry or wet deposition. Arsenic in surface water can undergo a complex pattern of transformations: oxidation-reduction, ligand exchange, biotransformation, precipitation, and adsorption. As a consequence of these reactions, arsenic is extremely mobile in aquatic systems, and

riverborne arsenic is capable of being transported great distances. In aquatic systems, bioconcentration of arsenic primarily occurs in algae and lower invertebrates, but biomagnification does not appear to be significant (EPA, 1979). Plants may accumulate arsenic via root uptake, with uptake being dependent on the species, soil arsenic concentration, and soil characteristic.

Exposure of animal species to either trivalent or pentavalent arsenic leads to the initial accumulation of arsenic in liver, kidney, lung, spleen, aorta, skin, hair, and upper gastrointestinal tract. Animal studies have shown that chronic arsenic exposure may cause body weight changes, decreased blood hemoglobin, liver damage, and kidney damage (Toxicological Profile for Arsenic, U.S. Department of Health and Human Services, Agency for Toxics Substances and Disease Registry. July 1992).

Barium

Most barium released to the environment from industrial sources is in forms that do not become widely dispersed. In the atmosphere, barium is likely to be present in particulate form. Although chemical reactions may cause changes in speciation of barium in air, the main mechanisms for the removal of barium compounds from the atmosphere are likely to be wet and dry deposition. In aquatic media, barium is likely to precipitate out of solution as an insoluble salt (i.e., as $BaS0_4$ or $BaC0_3$). Waterborne barium may also adsorb to suspended particulate matter. Precipitation of barium sulfate salts is accelerated when rivers enter the ocean because of the high sulfate content in the ocean. Sedimentation of suspended solids removes a large portion of the barium content from surface waters. Coarse silt sediment in a turbulent environment will often grind and cleave the barium sulfate from the sediment particles leaving a buildup of dense barites. The uptake of barium by fish and marine organisms is also an important removal mechanism. Barium was found to bioconcentrate in marine plants by a factor of 1,000 times the level present in the water. Bioconcentration factors in marine animals, plankton, and in brown algae of 100, 120, and 260, respectively, have been reported (ATSDR, 1992c).

Barium added to soils may either be taken up by vegetation or transported through soil with precipitation. Relative to the amount of barium found in soils, little is bioconcentrated by plants. However, this transport pathway has not been comprehensively studied. Barium is not very mobile in most soil systems. The rate of transportation of barium in soil is dependent on the characteristics of the soil material. Soil properties that influence the transportation of barium to groundwater are cation exchange capacity and calcium carbonate ($CaCO_3$) content. In soil with a high cation exchange capacity (e.g., fine textured mineral soils or soils with high organic matter content), barium mobility will be limited by adsorption. High $CaCO_3$ content limits mobility by precipitation of the element as $BaCO_3$. Barium will also precipitate as barium sulfate in the presence of sulfate ions. Barium is more mobile and is more likely to be leached from soils in the presence

of chloride due to the increased solubility of barium chloride as compared to other chemical forms of barium. Barium complexes with fatty acids (e.g., in acidic landfill leachate) will be much more mobile in the soil due to the lower charge of these complexes and subsequent reduction in adsorption capacity (ATSDR, 1992c).

BHC (Gamma-BHC, Lindane)

HCH can be released to the environment during the formulation process and through its use as a pesticide. Once released to the environment, HCH can partition to all environmental media. HCH in the atmosphere, either as a vapor or adsorbed to particulates, can be photolytically degraded but is primarily removed from the atmosphere by rain-out and dry deposition. Biodegradation is believed to be the dominant decomposition process for HCH in soil and water. The rates of degradation depend on the ambient environmental conditions. HCH has been detected in air, surface water, groundwater, sediment, soil, fish and other aquatic organisms, and wildlife.

Animals that have been fed γ- and α-HCH have had convulsions, and animals fed β-HCH have become comatose. All isomers can produce liver and kidney effects. Reduced ability to fight infection was reported in animals fed γ-HCH, and injury to the ovaries and testes was reported in animals given γ-HCH or β-HCH. Animals fed γ-HCH during pregnancy may have an increased number of fetuses with extra ribs. HCH isomers are changed by the body into other chemical products, some of which may be responsible for the harmful effects. Long-term oral administration of α-, β-, γ-, or technical-grade HCH to laboratory rodents has been reported to result in liver cancer.

Boron

Atmospheric boron may be in the form of particulate matter or aerosols. Borates are relatively soluble in water, and will probably be removed from the atmosphere by precipitation and dry deposition. The half-life of airborne particles is usually on the order of days, depending on the size of the particle and atmospheric conditions. No specific information on the fate of atmospheric boron was located. Boron readily hydrolyzes in water to form the electrically neutral, weak monobasic acid H_3BO_3 and the monovalent ion $B(OH)_4$. Water borne boron may be adsorbed by soils and sediments. Adsorption-desorption reactions are expected to be the only significant mechanism that will influence the fate of boron in water. The extent of boron adsorption depends on the pH of the water and the chemical composition of the soil. The greatest adsorption is generally observed at pH 7.5-9.0. The adsorption of boron may not be reversible in some soils. The lack of reversibility may be the result of solid-phase formation on mineral surfaces, and/or the slow release of boron by diffusion from the interior of clay minerals. In general, boron adsorption will be most significant

in soils that contain high concentrations of amorphous aluminum and iron oxides and hydroxides such as the reddish Ultisols in the southeastern United States (ATSDR, 1993a).

It is unlikely that boron is bioconcentrated significantly by organisms from water. The BCFs of boron in marine and freshwater plants, fish, and invertebrates were estimated to be less than 100. Experimentally measured BCFs for fish have ranged from 52 to 198. These BCFs suggest that boron is not significantly bioconcentrated (ATSDR, 1993a).

Cadmium

Cadmium and cadmium compounds have negligible vapor pressures, but may exist in air as suspended particulate matter derived from sea spray, industrial emissions, combustion of fossil fuels, or the erosion of soils. Cadmium-containing particulates may dissolve in atmospheric water droplets and be removed from air by wet deposition. Cadmium complexed with humic substances is also an important form of cadmium in polluted waters. Cadmium concentration in water is inversely related to the pH and the concentration of organic material in the water. Because cadmium exists only in the +2 oxidation state, aqueous cadmium is not strongly influenced by the oxidizing or reducing potential of the water. However, under reducing conditions, cadmium may form cadmium sulfide which is poorly soluble and tends to precipitate. Precipitation and sorption to mineral surfaces and organic materials are the most important removal processes for cadmium compounds. Sediment bacteria may also assist in the partitioning of cadmium from water to sediments. Studies indicate that concentrations of cadmium in sediments are at least one order of magnitude higher than in the overlying water. However, cadmium may also redissolve from sediments under varying ambient conditions of pH, salinity, and redox potential. Cadmium is not known to form volatile compounds, so partitioning from water to the atmosphere does not occur (ATSDR, 1993b).

Cadmium in soils may leach into water, especially under acidic conditions. Cadmium-containing soil particles may also be entrained into the air or eroded into water, resulting in dispersion of cadmium into these media (ATSDR, 1993b).

To date, no evidence exists to suggest that cadmium (Cd) is either biologically essential or beneficial (Venugopal and Luckey 1978; FWS 1985a). Freshwater biota are particularly sensitive to this heavy metal; concentrations as low as 0.8 to 9.9 μg Cd/L produce lethality among insects, crustaceans, and fish (FWS 1985a; EPA 1985b). This heavy metal does not bioconcentrate to an appreciable extent; bioconcentration data listed in EPA (1985b) for freshwater species range from 3 (brook trout) to 4190 (caddisfly; *Hydropsyche betteni*) with a geometric mean value of 404.

Elemental cadmium (Cd) is insoluble in water, although its chloride and sulfate salts are freely soluble (FWS 1985a). The availability of cadmium to aquatic biota from their immediate physical and chemical environs depends on numerous factors, including adsorption and desorption rates of cadmium from terrigenous materials, pH, Eh, chemical speciation, and many other modifiers. Adsorption and desorption processes are likely to be major factors in controlling the concentration of cadmium in natural waters and tend to counteract changes in the concentration of cadmium ions in solution (FWS 1985a). Water hardness also alters the bioavailability of cadmium. Adsorption and desorption rates of cadmium are rapid on mud solids and particles of clay, silica, humic material, and other naturally occurring solids. It should be borne in mind that mobility and availability of cadmium, like most heavy metals, is a function of a large number of interrelated factors (e.g., CEC). Beyer et al. (1985) demonstrated that only a small portion of all metals measured in the soil become incorporated into plant foliage and suggested that most of the metal contamination detected in biota came from aerial deposition.

Compared to aquatic biota, mammals and birds are relatively less sensitive to cadmium exposure. Adult mallards fed a diet containing up to 200 mg Cd/kg survived and exhibited no loss in body weight, although egg production of laying hens was suppressed (White and Finely 1978). The lowest oral doses producing lethality among mammals were 250 and 150 mg Cd/kg body weight in rats and guinea pigs, respectively (EPA 1985b).

Aquatic and terrestrial organisms bioaccumulate cadmium. Cadmium concentrates in freshwater and marine animals to concentrations hundreds to thousands of times higher than in the water. The data indicate that cadmium bioaccumulates in all levels of the food chain. Cadmium accumulation has been reported in grasses and food crops, and in earthworms, poultry, cattle, horses, and wildlife. However, since cadmium accumulates largely in the liver and kidneys of vertebrates and not in the muscle tissue, and intestinal absorption of cadmium is low, biomagmfication through the food chain may not be significant. Although some data indicate increased cadmium concentrations in animals at the top of the food chain, comparisons among animals at different trophic levels are difficult, and the data available on biomagnification are not conclusive (ATSDR, 1993b).

Carbon Disulfide

Releases of carbon disulfide to the environment as a result of industrial activity are expected to be primarily to the atmosphere. Any carbon disulfide released to surface waters in effluent streams is expected to partition rapidly to the atmosphere as a result of the high ratio of vapor pressure to the solubility (Henry's law constant = 1.01×10^{-2} atm • m^3/mol) of the compound. Hydrolysis is not a significant removal mechanism since the evaporation half-life from a saturated solution is estimated to be 11 minutes (EPA

1976). The partitioning of carbon disulfide from water onto sediments is not expected to be removed significantly from the aquatic phase through adsorption. Carbon disulfide released to soils in spills should rapidly volatilize to the atmosphere, but a portion of the compound remaining on soil surfaces could be available for transport into groundwater since it does not have much affinity for soil particles.

No experimental data on biomagnification were found in the available literature. Estimated bioconcentration factor (BCF) values were calculated from solubility (equal to 2.94×10^3) and K_{ow} (log K_{ow} equals 2.16) data. The calculated values, 6.8 and 25.8 respectively for solubility and K_{ow} data, indicate carbon disulfide will not significantly bioaccumulate in aquatic organisms (EPA 1986b).

Studies in animals indicate that carbon disulfide can affect the normal functions of the brain, liver, and heart. After pregnant rats breathed carbon disulfide in the air, some of the newborn rats died or had birth defects. Animals fed food that contained carbon disulfide developed liver and heart disease, and some showed abnormal behavior. When animals received large doses of carbon disulfide during pregnancy, some of the newborns died or had birth defects. Rabbits developed blisters and ulcers on the treated areas of their ears.

Chloromethane

The physical properties of chloromethane that affect its transport and partitioning in the environment are: water solubility, log octanol/water partition coefficient, 0.91; Henry's law constant, 8.82x10-3 atm-m^3 mol; vapor pressure, 4310 mm Hg at 25°C; log sediment sorption coefficient 0.7; and log BCF 0.46. Most chloromethane discharged to the environment will be released to air where it will be subjected to transport and diffusion into the stratosphere. The relatively uniform concentration of chloromethane in the northern and southern hemispheres indicates its widespread distribution and the importance of transport processes in its distribution. The water solubility of chloromethane indicates that small amounts may be removed from the atmosphere by precipitation; however, no information confirming this was located in the literature. The dominant transport process from water will be volatilization (ATSDR, 1990a).

In soil, the dominant transport mechanism for chloromethane that is present near the surface probably will be volatilization (based on its Henry's law constant, water solubility, and vapor pressure), but no experimental information was located in the literature to confirm this. The actual volatilization rate for a chemical in soil is influenced by a number of factors including surface roughness, soil type, rainfall, leaching, depth of incorporation, temperature, and ground cover. Since chloromethane is not expected to sorb to soils, any chloromethane present in lower layers of the soil will be expected to leach to

lower horizons as well as diffuse to the surface and volatilize. The presence of chloromethane in groundwater confirms the importance of leaching as a transport route (ATSDR, 1990a).

Chlorophenols

The environmental fate and transport of chlorophenols are controlled by their physical and chemical properties and environmental conditions. Increasing chlorination increases the tendency of the chlorophenols to partition into sediments and lipids and to bioconcentrate. The higher vapor pressures of the monochlorophenols suggest that among the chlorophenols, these compounds are most likely to be found in air. The rate of chemical evaporation from an aqueous solution largely depends on a chemical's vapor pressure and water solubility (Henry's law constant). Volatilization of 2,4-DCP from water is expected to be slow and, therefore, not a major removal process from surface waters. Volatilization from near-surface soil is also not expected to be a significant removal process. The chlorophenols will all tend to partition into sediments. A sediment sorption study found sediment sorption capacity was extensive (up to 0.3 mmol/g), and up to 90% of the adsorption was irreversible.

The bioaccumulation potential of 2-CP, 4-CP, 2,4-DCP, 2,4,5-TCP, 2,4,6-TCP, and 2,3,4,6-TeCP was reviewed by Loehr and Krishnamoorthy (1988). Based on bioconcentration values and log octanol/water partition coefficients, they concluded that all chlorophenols studied had the potential for accumulation in aquatic organisms. Logs of bioconcentration factors ranged from 0.81–2.33 for 2-CP, 1.79-3.28 for 2,4,5-TCP, and 1.95–2.3 for 2,3,4,6-TeCP. The predictions for 4-CP, 2,4-DCP, and 2,4,6-TCP were based principally on high log octanol/water partition coefficients.

Research on biomagnification of chemical residues within the aquatic food chain indicates that the potential for residue accumulation by fish through food chains is relatively insignificant (<10%) for most compounds when compared to the tissue residues resulting from the bioconcentration process (i.e., direct uptake from water) (Barrows et al. 1980). Due to their relatively low bioconcentration factors (<1,000) and short biological half-lives (<7 days), monochlorophenols will probably not biomagnify within aquatic food chains (Barrows et al. 1980). Data regarding the biomagnification of the higher chlorophenols were not located.

Isensee and Jones (1971) studied the uptake of 2,4-DCP from solution and soil by oats and soybeans. The compound was taken up by the plants, with the concentrations decreasing as the plants matured. At maturity, 2,4-DCP in oat seeds was below detection (<0.001 μg/g) and in soybeans was 0.003 μg/g. The bioaccumulation of 2,3,4,6-TeCP was examined in earthworms (*Lumbricus rubellus*,

Aporrectodea caliginosa tuberculata); 2,3,4,6-TeCP concentrations were 430 and 1,980 μg/g fat in *Lumbricuss* and *Aporrectodea*, respectively, while soil concentrations were 336 μg/g dry soil. It is not known if 2,3,4,6-TeCP biomagnifies up terrestrial food chain. Based on physical properties, the tetrachlorophenols, rather than lower chlorinated phenols, would have the greatest potential to biomagnify.

Animals that were given food or drinking water containing chlorophenols developed health effects. The major effects with high levels of chlorophenols were effects on the liver and the immune system. Also the animals that ate or drank chlorophenols did not gain as much weight as the animals that ate food and drank water without chlorophenols. High levels of chlorophenols given to pregnant female rats in the drinking water have tended to reduce the number of their newborn animals and to decrease their weights. The chlorophenols have not been shown to cause birth defects in animals even at high doses.

Feeding rats and mice high doses of 2,4-dichlorophenol for a long time did not cause cancer. However, long-term treatment of rats and mice with high doses of 2,4,6-trichlorophenol in food caused leukemia in rats and liver cancer in mice, suggesting that 2,4,6-trichlorophenol may be a carcinogen. Putting chlorophenols on the skin or eyes of animals causes severe injuries. Injury is greatest with exposure to the mono- and dichlorophenols. The signs of severe skin injury include redness, swelling, scabbing, and scar formation. The cornea was damaged when monochlorophenols were placed directly onto the eyes of rabbits.

Chromium

Chromium is present in the atmosphere primarily in particulate form. Naturally occurring gaseous forms of chromium are rare. The transport and partitioning of particulate matter in the atmosphere depend largely on particle size and density. Atmospheric particulate matter is deposited on land and water via wet and dry deposition. Wet removal of particulate chromium also occurs by rainout within a cloud and washout below a cloud, and acid rain may facilitate removal of acid-soluble chromium compounds from the atmosphere. Since chromium compounds cannot volatilize from water, transport of chromium from water to the atmosphere is not likely, except by transport in windblown sea sprays. Most of the chromium released into water will ultimately be deposited in the sediment. A very small percentage of chromium can be present in water in both soluble and insoluble forms. Soluble chromium generally accounts for a very small percentage of the total chromium (ATSDR, 1993c).

Most of the soluble chromium is present as chromium(VI) and soluble chromium(III) complexes. Soluble forms and suspended chromium can undergo intramedia transport. Chromium(VI) in water will eventually be reduced to chromium(III) by organic matter in the water. For example, the bioavailability of chromium(III)

to freshwater invertebrates (Daphnia pulex) decreased with the addition of humic acid. This decrease in bioavailability was attributed to lower availability of the free form of the metal due to its complexation with humic acid (ATSDR, 1993c).

Although higher concentrations of chromium have been reported in plants growing in high chromium-containing soils (e.g., soil near ore deposits or chromium-emitting industries and soil fertilized by sewage sludge) compared with plants growing in normal soils, most of the increased uptake in plants is retained in roots, and only a small fraction is translocated in the above-ground part of edible plants. There is no indication of biomagnification of chromium along the terrestrial food chain (soil-plant-animal). Chromium in soil is present mainly as insoluble oxide Cr_2O_3. Therefore, it is not very mobile in soil. Flooding of soils and the subsequent anaerobic decomposition of plant detritus matters may increase the mobilization of chromium(III) in soils due to formation of soluble complexes. This complexation may be facilitated by a lower soil pH. A smaller percentage of total chromium in soil exists as soluble chromium(VI) and chromium(III), which are more mobile in soil. The mobility of soluble chromium in soil will depend on the sorption characteristics of the soil. The relative retention of metals by soil is in the order of lead > antimony > copper > chromium > zinc > nickel > cobalt > cadmium. The sorption of chromium to soil depends primarily on the clay content of the soil and, to a lesser extent, on Fe_2O_3 and the organic content of soil. Chromium in soil may be transported to the atmosphere as an aerosol (ATSDR, 1993c).

Surface runoff from soil can transport both soluble and bulk precipitate of chromium to surface water. Soluble and unadsorbed chromium(VI) and chromium(III) complexes in soil may leach into groundwater. The leachability of chromium(VI) in the soil increases as the pH of the soil increases. On the other hand, lower pH present in acid rain may facilitate leaching of acid-soluble chromium(III) and chromium(VI) compounds in soil. Chromium has a low mobility for translocation from roots to aboveground parts of plants. However, depending on the geographical areas where the plants are grown, the concentration of chromium in aerial parts of certain plants may differ by a factor of 2-3 (ATSDR, 1993c).

Chromium VI generally does not exist in biological systems, as it is reduced rapidly to Chromium III. Chromium VI, however, is much more toxic to living systems than Chromium III. Several studies exists regarding the toxicity of Chromium VI in mammals. Mice given oral doses of 57, 120, and 234 mg CrVI/kg-day during early gestation experienced increased preimplantation and postimplantation losses, along with decreased litter size (Trivedi et al., 1989 as cited in ATSDR, 1993). A LOAEL of 57 mg/kg-day was reported for reproductive effects. A decrease in motor activity was seen in rats given oral doses of Chromium VI at 98 mg/kg-day for 28 days, and a NOAEL of 9.8 mg/kg-day was reported for these effects (Diaz-Mayans et al., 1986). In addition, mice fed potassium dichromate at 4.6 mg/kg-day exhibited reduced sperm count

after 7 weeks, and morphologically altered sperm at 9.1 mg/kg-day after 7 weeks (Zahid et al., 1990, as cited in ATSDR, 1993).

Since Diaz-Mayans et al. (1986) established a clear dose-response relationship, the NOAEL was chosen for derivation of a benchmark value.

Only one avian study exists for Chromium VI. Chickens were fed diets up to 100 ppm Chromium VI and no adverse effects on survival or growth were observed after 32 days, suggesting a NOAEL of 100 ppm (Rosomer et al. 1961).

A multitude of studies exist on the effects of Chromium VI on fish. Since the NAWQC value of 0.011 mg/L was the most conservative value, it was chosen as the value for forage, small, and large fish. For fish and terrestrial organisms, the data show that Chromium VI does not effectively bioaccumulate. Chromium is not expected to biomagnify in the aquatic food chain (ATSDR, 1993c).

Copper

Copper is released to the atmosphere in the form of particulate matter or adsorbed to particulate matter. It is removed by gravitational settling (bulk deposition), dry deposition (inertial impaction characterized by a deposition velocity), washout by rain (attachment to droplets within clouds), and rainout (scrubbing action below clouds). The removal rate and distance traveled from the source will depend on source characteristics, particle size, and wind velocity. Most copper deposited in soil from the atmosphere, agricultural use, and solid waste and sludge disposal will be strongly adsorbed and remain in the upper few centimeters of soil (ATSDR, 1990b).

Copper's movement in soil is determined by a host of physical and chemical interactions of copper with the soil components. In general, the copper will adsorb to organic matter, carbonate minerals, clay minerals, or hydrous iron and manganese oxides. Sandy soils with low pH have the greatest potential for leaching. In most temperate soil, the pH, organic matter, and ionic strength of the soil solutions are the key factors affecting adsorption. The ionic strength and Ph of the soil solution affect the surface charge of soils and thereby influence ionic interaction. When the amount of organic matter is low, the mineral content or Fe, Mn and Al oxides become important in determining the adsorption of copper (ATSDR, 1990b).

Copper is an essential component of many enzymes and most animals have some ability to regulate its balance. Higher organisms typically employ cellular mechanisms to conserve copper when it is deficient

and excrete it when body burdens increase. These copper regulatory mechanisms may successfully prevent severe abnormalities if neither periods of deficiency nor excess are extreme (Rand and Petrocelli, 1985).

The toxicity of copper to aquatic biota has been shown to be related primarily to the activity of the cupric ion (Cu^{+2}), and possibly to some of the hydroxy complexes. The cupric ion is highly reactive and forms moderate to strong complexes and subsequently precipitates with any inorganic and organic constituents of natural waters. The portion of copper present as a free cupric ion is generally low and may be less than 1% in eutrophic waters where complexation predominates. It appears that organic and inorganic copper complexes and precipitates are less toxic than free cupric ion, thus reducing the toxicity attributable to total copper. The chemistry of copper complicates the interpretation of its toxicity because the portion of free cupric ion present in solution is highly variable (Rand and Petrocelli, 1985). Like a number of other cation metals, both calcium hardness and carbonate alkalinity are also known to reduce the acute toxicity of copper; expression of Virginia water quality criteria allows adjustment for these water quality effects.

Data compiled by EPA (1984b) indicated that both freshwater invertebrates and fish exhibit a wide range of sensitivities to acute exposures to copper; neither group appeared to be more sensitive than the other to copper. Embryos of the blue mussel and the Pacific oyster were the most sensitive saltwater species tested, with acute values of 5.8 and 7.8 μg/L, respectively. Acute values for saltwater fish ranged from 13.93 to 411.7 μg/L, with embryo-larval forms more sensitive than adults.

The bioconcentration factor (BCF) of copper in fish obtained in field studies is 10-100, indicating a low potential for bioconcentration. The BCF is higher in molluscs, especially oysters, where it may reach 30,000. This may be due to the fact that they are filter feeders, and copper concentrations are higher in particulates than in water. However, there is abundant evidence that there is no biomagnification of copper in the food chain. Even at the lowest levels of the food chain, there is little evidence of copper bioaccumulation. In a study of earthworms and soil from 20 diverse sites in Maryland, Pennsylvania, and Virginia, copper concentrations in earthworms poorly correlated with that in soil (ATSDR, 1990b).

DDT, DDD, and DDE

DDT and its metabolites may be transported from one medium to another by the processes of solubilization, adsorption, bioaccumulation, or volatilization. Studies of DDT transformations in soils indicate prolonged persistence. During these extended periods of time, these compounds undergo extensive adsorption to soil particles. Since the compounds are bound strongly to soil, they are not easily displaced from their site of application (except by erosion), nor do they tend to leach to groundwater, and appreciable amounts may remain in the soil for extended periods of time (ATSDR, 1994b).

DDT in excess of water solubility limits is adsorbed onto sediments which act as the primary reservoir for excess quantities of DDT. There it is available for ingestion by organisms, such as bottom feeders. Volatilization of DDT, DDE, and DDD is known to account for considerable losses of these compounds from soil surfaces and water. The tendency of DDD to volatilize is approximately fivefold less than that of DDT or DDE. Laboratory studies of the air/water partition coefficient of DDE indicate that it will volatilize from seawater 10-20 times faster than from freshwater. DDT in soils is subject to volatilization, with an estimated half-life of 100 days. Small particles that carry DDT or its degradation products may also be distributed through the atmosphere. Precipitation is believed to account for the greatest rate of removal from the atmosphere. When DDT is released to water, it quickly adsorbs to particles and is subject to sedimentation, may bioconcentrate in microorganisms, and can become part of the food chain. DDT, DDE, and DDD are highly lipid soluble, as reflected by their log octanol-water partition coefficients (log K_{ow}) of 6.19, 7.00, and 6.20, respectively.

Despite being strongly bound to soil, DDT, DDE, and DDD are bioavailable to plants and soil invertebrates. Studies indicate that the majority of the residues found in the roots of the plant, and the lowest concentration of DDT residues was found in the shoots, indicating low translocation of DDT. Earthworms are capable of aiding the mobilization of soil-bound DDT residues to readily bioavailable forms (ATSDR, 1994b).

DDT has not been marketed in the United States since 1972, but is ubiquitous due to its widespread use in previous decades and its relatively long half-life. DDT's close structural analogs, DDE and DDD, are metabolites of DDT and have also been formulated as pesticides in the past (Hayes, 1982). Because of its persistent nature, coupled with its hydrophobic properties and solubility in lipids, DDT and its metabolites are concentrated from water by aquatic organisms at all trophic levels. It also readily enters the food web and is bioaccumulated by organisms at higher trophic levels (EPA, 1980f).

DDT is intermediate in toxicity to fish in comparison to other chlorinated hydrocarbon pesticides. It is less toxic that aldrin, dieldrin, endrin and toxaphene, but more toxic than chlordane, lindane and methoxychlor (EPA, 1980f). Invertebrates are, for the most part, more sensitive than fish species, but the range of species LC50s for macroinvertebrates (10,000) is much greater than that for fish (300). The least sensitive species listed in EPA (1980f) was a stonefly (*Pteronarcys californica*) with a 96 h LC50 of 1.8 mg/L. Week-old crayfish were the most sensitive reported species (LC50 = 0.00018 mg/L) although 10-week old crayfish of the same species had an LC50 of 0.003 mg/L. EPA (1980f) reported that of the species for which data were available, yellow perch was the most sensitive freshwater species tested (96 h LC50 of 0.6 μg/L) where as the least sensitive species was the goldfish (96 LC50 = 180 μg/L).

Data for DDE indicate that long-term dietary dosage at 2.8 to 3.0 mg/kg DDE (wet weight) can have adverse effects on reproduction of mallards, black ducks, and screech owls. Species that feed on saltwater animals containing DDT and its metabolites have exhibited reductions in their reproductive capacity (Rand and Petrocelli, 1985). Anderson et al. (1975) studied the impacts of DDT in northern anchovies (a species with a high lipid content) on the reproductive success of brown pelicans. The concentrations of this contaminant steadily declined in anchovies over this 5-year study and pelican reproduction improved; the authors concluded that even the lowest concentrations detected in anchovies (0.15 mg/kg) and the subsequent 97 mg/kg concentration in pelican eggs was unacceptably high, because pelican eggshell thickness was still too low and pelican recruitment was still not high enough to sustain a stable population.

DDT's high lipid solubility, combined with an extremely long half-life, has resulted in bioaccumulation (i.e., levels in organisms exceed those levels occurring in the surrounding environment). When they are present in ambient water, DDT and its metabolites are bioconcentrated in freshwater and marine plankton, insects, mollusks, other invertebrates, and fish. Bioconcentration factors from laboratory tests with DDT and saltwater organisms ranged from 1200 to 76300 for fish and shellfish, respectively (EPA, 1980f). As these organisms become part of the food chain, a progressive biomagnification of residues may result in high levels of residues in organisms at the top of the food chain. Rainbow trout may accumulate DDT, DDE, and DDD from ingesting fish lower on the food chain and from the surrounding media (i.e., water and sediment).

Endosulfan I, II, and Sulfate

Endosulfan has been released to the environment mainly as a result of its use as an insecticide. When applied to fruit trees, vegetables, and other crops, endosulfan is released directly to the atmosphere and is also released to the atmosphere as the result of volatilization from treated plant surfaces and surface waters. Effluents from manufacturing and formulating facilities and surface runoff from treated croplands are sources of releases of the compound to surface waters. The main routes of release of endosulfan to soils are application of the compound to crops and land disposal of unused formulated pesticide products containing the compound.

Endosulfan released to soil is most likely subjected to photolysis (on soil surfaces), hydrolysis (under alkaline conditions), or biodegradation. The α- and β-isomers of endosulfan undergo photolysis upon exposure to sunlight on plant leaves. The α-isomer also undergoes isomerization to the β-isomer, which is relatively more stable (Dureja and Mukerjee 1982). A photolytic half-life of about 7 days was reported for endosulfan by EPA (1982). Endosulfan in aqueous solutions is also expected to undergo biodegradation. On plant surfaces, as in soils, numerous studies have demonstrated that endosulfan is oxidized to endosulfan sulfate.

In most plant residue studies, endosulfan sulfate residue levels tend to increase relative to the parent isomers and other metabolites and appear to be very persistent (Coleman and Dolinger 1982).

The results of several laboratory and greenhouse studies indicate that endosulfan is strongly adsorbed to soil. Adsorption of endosulfan to soil particulates is also predicted based on the log soil organic carbon/water partition coefficient (K_{oc}) value of 3.5. Adsorption is also important in aquatic systems. For example, Greve and Wit (1971) found that 82%–85% of the endosulfan residues in water samples taken from the Rhine River (0.2–0.6 ppb) were associated with the particulate phase.

The clinical signs common to animals after acute exposure to high doses of endosulfan (e.g., hyperactivity, tremors, decreased respiration, dyspnea, salivation, tonic-clonic convulsions, and death) point to the nervous system as the major target of toxicity. However, neurotoxic effects are generally not seen following longer term, low-dose exposure. Target organs/systems of endosulfan identified in experimental animals include the gastrointestinal tract, blood, liver, kidneys, reproductive organs, and immune system. Developmental toxicity has also been noted in animals. The effects observed on the respiratory and cardiovascular systems are most likely secondary to effects of endosulfan on the central nervous system control of respiratory and cardiovascular function. Very few studies have examined the toxicity of endosulfan following inhalation or dermal exposure, but the effects reported (e.g., central nervous system stimulation and hepatic and renal effects) are similar to those seen after oral exposure.

Endrin and Endrin Aldehyde

Endrin is extremely persistent when released to the soil. Endrin on soil may be transported to surface water via runoff from rain or irrigation. Since endrin in solid form is hydrophobic and sorbs strongly to soil particles, migration into groundwater would not generally be expected from normal agricultural application. However, endrin has been detected in some groundwaters, suggesting that leaching may be possible in some soils under certain conditions. Furthermore, since endrin formulations in solvent carriers such as xylene or hexane were also commonly used, endrin could move into groundwater from spills of such formulations. Similarly, migration to groundwater might also occur at waste sites where endrin residues become mixed with organic solvents. Unlike some other chlorinated pesticides, endrin volatilization was not enhanced after a rainfall. Small amounts of endrin in soil may also be transported to the air by dust particles.

The occurrence of significant concentrations of endrin transformation products (including endrin ketone, endrin aldehyde, and endrin alcohol) in a variety of plants grown in soil treated with endrin for periods as long as 15 years prior to planting indicates that there may be significant uptake of endrin and/or its transformation products by plants from endrin- treated soil.

When released to water, endrin strongly adsorbs to sediment and bioconcentrates significantly in aquatic organisms. Typical bioconcentration factors for freshwater and marine organisms range from 140 to 49,000. In addition to being bioconcentrated in aquatic organisms directly from water, endrin appears to be biomagnified slightly through various levels of the food chain (ATSDR, 1994c). Endrin was widely used as a broad spectrum pesticide until its registration was canceled in 1984. This chlorinated cyclodiene is highly toxic to humans; its long-term persistence and mammalian toxicity had been recognized at least as early as 1964 (EPA, 1993b). Like other organochlorine pesticides, endrin is lipophilic and bioaccumulates in lipid. Studies indicate that this pesticide can move across the placenta (EPA, 1994a).

Ethylbenzene

The physicochemical properties of ethylbenzene reveal a strong tendency for ethylbenzene to partition into the atmosphere. Depending upon site conditions, releases to surface soil can result in substantial losses to the atmosphere in addition to subsurface infiltration. Vapor phase transport will occur from subsurface releases (i.e., from leaking underground storage tanks) and during migration through partitioning into air pockets within unsaturated soil pore spaces. This vapor phase migration behavior is used in soil gas sampling methods. The magnitude of the Henry's law constant, which measures partitioning between water and air, indicates that a significant proportion of ethylbenzene will partition from water into air. Ethylbenzene dissolves in surface water, soil pore water, or groundwater and will thus migrate into an available atmospheric compartment until its saturated vapor concentration is reached (ATSDR, 1990c).

Heptachlor and Heptachlor Epoxide

Heptachlor can be widely distributed in the environment. Both heptachlor and heptachlor epoxide can travel long distances in the wind from places where they are released such as treated fields or manufacturing sites. Heptachlor can be deposited on plant leaves or plants can absorb it through contaminated soil. Animals that eat plants containing heptachlor can also absorb heptachlor. Heptachlor is then changed into heptachlor epoxide, which breaks down very slowly in the environment and can stay in soil and water for many years. Plant, fish, and cattle that absorb the heptachlor or heptachlor epoxide through air, water, or food sources can pass it on to the organisms that consume them, leading to bioaccumulation. Also, since both heptachlor and heptachlor epoxide can volatilize from soil.

The chemical and physical properties of heptachlor and heptachlor epoxide vary somewhat from one another. Their chemical formulas are $C_{10}H_5Cl_7$ and $C_{10}H_5Cl_7O$, respectively. Their molecular weights are 373.35 and 389.4, respectively. Both are crystalline solids, and the melting points are 95-96°C (pure) and 46-74°C (technical grade) (Worthing and Walker 1987) for heptachlor and 160-161.5°C for heptachlor

epoxide. Heptachlor has a boiling point of 145°C, a density of 1.57 g/cm^3 at 9°C, and a camphor-like odor; the odor threshold in air for both heptachlor and heptachlor epoxide is 0.3 mg/m^3. The solubility of heptachlor in water at 25°C is 0.05 mg/L and that of heptachlor epoxide is 0.275 mg/L; both are soluble in most organic solvents. The partition coefficients for heptachlor and heptachlor epoxide are as follows: Log K_{ow}s are 5.44 and 5.40, respectively, and the Log K_{oc}s are 4.34 and 3.34–4.37, respectively. The vapor pressures at 20°C are $3x10^{-4}$ mmHg and $2.6x10^{-6}$ mmHg, respectively, and at 25°C the vapor pressure for heptachlor is $3x10^{-4}$ mmHg. Henry's law constant at 25°C for heptachlor is $3x10^{-3}$ atm-m^3/mol and that for heptachlor epoxide is 3.210^{-5} atm-m^3/mol.

The toxicities of heptachlor and heptachlor epoxide have been examined to some extent in animals via the oral route of exposure. The major target organ and system affected are the liver and the central nervous system. The effects, however, cannot be related directly to heptachlor or heptachlor epoxide. Available carcinogenicity data indicate that both heptachlor and heptachlor epoxide are liver carcinogens in the rat and mouse.

Iron

The ferrous, or bivalent (Fe^{++}), and the ferric, or trivalent (Fe^{+++}) forms of iron are of primary concern in the aquatic environment. Iron can exist in natural organometallic or humic compounds and colloidal forms. The national criterion for the protection of aquatic life is 1.0 mg Fe/L (EPA, 1986).

Lead

As summarized in FWS (1988), research to date has determined that lead (Pb) is neither essential nor beneficial and that all measured effects are adverse. Invertebrates exhibit a wide range of sensitivities to lead, and the toxicity of lead to fish has been found to be greater in soft water than in hard water. Organolead compounds are typically more toxic than inorganic compounds, food chain biomagnification is generally negligible, and younger organisms tend to be more sensitive to lead exposure than older individuals (FWS 1988). Reported bioconcentration factors are relatively low, ranging from 42 for brook trout to 1700 for a gastropod (*Lymnaea palustris*); the geometric mean value of data listed in EPA (1985c) for freshwater species is 403.

Lead modifies the function and structure of kidney, bone, the central nervous system, and the hematopoietic system, and produces adverse biochemical, histopathological, neuropsychological, fetotoxic, teratogenic, and reproductive effects (Boggess 1977; Nriagu 1978; De Michele 1984). Inorganic Pb absorbed into the mammalian body enters the bloodstream initially and attaches to the red blood cell. There is a further rapid

distribution of the Pb between blood extracellular fluid and other storage sites that is so rapid that only about halg of the freshly absorbed Pb remains in the blood after a few minutes. The storage sites for Pb are uncertain, although they are probably in soft tissues as well as bone; the half-time residence life (Tb 1/2) of inorganic Pb probably proceeds sequentially from gut, to blood, to bone and soft tissue, and by way of the bile to small intestine and fecal excretion (DeMichele 1984).

Tetraalkyllead mode of action differs from that of inorganic Pb. Although initial entry is still into the bloodstream, the Pb is evenly distributed between blood plasma and the red blood cells. Tetraalkylleads are lost rapidly from the bloodstream, although some reappear in 5 to 10 hours associated exclusively with the red blood cells, probably as tetraalkyllead, though a fraction may be converted to inorganic Pb. The organoleads concentrate in the liver, and it is there that tetraalkyllead is probably converted to trialkyllead. Otherwise, the Pb is widely dispersed throughout the body with Tb 1/2 values of 200 to 350 days (Harrison and Laxen 1981). Tetraalkyllead, by virtue of its liposolubility, is rapidly accumulated in bony tissues, particularly the brain, where the onset of signs of poisoning is rapid (Nriagu 1987). Short-term repeated exposures of rats (Rattus spp.) to EL results in a neurotoxic syndrome consisting of altered reactivity to noxious stimulation through disruption of forebrain-area function (Hong et al. 1983). Several fish species metabolize tetraalkyllead derivatives are considered responsible for the toxicity of the parent compound (Walsh and Tilson 1984). Trialkylleads and dialkylleads rapidly traverse biological membranes in bird eggs and accumulate in the yolk and developing embryo (Forsyth et al. 1985). At present, the organolead mode of action is poorly understood, but organolead compounds are known to inhibit amino acid transport, uncouple oxidative phosphorylation, and inhibit cerebral glucose metabolism (Hong et al. 1983).

Mammals have demonstrated 3 effects of lead toxicity. Rats receiving oral doses of lead for up to a year exhibited neurological deficits including disruption of conditioned responses and motor activity, both of which could impair the fight or flight response (and survival) in the wild (Krasovskii et al., 1979). Lead has caused symptoms of chronic toxicity and irregular estrus cycles in mammals which could disrupt seasonal reproductive cycles (Demayo et al. 1982; Hilderbrand et al. 1973).

Growth rate suppression was in chickens is the only toxic endpoints to be described for birds. Studies measuring reproductive endpoints of survival, egg laying, fertility, and eggshell thickness in American kestrels found no impairment of these parameters (Pattee, 1984).

The study by Davies et al. (1976) found that large fish exposed for 19 months to 7.6 mg/L developed "blacktail", a neurological condition that leads to curvature of the spine. Forage fish, small fish and daphnids had no data on the effects of lead toxicity.

As with a number of other metals, hardness has a major effect on the bioavailability of lead, although the observed effect is probably due to the presence of one or more interrelated ions such as hydroxide, carbonate, calcium, or magnesium (EPA 1985c).

Bioconcentration factors for lead ranged between 4.88 and 726 for fish and 500 for terrestrial invertebrates. However, earthworms and plants were not found to bioconcentrate lead to any significant degree.

Manganese

Elemental manganese and inorganic manganese compounds have negligible vapor pressures, but may exist in air as suspended particulate matter derived from industrial emissions or the erosion of soils. Manganese containing particles are mainly removed from the atmosphere by gravitational settling, with large particles tending to fall out faster than small particles. Removal by washout mechanisms such as rain may also occur, but is less important in removing manganese from the atmosphere than dry deposition. The tendency of soluble manganese compounds to adsorb to soils and sediments depends mainly on the cation exchange capacity and the organic composition of the soil. Manganese is a vital micronutrient for both plants and animals (ATSDR, 1992d).

The transport and partitioning of manganese in water is controlled by the solubility of the specific chemical form present, which in turn is determined by pH, Eh (oxidation-reduction potential), and the characteristics of available anions. The metal may exist in water in any of four oxidation states (2+, 3+, 4+, or 7+). Divalent manganese (Mn^{+2}) predominates in most waters (pH 4-7), but may become oxidized at pH greater than 8 or 9. The principal anion associated with $Mn(^{+2})$ in water is usually carbonate, and the concentration of manganese is limited by the relatively low solubility (65 mg/L) of $MnCO_2$. In relatively oxidized water, the solubility of $Mn(^{+2})$ may be controlled by manganese oxide equilibria, with manganese being converted to the (+3) or (+4) valence states. In extremely reduced water, the fate of manganese tends to be controlled by formation of the poorly soluble sulfide. Manganese is often transported in rivers as suspended sediments. Manganese in water may be significantly bioconcentrated at lower trophic levels. Folsom et al. (1963) estimated that the BCF of manganese was 2,500-6,300 for phytoplankton, 300-5,500 for marine algae, 800-830 for intertidal mussels, and 35-930 for coastal fish (ATSDR, 1992d). McKee and Wolfe (1963) summarized the data concerning the toxicity of manganese to freshwater life. Manganese ions rarely occur in concentrations above 1 mg/L. The reported tolerance values for freshwater organisms range from 1.5 to >1000 mg Mn/L.

Mercury

The natural global biogeochemical cycling of mercury is characterized by degassing of the element from soils and surface waters, followed by atmospheric transport, deposition of mercury back to land and surface waters, and sorption of the compound to soil or sediment particulates. Particulate-bound mercury can be converted to insoluble mercury sulfide and precipitated or bioconverted into more volatile or soluble forms that re-enter the atmosphere or are taken up by biota and bioaccumulated in terrestrial and aquatic food chains (ATSDR, 1994d).

Mercury has three valence states. The specific state and form in which the compound is found in an environmental medium is dependent upon a number of factors, including the redox potential and pH of the medium. In soils and surface waters, mercury can exist in the mercuric (Hg^{+2}) and mercurous (Hg^{+1}) states as a number of complex ions with varying water solubilities. Mercuric mercury, present as complexes and chelates with ligands, is probably the predominant form of mercury present in surface waters. The transport and partitioning of mercury in surface waters and soils is influenced by the particular form of the compound. More than 97% of the dissolved gaseous mercury found in water consists of elemental mercury. Volatile forms (e.g., metallic mercury and dimethylmercury) are expected to evaporate to the atmosphere, where as solid forms partition to particulates in the soil or water column and are transported downward to the sediments in the water column (ATSDR, 1994d).

Vaporization of mercury from soils may be controlled by temperature, with emissions from contaminated soils being greater in warmer weather when soil microbial reduction of Hg^{+2} to the more volatile elemental mercury is greatest. Vapor-phase mercury volatilized from surface waters has been measured however, the dominant process controlling the distribution of mercury compounds in the environment appears to be the sorption of nonvolatile forms to soil and sediment particulates with little resuspension from the sediments back into the water column (ATSDR, 1994d).

Freshwater and marine sediments are important repositories for inorganic forms since they readily adsorb to inorganic and organic particles as well as dissolved organic carbon (DOC) (Benes and Havelik 1979; Rudd and Turner 1983; Rogers et al. 1984). The degree and extent of this binding, while not well understood, will affect the availability of mercury for methylation. Methylation of mercury in most aquatic systems is thought to be primarily a function of microbiological activity in the sediment (Winfrey and Rudd 1990). Rates of methylation peak at the sediment-water interface and decrease in the overlying water and subsurface sediment (Korthals and Winfrey 1987). Reduced pH also appears to increase the availability of methylated mercury by expediting its release from sediment into the water column.

In soils, leaching is a relatively insignificant transport process. However, surface runoff is an important mechanism for moving mercury from soil to water, particularly for soils with high humic content. Mobilization of sorbed mercury from particulates can occur through chemical or biological reduction to elemental mercury and bioconversion to volatile organic forms. Adsorption of mercury in soil is decreased with increasing pH and/or chloride ion concentrations. Metallic mercury may move through the top 3-4 cm of dry soil at atmospheric pressure; however, it is unlikely that further penetration would occur (ATSDR, 1994d).

The chemical speciation of mercury (Hg) is probably the most important variable influencing ecotoxicology of Hg, but Hg speciation is complicated, especially in natural environments (Boudou and Ribeyre 1983; FWS 1987a). Most mercury entering aquatic systems is inorganic (Hg II) although recent studies have measured methylated mercury (CH_3HgH^+) in rain and surface runoff (Bloom and Watras 1989; Lee and Hultberg 1990). Methyl mercury is the major form of mercury in fish and accumulates to a greater extent in biological tissue than inorganic mercury. Methylation of inorganic mercury takes place in the terrestrial environment, the water column, and in sediment. The net amount of methyl mercury in an aquatic system is the result not only of its rate of formation, but also the result of the rates of those processes that alter the availability of inorganic mercury for methylation, and methyl mercury decomposition (demethylation) (Winfrey and Rudd 1990).

In a recent review of the hazards of mercury (Hg) to fish, wildlife, and invertebrates, FWS (1987a) noted that mercury and its compounds have no known biological function; its presence is regarded as undesirable and potentially hazardous, and it is a mutagen, teratogen, and carcinogen. Forms of mercury with relatively low toxicity can be transformed into forms with very high toxicity through biological and other processes. For all organisms tested, early developmental stages were the most sensitive, and organomercury compounds – especially methylmercury – were more toxic than inorganic forms. Numerous biotic and abiotic factors modify the toxicity of mercury compounds, sometimes by an order of magnitude or more, but mechanisms of action are unclear (FWS 1987a).

The most common organic form of mercury, methylmercury, is soluble, mobile, and quickly enters the aquatic food chain. This form of mercury can be bioconcentrated in organisms and biomagnified through food chains, returning mercury to upper trophic level consumers in a concentrated form. For example, methylmercury in surface waters is rapidly accumulated by aquatic organisms; bioconcentration factors in carnivorous fish range from 10,000 (brook trout) to 81,670 (fathead minnows). The geometric mean value of bioconcentration values listed in EPA (1985d) for freshwater organisms is 25,400. The bioaccumulation potential for methylmercury in fish is influenced by the pH of the water, with a greater bioaccumulation seen in waters with lower pH. Mercury concentrations in fish have also been negatively correlated with other water quality factors, such as alkalinity and dissolved oxygen content (ATSDR, 1994d).

Biomagnification factors for mercury in the food webs of Lakes Michigan and Ontario were lowest for amphipods feeding on mysids (1.1) and highest for fish feeding on plankton (10.4-11.8). Aquatic macrophytes also have been found to bioconcentrate methylmercury in almost direct proportion to the mercury concentration in the water. The potential for bioaccumulation in terrestrial food chains is demonstrated by the uptake of mercury by the edible mushroom *Pleurotus ostreatus*, grown on compost containing mercury at concentrations of up to 0.2 mg/kg. The bioaccumulation factor was 65-140, indicating that there are risks to human health if these mushrooms are eaten. However, other data indicate that virtually no mercury is taken up from the soil into the shoots of plants such as peas, although mercury concentrations in the roots may be significantly elevated and reflect the mercury concentrations of the surrounding soil (ATSDR, 1994d).

Methoxychlor

Methoxychlor is a relatively hydrophobic compound with log octanol/water partition coefficient (log KoW) values ranging from 4.68 to 5.08. Because of this, methoxychlor in water is expected to partition mainly to sediment and organic matter, although a significant fraction may remain in solution when the ratio of sediment mass to water volume is low. In sediments, the partitioning of methoxychlor was higher for silts and clays than it was for sand (ATSDR, 1994e).

The mobility of methoxychlor may be higher in sandy soils, since adsorption was significantly less in soil with lower organic carbon content and larger particle size. In addition to soil absorption, methoxychlor may become structurally bound to soil humic materials. Dechlorinated, dehydrochlorinated, and demethylated degradation products of methoxychlor were generally detected in lower levels of soil, suggesting that they are more mobile than methoxychlor (ATSDR, 1994e).

The bioconcentration of methoxychlor has been investigated in microorganisms, lower invertebrates, and in fish. Reported bioconcentration factors (BCFs) for methoxychlor ranged from 411-2,758 in *Aerobacter aerogenes*, 2,114-8,138 in *Bacillus subtilis*, 348-1,130 in stoneflies, 5,000-8,570 in snails and 1,500 in clams. In sheepshead minnows, BCFs were found to be concentration dependent, ranging from 113 at 3 mg/L to 264 at 23 mg/L. These data suggest that considerable species variation exists in the bioconcentration of methoxychlor in fish, perhaps as the result of species differences in the capacity to metabolize and eliminate methoxychlor (ATSDR, 1994e).

Nickel

Rats given a subchronic gavage study with nickel chloride in water experienced lethargy, ataxia, irregular breathing, reduced body temperature, and discolored extremities (EPA, 1994b). Inhalation of nickel subsulfide in rats increased the incidence of lung tumors (ATSDR, 1991). The CNS appears to be the target organ for nickel oral toxicity, while the lung is the target organ for inhalation exposure.

Phenol

As summarized in EPA (1980a), phenol is predominantly used as an intermediate in a wide variety of chemical processes including production of epoxy and phenolic resins, pharmaceutical, pesticides, dyes, and numerous industrially-important acids. The phenol molecule easily substitutes in the environment to form compounds such as halophenols, which may be more toxic than the parent compound. The acute toxicity of phenols to aquatic organisms has been characterized but information on chronic toxicity is limited. Acute toxicity of phenol to freshwater species has been expressed over 2 to 3 orders of magnitude. Test results have indicated that cladocerans are the most sensitive invertebrate species examined (*Daphnia pulex* LC50 = 5000 μg/l) while rainbow trout are among the most sensitive fish species tested (LC50 =5020 μg/l). Bioconcentration factors range from 1.2 to 2.3 for goldfish (*Carassius auratus*), indicating that phenol is not likely to bioconcentrate or biomagnify (EPA, 1980a).

Phthalates

Phthalates, or phthalate esters such as Bis(2-ethylhexyl)phthalate, represent a large family of chemicals widely used as plasticizers. For the most part, these are colorless liquids with low volatility, and are poorly water soluble (EPA 1980b; Verschueren 1983). Available data indicate that the toxicity of phthalate varies widely. However, acute toxicity values reported by EPA (1980b) all exceed 1000 μg/L while chronic values as low as 3 μg/L had been determined for di(2-ethylhexyl)phthalate. Reported bioconcentration values ranged from 14 to 2680 (EPA 1980b).

Although di-n-butyl phthalate has low volatility, it has been reported as particulate in the atmosphere and as a vapor. In the air, di-n-butyl phthalate is transported from its origin and is subject to both wet (rain and snow) and dry (wind and settling) deposition on the earth's surface. Although di-n-butyl phthalate is only poorly soluble in water, it may be transported in water following formation of chemical complexes between di-n-butyl phthalate and humic substances. The adsorption of di-n-butyl phthalate onto particulate matter is greater in salt water than in fresh water. Adsorption onto soil and sediments appear to be a significant sink

for di-n-butyl phthalate. It has been demonstrated that di-n-butyl phthalate is rapidly adsorbed from seawater onto marine sediment. In hazardous waste sites, the presence of common organic solvents such as alcohols and ketones may increase the solubility of relatively water insoluble compounds such as di-n-butyl phthalate, thus increasing the amounts that may leach from the site into the subsoil and into groundwater (ATSDR, 1990d).

Polyaromatic Hydrocarbons

Increased fossil fuel consumption in the United States has lead to a rise PAH emissions into the environment. The global movement of PAHs can be summarized as follows: PAHs released to the atmosphere are subject to short- and long-range transport and are removed by wet and dry deposition. In surface water, PAHs can volatilize, photodegrade, oxidize, biodegrade, bind to particulates, or accumulate in aquatic organisms (with bioconcentration factors often in the 100-2,000 range). In sediments, PAHs can biodegrade or accumulate in aquatic organisms. PAHs in soil can biodegrade or accumulate in plants; PAHs can enter groundwater and be transported within an aquifer (ATSDR, 1993d).

Transport and partitioning of PAHs in the environment are determined to a large extent by physical/chemical properties such as water solubility, vapor pressure, Henry's law constant, octanol-water partition coefficient (K_{ow}) and organic carbon partition coefficient (K_{oc}). In general, PAHs have low water solubilities. Because of their low solubility, PAHs in aquatic systems are primarily found sorbed to particles that either have settled to the bottom or are suspended in the water column. In an estuary, volatilization and adsorption to suspended sediments with subsequent deposition are the primary removal processes for medium and high molecular weight PAHs, whereas volatilization and microbial degradation are the major removal processes for low molecular weight compounds (ATSDR, 1993d).

Sorption of PAHs to soil and sediments increases with increasing organic carbon content and is also directly dependent on particle size. PAHs have also been shown to be transported laterally within contaminated aquifers. PAHs can be accumulated in aquatic organisms from water, sediments, and food. Bioconcentration factors (BCFs) of PAHs in fish and crustaceans have frequently been reported to be in the range of 100-2,000. In general, bioconcentration was greater for the higher molecular weight compounds than for the lower molecular weight compounds. Biotransformation by the MFO system in the fish liver can result in the formation of carcinogenic and mutagenic intermediates; exposure to PAHs has been linked to the development of tumors in fish. The ability of fish to metabolize PAH, may explain why benzo(a)pyrene is frequently not detected or found only at very low levels in fish from environments heavily contaminated with PAHs. The breakdown products (polyhydroxy compounds) are eliminated in feces (via bile) and urine. Varanasi et al. (1985) ranked the amount of benzo(a)pyrene metabolism by aquatic organisms as follows:

fish > shrimp > amphipod crustaceans > clams. Fish and crustaceans readily assimilate PAHs from contaminated food, whereas mollusks and polychaete worms have limited assimilation. Biomagnification has not been reported because of the tendency of many aquatic organisms to eliminate these compounds rapidly (ATSDR, 1993d).

Some PAHs are of environmental concern because they are known to be carcinogens and/or mutagens. An increase in fossil fuel consumption in the United States has resulted in an increase in emissions of PAHs to the environment. Sorption of PAHs onto solids in the water column and subsequent settling, as well as partitioning onto organic materials in the sediment, can significantly affect PAH transport.

Because of their complex chemical composition, the toxicity of PAHs is variable and not well understood (NAS 1985). In addition, research has demonstrated that different organisms and different life stages for a given species can vary widely in sensitivity to PAHs (FWS 1987b; NAS 1985; Neff and Anderson 1981). However, it is generally agreed that in aquatic ecosystems, the toxicity of PAHs is correlated with water solubility (Neff and Anderson 1981) and molecular weight, with high molecular weight PAHs exhibiting low acute toxicity (due to low water solubility) (FWS 1987b). In all but a few cases, PAH concentrations that are acutely toxic to aquatic organisms are several orders of magnitude higher than concentrations found in even the most heavily polluted waters. Sediment from polluted areas, however, may contain PAHs in concentrations approaching those similar to those which are acutely toxic, but their limited bioavailability would probably render them substantially less toxic than PAHs in solution (FWS 1987b).

Patton and Dieter (1980) fed mallards a diet that contained 4000 mg PAHs/kg (primarily naphthalenes, naphthenes, and phenanthrene) for 7 months. No mortality or visible signs of toxicity were noted but both liver weight and hepatic blood flow were significantly greater than that of the controls. However, the authors concluded that these modifications in the liver did not represent an adverse effect and that adult mallards could tolerate long-term exposures to relatively high concentrations of PAHs. Mammalian toxicity data are limited for PAHs but the ability of some PAHs to induce tumor formation is well documented (FWS 1987b). Bioaccumulated PAHs with a four-ring structure or less are rapidly metabolized. Therefore, long-term partitioning into biota is not considered a significant fate process (FWS 1987b; EPA 1993).

In general, PAHs obtained from the diet can contribute to total tissue concentrations to a limited extent. Tissues from plants grown in the treated soils were relatively enriched with low molecular weight PAHs (e.g., acenaphthene, fluorene, phenanthrene), but increased PAH concentrations (relative to tissues from plants grown in control plots that did not receive sludge amendments) were not consistently detected. The PAH concentrations in above ground plant parts were not strongly related to soil PAH levels but were probably the result of atmospheric deposition. The presence of PAHs in root crop tissues was probably due

to adsorption of the compounds to root surfaces. PAHs may accumulate in terrestrial animals through the food chain or by ingestion of soil (ATSDR, 1993d).

PCBs

In water, adsorption to sediments or other organic matter is a major fate process for PCBs. Experimental and monitoring data have shown that PCB concentrations are higher in sediment and suspended matter than in the associated water column. Based on their water solubilities and octanol-water partition coefficients, the less chlorinated components of the Aroclors will sorb less strongly than the highly chlorinated components. Although adsorption and subsequent sedimentation may immobilize PCBs for relatively long periods of time in aquatic systems, redissolution (due to loss from the aquatic phase as a result of, for example, volatilization and subsequent release from sediment) into the water column has been shown to occur in the environment. The substantial quantities of PCBs contained in aquatic sediments can therefore act as an environmental reservoir from which PCBs may be released slowly over a long period of time. Environmental redistribution from aquatic sediments should be most significant for the PCBs contained in the top layers of the sedimentary deposit. PCBs reaching the lower layers of sedimentary deposits may be effectively sequestered from environmental redistribution. The depth distribution of PCBs in lake sediments provides a record of changes in PCB accumulation with time. PCBs may volatilize even more significantly from dams, waterfalls, and other waterways that have markedly higher aeration rates. Nonetheless, adsorption to sediment significantly decreases the volatilization rate of highly chlorinated Aroclors from the aquatic phase. The rate of redissolution of PCBs from sediment to water will always be greater in summer than in winter because of more rapid volatilization from water. The low water solubility, high octanol-water partition coefficients of the PCBs demonstrates strong adsorption of PCBs to soils and sediment. The tendency to leach will be greatest among the least chlorinated congeners. Since the sorption of PCBs in soil is proportional to soil organic carbon content,leaching is expected to be greatest from soils with low organic carbon. PCBs in soil leach significantly in the presence of organic solvents, as might occur at a hazardous waste site. The volatilization rate will be greater from soil with low organic carbon, due to the weaker sorption of PCBs. The volatilization rates also will be greater in moist soils due to the codistillation of PCBs with water. Storm water runoff will also transport PCBs from soil to surface water (ATSDR, 1993f).

Polychlorinated biphenyls (PCBs) are a mixture of chlorinated biphenyl chemicals which occur individually as 209 congeners, comprised of various chlorine substitution patterns. PCBs are closely related to many chlorinated hydrocarbon pesticides (e.g, DDT, dieldrin, and aldrin) in their chemical, physical, and toxicological properties and in their widespread occurrence in the aquatic environment (Nimmo, 1985). Mixtures of PCBs were marketed under the trade name Aroclor, with a numeric designation that indicated their chlorine content. Although production and use was banned in 1979, the chemical group is extremely

persistent in the environment and bioaccumulates through the foodchain. There is evidence that the most potent, dioxin-like PCB congeners are preferentially accumulated in higher organisms. Additional research indicates that there is evidence that PCB risks increase with increased chlorination because more highly chlorinated PCBs are retained more efficiently in fatty tissues (EPA, 1994b). The non-ortho-substituted coplanar PCB congeners, and some of the mono-ortho-substituted congeners, have been shown to exhibit dioxin-like effects. There is increasing evidence that many of the toxic effects of PCBs result from alterations in hormonal function. Consequently, the aggregate toxicity of a PCB mixture may increase as it moves up the foodchain (EPA, 1993b).

The three effects of PCB exposure on terrestrial wildlife are mortality, decreased reproductive success, and behavioral modifications (EPA, 1993b). Mink (*Mustela vison*) appear to be among the most sensitive species to the toxic effects of PCBs (Gillette et al., 1987). Single oral doses of PCBs administered to mink have produced LD_{50} values of 750 mg/kg for Aroclor 1221 and 4000 mg/kg for Aroclor 1254 (Aulerich and Ringer, 1977; Ringer, 1983). The primary chronic effect documented as a result of dietary exposure to PCBs has been decreased reproductive success, as evidenced by reduced whelping rates, fetal death, and reduced growth among the young. Based on a review of available data, EPA determined that 30 μg/kg/d represented an NOEL value for reproductive effects of Aroclor 1254 (EPA, 1993b).

Birds have been shown to be more resistant than mammalian species to the acute effects of PCBs. PCB doses greater than 200 ppm in the diet (10 mg/kg body weight) caused some mortality among northern bobwhite (*Colinus virginians*), mallards (*Anas plythynchos*), and ring-necked pheasants (*Phasianus colchicus*). PCBs provided to these birds at dietary concentrations of 1500 ppm (100 mg/kg body weight) caused extensive mortality (FWS, 1986b). Exposure to PCBs resulted in some mortality among all the avian species tested, with lethal concentrations depending on the length of exposure and the particular PCB mixture (Aulerich et al., 1973). For all avian species, PCB residue concentrations of at least 310 mg/kg fresh weight in the brain were associated with an increased likelihood of death from PCB poisoning (FWS, 1986b). An evaluation of the results of various toxicity studies performed on a number of bird species led EPA (1993b) to conclude that 0.18 mg/kg/body weight represented an appropriate NOEL for avian wildlife.

When airborne PCBs are deposited onto the surface of water, they become enriched in the surface microlayer, and the concentrations of PCBs in the surface microlayer is 500 times higher than in deeper water. As a result, bioconcentration by fish was several orders of magnitude higher in this zone. Conversely, since the concentration of PCBs in sediments is several orders of magnitude higher than in water, the bioconcentration of PCBs in bottom feeding species is also expected to be high. According to a summary of experimentally determined BCFs (ratio of concentration in the organism over the concentration in water) of various Aroclors (1016, 1248, 1254, and 1260) in aquatic species (fish, shrimp, oyster), BCFs range from

26,000 to 660,000. The estimated BCFs for the same Aroclors in the fathead minnow is 43,000-200,000. There is evidence that PCBs will biomagnify within the food chain as indicated by the PCB levels in higher tropic levels of aquatic organisms and in several species of fish-consuming birds and seals.

Accumulation of PCBs in terrestrial vegetation can occur in the following ways: uptake from soil through the root and translocation to the aerial parts of plants; deposition of atmospheric particulates on aerial plant surfaces; and uptake of airborne vapors by aerial plant parts. The BCF for the first process is <0.02, indicating translocation from soil to aerial plant parts is not important for PCBs. The BCF in carrot peels was slightly higher than in other plant parts possibly due to adsorption from soil. However, the BCF for air to vegetation transfer of gaseous PCBs (concentration of PCBs in aerial plant parts [ng/g]/concentration of PCB vapor in air [ng/g, air density 1.19 g/L]) is reported to be 85,000. Therefore, the transfer of vapor-phase PCBs from air to aerial plant parts may be the main source of vegetation contamination. However, the tendency of PCBs to adsorb to airborne particulates will increase as the degree of chlorination increases. The fact that the PCBs have been detected in remote locations indicates these compounds will be transported long distances from their source of emission. PCBs in the atmosphere are physically removed by wet and dry deposition. Dry deposition occurs only for PCBs in the particulate phase. (ATSDR, 1993f).

Selenium

The volatile selenium compounds that partition into the atmosphere include the inorganic compounds selenium dioxide and hydrogen selenide, which is rapidly oxidized to elemental selenium and water, and the organic compounds dimethyl selenide and dimethyl diselenide which can persist in air. Selenium compounds released to the atmosphere can be removed from it by dry or wet deposition to soils or to surface water (ATSDR, 1994f).

The forms of selenium expected to be found in surface water and the water contained in soils are the salts of selenic and selenious acids. The soluble salts of selenic acid are expected to occur in alkaline waters. Sodium selenate is one of the most mobile selenium compounds in the environment owing to its high solubility and inability to adsorb onto soil particles. Selenious acid (H_2SeO_3) is a weak acid, and the diselenite ion predominates in waters between pH 3.5 and 9. Most selenites are less soluble in water than the corresponding selenates. In soils, pH and Eh are determining factors in the transport and partitioning of selenium. Elemental selenium is essentially insoluble and may represent a major inert "sink" for selenium introduced into the environment under anaerobic conditions. Heavy metal selenides and selenium sulfides, which are also insoluble, predominate in acidic (low pH) soils and soils with high amounts of organic matter. Selenium in this form is immobile and will remain in the soil. The selenides of other metals such as copper and cadmium are of low solubility. Sodium and potassium selenites dominate in neutral, well-drained mineral

soils, where some soluble metal selenites may be found as well. In alkaline (pH > 7.5), well-oxidized soil environments, selenates are the major selenium species. Due to their high solubility and low tendency to adsorb onto soil particles, the selenates are very mobile and are readily taken up by biological systems or leached through the soil. Selenite forms stable ferric oxide-selenite adsorption complexes in acid or neutral soils (ATSDR, 1994f).

When environments favor the soluble forms of selenium (alkaline and oxidizing conditions), these forms can be accumulated by plants. In addition, although both selenite ($Se^{4=}$) and selenate (Se^{6+}) are soluble forms of selenium, selenate was found to be the preferred form of selenium uptake by plants. Preferential uptake of selenate may be caused by its tendency to be less strongly adsorbed to soil particles and organic matter than selenite. Selenium uptake by plants is influenced by many factors including soil type, pH, colloidal content, concentration of organic material, oxidation-reduction potentials in the root-soil environment, and total level of selenium in the soil. Soluble selenates (principally sodium selenate) appear to be responsible for most of the naturally occurring instances of plants accumulating high levels of selenium, although much of the total selenium in soil may be present in other forms (ATSDR, 1994f).

Styrene

In the atmosphere, styrene exists as a vapor. Styrene is an oily liquid that is slightly volatile. Physical processes such as precipitation and dry deposition are not significant mechanisms for removing styrene from the atmosphere due to its high photochemical reactivity. Styrene is only sparingly soluble in water, but its exact solubility is uncertain. Styrene in water may also partition to soils and sediments. The extent of adsorption of sparingly water-soluble compounds is often correlated with the organic carbon content of the adsorbent. Assuming that the solubility of styrene is 300 mg/L, a calculated KoC value for styrene is 260 which suggests that styrene is "moderately mobile" in soil. In surface soils, where the amount of organic carbon will be highest, the movement of styrene will be retarded by adsorption. In deeper subsurface environments where the amount of organic carbon may be low, adsorption may not be as significant. The K_{ow} of styrene has been measured to be 1,445 and 891, suggesting that styrene will partition to fat tissues. Even though styrene does tend to partition into fat, it does not tend to bioaccumulate to high levels, mainly because of its metabolism and excretion (ATSDR, 1992e).

The BCF for styrene is about 25. An experimentally-measured BCF for goldfish was 13.5. These low BCFs suggest that bioconcentration is not a significant fate of styrene released into the environment. No other measured BCFs were located to corroborate these reported values (ATSDR, 1992e).

Tetrachloroethene, Trichloroethene, and 1,2-Dichloroethene

Tetrachloroethylene (PCE) is a stable, colorless liquid likely to enter the environment through accidental releases to air, soil, or water. If released to soil, it is subject to volatilization and leaching into the water table. The half-life of PCE in soil is estimated at 180 to 360 days (Howard, 1991). Biodegradation may be an important process in anaerobic soils, based on laboratory tests with methanogenic columns (EPA, 1994b). When released into water, PCE evaporates with an estimated half-life ranging from <1 day to several weeks. PCE does not significantly biodegrade, bioconcentrate in aquatic organisms, or adsorb to sediment (EPA, 1994b). Acute toxicity tests performed on PCE resulted in a 48-h LC50 of 18 mg/L for *Daphnia magna*, a 96-h LC50 of 5 mg/L for *Salmo gairdneri* (rainbow trout), and a 96-h LC50 of 18.4 mg/L for *Pimephales promelas* (fathead minnow) (EPA, 1994b).

Trichlorethylene is a heavy stable liquid which is slightly soluble in water. It is used in metal degreasing, solvent extraction and dry cleaning. Its half life ranges from 180 to 360 days in both soil and surface water (Howard, 1991). Acute toxicity tests performed on trichlorethylene resulted in a 96-h LC50 of 66.8 mg/L for *Pimephales promelas* (fathead minnow)(Verschueren 1983). Toxicity data for TCE are limited. Prolonged inhalation exposure of animals effected the liver and kidneys. The main target organs are the CNS, heart, liver, and kidney. Exposure to TCE has been shown to cause increased incidence of liver tumors (gavage) and lymphomas (inhalation) in mice, and increased renal tumors in rats (gavage; EPA, 1988c).

1,2-Dichloroethylene may be released to the environment in emissions and wastewater or formed as breakdown products from common industrial solvents under anaerobic conditions. It is a clear, colorless, flammable liquid which consists of a mixture of the cis- and trans-isomers. 1,2-Dichloroethylene has shown slight acute and moderate chronic toxicity to aquatic species, but data is insufficient predict the short- or long-term effects of this contaminant on terrestrial receptors. It is slightly persistent in water, with a half-life of 2 to 20 days, and is lost mainly through volatilization. Biodegradation, adsorption to sediment, and bioconcentration in aquatic organisms is not significant (EPA, 1994b).

Xylenes

In a global sense, most (99.68%) of the xylenes released into the environment will ultimately partition into the atmosphere. When spilled on land, xylenes will volatilize or leach into the ground. In soils and sediments, xylene tends to be adsorbed to organic matter. A general trend for the relative retention of xylene in soil with increasing soil organic matter has been observed by a number of investigators. In subsurface soils with low organic carbon content, xylenes are more likely to infiltrate into groundwater from soil. (ATSDR, 1990e)

Zinc

Zinc occurs in the environment primarily in the +2 oxidation state. It dissolves in acids to form hydrated Zn^{+2} cations and in strong bases to form zincate anions. In most unpolluted waters, zinc exists primarily as the hydrated form of the divalent cation. In polluted waters, the metal often forms complexes with a variety of organic and inorganic ligands. Zinc can occur in both suspended and dissolved forms in surface water. Dissolved zinc may occur as the free (hydrated) zinc ion or as dissolved complexes and compounds with varying degrees of stability. Suspended (undissolved) zinc may be dissolved following minor changes in water chemistry or may be sorbed to suspended matter. In the aquatic environment, zinc partitions to sediments or suspended solids in surface waters through sorption onto hydrous iron and manganese oxides, clay minerals, and organic material. In addition, the zinc content in sediment closely correlated with the depth, organic content, and clay content of the sediments. The stability of the zinc complex depends on the pH of the water and the nature of the complex. Zinc tends to sorb more readily at a high pH (pH >7) than at a low pH. Desorption of zinc from sediments occurs as salinity increases, apparently because of displacement of the adsorbed zinc ions by alkali and alkaline earth cations, which are abundant in brackish and saline waters. The mobility of zinc in soil depends on the solubility of the speciated forms of the element and on soil properties such as cation exchange capacity, pH, redox potential, and chemical species present in soil (ATSDR, 1994g).

Zinc toxicity endpoints in mammals include decreased sperm motility and reduced fertilizing capacity which could decrease the fecundity of wild populations. In birds, pancreatic lessions, decreased body weight and gizzard erosion have identified as endpoints of zinc toxicity. Toxic endpoints of zinc exposure have not been identified for other groups of animals (i.e. fish, daphnids, etc.).

Zinc is an essential nutrient and occurs in the tissues of organisms, even at normal ambient water and soil concentrations. Zinc can accumulate in freshwater animals at 51-1,130 times the concentration present in the water. Microcosm studies indicate, in general, that zinc does not biomagnify through food chains. Furthermore, although zinc actively bioaccumulates in aquatic systems, biota appears to represent a relatively minor sink compared to sediments. Steady-state zinc bioconcentration factors (BCFs) for 12 aquatic species range from ~4 to 24,000. Crustaceans and fish can accumulate zinc from both water and food. A BCF of 1,000 was reported for both aquatic plants and fish, and a value of 10,000 was reported for aquatic invertebrates. The high enrichment in oysters may be due to their ingestion of particulate matter containing higher concentrations of zinc than does ambient water. With respect to bioconcentration from soil by terrestrial plants, invertebrates, and mammals, BCFs of 0.4, 8, and 0.6, respectively, have been reported. The concentration of zinc in plants depends on the plant species, soil pH, and the composition of the soil. Plant species do not concentrate zinc above the levels present in soil. Wind-blown dust

transports zinc bound to soil particulates into the atmosphere. The particulates may also contain other materials. Zinc-bearing particles in the atmosphere are transported to soil and water by wet deposition (rain and snow) and dry deposition (gravitational settling and deposition on water and soil surfaces) (ATSDR, 1994e).

APPENDIX I

ECOLOGICAL RISK ASSESSMENT CALCULATIONS

I.1 SITE 1 - CBU DRUM STORAGE AREA
I.2 SITE 2 - AREA A LANDFILL
I.3 SITE 2 - AREA A WETLAND
I.4 SITE 20 - AREA A WEAPONS CENTER
I.5 SITE 3 - AREA A DOWNSTREAM WATERCOURSES/OBDA
I.6 SITE 4 - RUBBLE FILL AT BUNKER A86
I.7 SITE 6 - DRMO
I.8 SITE 7 - TORPEDO SHOPS
I.9 SITE 8 - GOSS COVE LANDFILL
I.10 SITE 14 - OBDANE
I.11 THAMES RIVER

APPENDIX I.1

SITE 1 - CBU DRUM STORAGE AREA

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR THE SHREW
BASED ON ACUTE DOSES AND MAXIMUM AND AVERAGE EXPOSURE CONCENTRATIONS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Chemical	Maximum Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Maximum Acute HI
Vanadium	4.0E+02	8.4E-02	3.3E+01	2.9E+00	1.2E+01
Antimony	1.2E+02	1.0E-02	1.2E+00	5.5E+00	2.2E-01
Chromium	3.3E+01	1.8E-01	6.1E+00	1.8E+02	3.4E-02
Arsenic	1.7E+01	5.4E-02	8.6E-01	1.3E+01	6.8E-02

Chemical	Highest Average Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Highest Average Acute HI
Vanadium	2.2E+02	8.4E-02	1.9E+01	2.9E+00	6.5E+00
Antimony	1.1E+02	1.0E-02	1.1E+00	5.5E+00	2.0E-02
Chromium	2.4E+01	1.8E-01	4.4E+00	1.8E+02	2.4E-02
Lead	6.7E+00	1.6E+00	1.1E+01	5.0E-01	2.1E-01

000001

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR THE RED-TAILED HAWK
BASED ON ACUTE DOSES AND MAXIMUM AND AVERAGE EXPOSURE CONCENTRATIONS
SITE 1- CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Chemical	Maximum Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Maximum Acute HI
4,4'-DDD	4.2E+2	1.1E-04	4.8E-02	3.0E+01	1.6E-03
4,4'-DDE	6.3E+0	1.1E-04	7.1E-04	3.4E+00	2.1E-04
4,4'-DDT	2.8E+0	1.1E-04	3.2E-04	2.1E+01	1.5E-05
Antimony	2.8E+0	5.0E-03	1.4E-02	1.3E+01	1.1E-03

Chemical	Highest Average Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Highest Average Acute HI
4,4'-DDD	2.1E+2	1.1E-04	2.4E-02	3.0E+01	7.9E-04
4,4'-DDE	4.2E+0	1.1E-04	4.7E-04	3.4E+00	1.4E-04
Antimony	2.5E+0	5.0E-03	1.2E-02	1.3E+01	9.8E-04
4,4'-DDT	2.4E+0	1.1E-04	2.7E-04	2.1E+01	1.3E-05

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON MAXIMUM CONCENTRATIONS IN SOILS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Compound	Maximum Exposure Point Concentration (mg/kg)	Background Screening Value (mg/kg)	Exceeds Background Screening Value	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Inorganic Chemicals						
Aluminum	1.01E+4	1.76E+4		5.00E+1	X	2.0E+2
Antimony	6.80E+0	2.05E+0	X	5.00E+0	X	1.4E+0
Arsenic	4.80E+0	3.60E+0	X	1.00E+1		
Barium	7.57E+1	3.90E+1	X	5.00E+2		
Beryllium	1.00E+0	7.20E-1	X	1.00E+1		
Cadmium	1.20E+0	2.40E-1	X	3.00E+0		
Calcium	4.24E+3	3.14E+2	X			
Chromium	3.41E+1	1.93E+1	X	1.00E+0	X	3.4E+1
Cobalt	6.20E+0	7.00E+0		2.00E+1		
Copper	1.15E+2	1.79E+1	X	1.00E+2	X	1.2E+0
Iron	1.91E+4	1.68E+4	X			
Lead	1.04E+2	1.75E+1	X	5.00E+1	X	2.1E+0
Magnesium	2.88E+3	2.46E+3	X			
Manganese	2.15E+2	1.72E+2	X	5.00E+2		
Mercury	4.70E-1	5.50E-2	X	3.00E-1	X	1.6E+0
Nickel	3.38E+1	5.00E+0	X	3.00E+1	X	1.1E+0
Potassium	1.75E+3	6.69E+2	X			
Sodium	3.42E+2	1.66E+1	X			
Vanadium	1.86E+2	3.33E+1	X	2.00E+0	X	9.3E+1
Zinc	4.60E+2	2.56E+1	X	5.00E+1	X	9.2E+0

000003

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON MAXIMUM CONCENTRATIONS IN SOILS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Compound	Maximum Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Organic Chemicals				
1,4-Dichlorobenzene	1.10E-1			
2-Butanone	2.00E-2			
2-Methylnaphthalene	2.10E+0			
4,4'-DDD	3.90E+0			
4,4'-DDE	5.80E-2			
4,4'-DDT	2.60E-2			
Acenaphthylene	3.50E-2			
Alpha-Chlordane	2.80E-2			
Anthracene	1.90E-1			
Aroclor-1254	4.20E-1	4.00E+1		
Benzo(a)anthracene	6.80E-1			
Benzo(a)pyrene	3.80E-1			
Benzo(b)fluoranthene	6.30E-1			
Benzo(g,h,i)perylene	2.20E-1			
Benzo(k)fluoranthene	6.10E-1			
Butyl benzyl phthalate	8.20E-1			
Carbazole	3.50E-2			
Chrysene	1.10E+0			
Di-N-butyl phthalate	9.70E-1	2.00E+2		
Dibenzo(a,h)anthracene	5.90E-2			
Dibenzofuran	2.40E-2			
Dieldrin	2.90E-2			
Endrin	4.10E-3			

000004

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON MAXIMUM CONCENTRATIONS IN SOILS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Compound	Maximum Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Ethylbenzene	2.30E-2			
Fluoranthene	1.30E+0			
Fluorene	2.60E-1			
Gamma-Chlordane	7.60E-3			
Indeno(1,2,3-Cd)pyrene	2.10E-1			
Methylene chloride	1.00E-3			
Naphthalene	9.30E-1			
Phenanthrene	4.30E-1			
Pyrene	1.40E+0			
Tetrachloroethene	2.00E-3			
Trichloroethene	2.00E-3			
Xylenes, total	3.00E-1	1.00E+2		

000005

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON AVERAGE CONCENTRATIONS IN SOILS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Compound	Average Exposure Point Concentration (mg/kg)	Background Screening Value (mg/kg)	Exceeds Background Screening Value	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Inorganic Chemicals						
Aluminum	8.61E+3	1.76E+4		5.00E+1	X	1.7E+2
Antimony	6.05E+0	2.05E+0	X	5.00E+0	X	1.2E+0
Arsenic	3.08E+0	3.60E+0		1.00E+1		
Barium	5.82E+1	3.90E+1	X	5.00E+2		
Beryllium	6.80E-1	7.20E-1		1.00E+1		
Cadmium	9.65E-1	2.40E-1	X	3.00E+0		
Calcium	3.85E+3	3.14E+2	X			
Chromium	2.44E+1	1.93E+1	X	1.00E+0	X	2.4E+1
Cobalt	5.45E+0	7.00E+0		2.00E+1		
Copper	7.32E+1	1.79E+1	X	1.00E+2		
Iron	1.56E+4	1.68E+4				
Lead	5.44E+1	1.75E+1	X	5.00E+1	X	1.1E+0
Magnesium	2.69E+3	2.46E+3	X			
Manganese	1.91E+2	1.72E+2	X	5.00E+2		
Mercury	3.40E-1	5.50E-2	X	3.00E-1	X	1.1E+0
Nickel	2.15E+1	5.00E+0	X	3.00E+1		
Potassium	1.71E+3	6.69E+2	X			
Sodium	3.06E+2	1.66E+1	X			
Vanadium	1.03E+2	3.33E+1	X	2.00E+0	X	5.1E+1
Zinc	2.50E+2	2.56E+1	X	5.00E+1	X	5.0E+0

000006

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON AVERAGE CONCENTRATIONS IN SOILS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Compound	Average Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Organic Chemicals				
1,4-Dichlorobenzene	1.10E-1			
2-Butanone	1.33E-2			
2-Methylnaphthalene	1.06E+0			
4,4'-DDD	1.96E+0			
4,4'-DDE	3.83E-2			
4,4'-DDT	2.23E-2			
Acenaphthylene	3.50E-2			
Alpha-Chlordane	1.88E-2			
Anthracene	1.38E-1			
Aroclor-1254	3.03E-1	4.00E+1		
Benzo(a)anthracene	4.55E-1			
Benzo(a)pyrene	3.15E-1			
Benzo(b)fluoranthene	5.35E-1			
Benzo(g,h,i)perylene	2.00E-1			
Benzo(k)fluoranthene	3.98E-1			
Butyl benzyl phthalate	5.03E-1			
Carbazole	3.50E-2			
Chrysene	6.95E-1			
Di-N-butyl phthalate	5.78E-1	2.00E+2		
Dibenzo(a,h)anthracene	5.90E-2			
Dibenzofuran	2.40E-2			
Dieldrin	2.38E-2			
Endrin	4.10E-3			

000007

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON AVERAGE CONCENTRATIONS IN SOILS
SITE 1 - CBU DRUM STORAGE AREA
NSB-NLON, GROTON, CONNECTICUT

Compound	Average Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Ethylbenzene	7.25E-3			
Fluoranthene	9.75E-1			
Fluorene	1.52E-1			
Gamma-Chlordane	7.60E-3			
Indeno(1,2,3-Cd)pyrene	2.05E-1			
Methylene chloride	1.00E-3			
Naphthalene	5.58E-1			
Phenanthrene	4.20E-1			
Pyrene	9.80E-1			
Tetrachloroethene	2.00E-3			
Trichloroethene	2.00E-3			
Xylenes, total	6.27E-2	1.00E+2		

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
CBU Drum Storage Area
Maximum Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
1,1,2,2-Tetrachloroethane	2.39E+00	2.23E+02	1.31E-02	0.00E+00	0.00E+00	7.83E+00	0.00E+00	2.31E+00	0.00E+00	6.15E-06	0.00E+00
1,1,2-Trichloroethane	2.17E+00	1.36E+02	1.31E-02	0.00E+00	0.00E+00	7.27E+00	0.00E+00	2.31E+00	0.00E+00	3.72E-06	0.00E+00
1,1-Dichloroethene	1.48E+00	2.85E+01	1.31E-02	0.00E+00	0.00E+00	8.62E+00	0.00E+00	2.31E+00	0.00E+00	7.59E-07	0.00E+00
1,2-Dichloroethene (total)	1.48E+00	2.85E+01	1.31E-02	0.00E+00	0.00E+00	8.62E+00	0.00E+00	2.31E+00	0.00E+00	7.59E-07	0.00E+00
1,4-Dichlorobenzene	3.39E+00	2.15E+03	1.31E-02	1.10E-01	3.90E-03	3.37E+00	1.16E-03	2.31E+00	5.09E-02	6.17E-05	3.52E-06
2-Butanone	2.60E-01	1.80E+00	1.31E-02	2.00E-02	8.47E-01	1.00E+01	8.47E-02	2.31E+00	9.25E-03	4.57E-08	4.75E-10
2-Methylnaphthalene	3.86E+00	6.23E+03	1.31E-02	2.10E+00	2.57E-02	2.34E+00	1.10E-02	2.31E+00	9.72E-01	1.82E-04	1.98E-04
3,3'-Dichlorobenzidine	3.51E+00	2.82E+03	1.31E-02	0.00E+00	0.00E+00	5.34E+00	0.00E+00	2.31E+00	0.00E+00	8.11E-05	0.00E+00
4,4'-DDD	5.99E+00	7.73E+05	1.31E-02	3.90E+00	3.85E-04	1.00E+01	3.85E-05	2.31E+00	1.80E+00	2.00E-01	4.05E-01
4,4'-DDE	5.69E+00	3.92E+05	1.31E-02	5.80E-02	1.13E-05	1.00E+01	1.13E-06	2.31E+00	2.68E-02	2.00E-01	6.02E-03
4,4'-DDT	6.19E+00	1.22E+06	1.31E-02	2.60E-02	1.63E-06	1.00E+01	1.63E-07	2.31E+00	1.20E-02	2.00E-01	2.70E-03
4-Methyl-2-pentanone	1.09E+00	1.18E+01	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	3.09E-07	0.00E+00
Acenaphthene	3.92E+00	7.14E+03	1.31E-02	0.00E+00	0.00E+00	2.43E+00	0.00E+00	2.31E+00	0.00E+00	2.09E-04	0.00E+00
Acenaphthylene	4.07E+00	1.00E+04	1.31E-02	3.50E-02	2.67E-04	2.16E+00	1.24E-04	2.31E+00	1.62E-02	2.95E-04	5.36E-06
Acetone	-2.40E-01	5.81E-01	1.31E-02	0.00E+00	0.00E+00	6.09E+00	0.00E+00	2.31E+00	0.00E+00	1.45E-08	0.00E+00
Aldrin	5.11E+00	1.06E+05	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	3.24E-03	0.00E+00
Alpha-Chlordane	5.99E+00	7.73E+05	1.31E-02	2.80E-02	2.76E-06	1.00E+01	2.76E-07	2.31E+00	1.30E-02	2.45E-02	3.57E-04
Aluminum	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	1.50E-03	0.00E+00
Anthracene	4.45E+00	2.37E+04	1.31E-02	1.90E-01	6.12E-04	1.93E+00	3.17E-04	2.31E+00	8.79E-02	7.08E-04	6.98E-05
Antimony	0.00E+00	1.00E+00	1.31E-02	6.80E+00	5.19E+02	NA	NA	1.00E+00	1.36E+00	1.00E-03	2.30E-03
Aroclor-1248	6.20E+00	1.24E+06	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	3.97E-02	0.00E+00
Aroclor-1254	6.50E+00	2.45E+06	1.31E-02	4.20E-01	1.31E-05	1.00E+01	1.31E-06	2.31E+00	1.94E-01	7.94E-02	1.73E-02
Aroclor-1260	6.80E+00	4.84E+06	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	1.59E-01	0.00E+00
Arsenic	0.00E+00	1.00E+00	1.31E-02	4.80E+00	3.66E+02	6.00E+01	8.00E-02	1.00E+00	9.60E-01	2.00E-03	3.24E-03
Barium	0.00E+00	1.00E+00	1.31E-02	7.57E+01	5.77E+03	*	*	1.00E+00	1.51E+01	1.50E-04	3.84E-03
Benzene	1.13E+00	1.29E+01	1.31E-02	0.00E+00	0.00E+00	8.90E+00	0.00E+00	2.31E+00	0.00E+00	3.39E-07	0.00E+00
Benzo(a)anthracene	5.61E+00	3.27E+05	1.31E-02	6.80E-01	1.59E-04	1.00E+01	1.59E-05	2.31E+00	3.15E-01	1.02E-02	3.61E-03
Benzo(a)pyrene	5.98E+00	7.56E+05	1.31E-02	3.80E-01	3.84E-05	1.00E+01	3.84E-06	2.31E+00	1.76E-01	2.40E-02	4.73E-03
Benzo(b)fluoranthene	6.57E+00	2.87E+06	1.31E-02	6.30E-01	1.67E-05	1.00E+01	1.67E-06	2.31E+00	2.91E-01	9.33E-02	3.05E-02
Benzo(g,h,i)perylene	7.23E+00	1.28E+07	1.31E-02	2.20E-01	1.31E-06	1.00E+01	1.31E-07	2.31E+00	1.02E-01	4.27E-01	4.87E-02
Benzo(k)fluoranthene	6.84E+00	5.30E+06	1.31E-02	6.10E-01	8.79E-06	1.00E+01	8.79E-07	2.31E+00	2.82E-01	1.74E-01	5.50E-02
Benzoic acid	1.73E+00	5.02E+01	1.31E-02	0.00E+00	0.00E+00	9.10E+00	0.00E+00	2.31E+00	0.00E+00	1.35E-06	0.00E+00
Beryllium	0.00E+00	1.00E+00	1.31E-02	1.00E+00	7.63E+01	NA	NA	1.00E+00	2.00E-01	1.00E-03	3.38E-04
Bis(2-ethylhexyl)phthalate	5.30E+00	1.62E+05	1.31E-02	0.00E+00	0.00E+00	NA	NA	2.31E+00	0.00E+00	5.01E-03	0.00E+00
Boron	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	8.00E-04	0.00E+00
Bromodichloromethane	1.88E+00	7.06E+01	1.31E-02	0.00E+00	0.00E+00	4.95E-01	0.00E+00	2.31E+00	0.00E+00	1.91E-06	0.00E+00
Bromomethane	1.10E+00	1.21E+01	1.31E-02	0.00E+00	0.00E+00	2.71E+00	0.00E+00	2.31E+00	0.00E+00	3.16E-07	0.00E+00
Butyl benzyl phthalate	4.78E+00	5.00E+04	1.31E-02	8.20E-01	1.25E-03	NA	NA	2.31E+00	3.79E-01	1.51E-03	6.44E-04
Cadmium	0.00E+00	1.00E+00	1.31E-02	1.20E+00	9.15E+01	5.00E+01	2.40E-02	2.00E+00	4.80E-01	5.50E-04	3.14E-04
Carbazole	3.29E+00	1.72E+03	1.31E-02	3.50E-02	1.56E-03	4.12E+00	3.78E-04	2.31E+00	1.62E-02	4.90E-05	8.90E-07

Soil Organic Content (mg/kg): 13,100
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 1.31
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
CBU Drum Storage Area
Maximum Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Carbon disulfide	2.16E+00	1.33E+02	1.31E-02	0.00E+00	0.00E+00	4.18E+00	0.00E+00	2.31E+00	0.00E+00	3.63E-06	0.00E+00
Chlorobenzene	2.84E+00	6.19E+02	1.31E-02	0.00E+00	0.00E+00	3.81E+00	0.00E+00	2.31E+00	0.00E+00	1.74E-05	0.00E+00
Chloroform	1.97E+00	8.64E+01	1.31E-02	0.00E+00	0.00E+00	7.50E+00	0.00E+00	2.31E+00	0.00E+00	2.34E-06	0.00E+00
Chloromethane	9.10E-01	7.85E+00	1.31E-02	0.00E+00	0.00E+00	6.78E+00	0.00E+00	2.31E+00	0.00E+00	2.04E-07	0.00E+00
Chromium	0.00E+00	1.00E+00	1.31E-02	3.41E+01	2.60E+03	2.50E+01	1.36E+00	1.00E+00	6.82E+00	3.50E-03	4.03E-02
Chrysene	5.61E+00	3.27E+05	1.31E-02	1.10E+00	2.57E-04	*	*	2.31E+00	5.09E-01	1.02E-02	5.84E-03
Cis-1,3-dichloropropene	1.41E+00	2.43E+01	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	6.46E-07	0.00E+00
Cobalt	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.00E-02	0.00E+00
Copper	0.00E+00	1.00E+00	1.31E-02	1.15E+02	8.77E+03	3.00E+01	3.83E+00	9.30E-01	2.14E+01	1.00E-02	3.78E-01
Cyanide	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	1.00E-01	0.00E+00
Di-n-butylphthalate	5.20E+00	1.29E+05	1.31E-02	9.70E-01	5.72E-04	NA	NA	2.31E+00	4.49E-01	3.98E-03	2.01E-03
Dibenzo(a,h)anthracene	5.97E+00	7.39E+05	1.31E-02	5.90E-02	6.09E-06	1.00E+01	6.09E-07	2.31E+00	2.73E-02	2.34E-02	7.18E-04
Dibenzofuran	4.12E+00	1.12E+04	1.31E-02	2.40E-02	1.63E-04	2.30E+00	7.09E-05	2.31E+00	1.11E-02	3.31E-04	4.13E-06
Dieldrin	4.09E+00	1.05E+04	1.31E-02	2.90E-02	2.11E-04	5.32E+00	3.97E-05	2.31E+00	1.34E-02	3.09E-04	4.65E-06
Diethyl phthalate	2.96E+00	8.13E+02	1.31E-02	0.00E+00	0.00E+00	NA	NA	2.31E+00	0.00E+00	2.29E-05	0.00E+00
Endosulfan ii	3.62E+00	3.62E+03	1.31E-02	0.00E+00	0.00E+00	7.93E+00	0.00E+00	2.31E+00	0.00E+00	1.05E-04	0.00E+00
Endosulfan sulfate	3.65E+00	3.87E+03	1.31E-02	0.00E+00	0.00E+00	7.93E+00	0.00E+00	2.31E+00	0.00E+00	1.12E-04	0.00E+00
Endrin	5.60E+00	3.20E+05	1.31E-02	4.10E-03	9.78E-07	1.00E+01	9.78E-08	2.31E+00	1.90E-03	1.00E-02	2.13E-05
Endrin aldehyde	5.60E+00	3.20E+05	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	1.00E-02	0.00E+00
Endrin ketone	5.60E+00	3.20E+05	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	1.00E-02	0.00E+00
Ethylbenzene	3.15E+00	1.25E+03	1.31E-02	2.30E-02	1.41E-03	2.89E+00	4.86E-04	2.31E+00	1.06E-02	3.55E-05	4.24E-07
Fluoranthene	5.33E+00	1.74E+05	1.31E-02	1.30E+00	5.71E-04	1.00E+01	5.71E-05	2.31E+00	6.01E-01	5.37E-03	3.62E-03
Fluorene	4.18E+00	1.29E+04	1.31E-02	2.60E-01	1.54E-03	2.18E+00	7.08E-04	2.31E+00	1.20E-01	3.80E-04	5.13E-05
Gamma-Chlordane	2.78E+00	5.41E+02	1.31E-02	7.60E-03	1.07E-03	1.00E+01	1.07E-04	2.31E+00	3.52E-03	1.51E-05	5.97E-08
Heptachlor	4.40E+00	2.12E+04	1.31E-02	0.00E+00	0.00E+00	4.19E+00	0.00E+00	2.31E+00	0.00E+00	6.31E-04	0.00E+00
Heptachlor epoxide	3.65E+00	3.87E+03	1.31E-02	0.00E+00	0.00E+00	4.19E+00	0.00E+00	2.31E+00	0.00E+00	1.12E-04	0.00E+00
Indeno(1,2,3-Cd)pyrene	7.66E+00	3.39E+07	1.31E-02	2.10E-01	4.73E-07	1.00E+01	4.73E-08	2.31E+00	9.72E-02	1.15E+00	1.25E-01
Iron	0.00E+00	1.00E+00	1.31E-02	1.91E+04	1.46E+06	*	*	1.00E+00	3.82E+03	2.00E-02	1.29E+02
Lead	0.00E+00	1.00E+00	1.31E-02	1.04E+02	7.93E+03	5.94E+01	1.75E+00	1.24E+00	2.58E+01	4.00E-04	1.54E-02
Manganese	0.00E+00	1.00E+00	1.31E-02	2.15E+02	1.64E+04	*	*	1.00E+00	4.30E+01	2.70E-02	1.96E+00
Mercury	0.00E+00	1.00E+00	1.31E-02	4.70E-01	3.59E+01	2.16E+00	2.18E-01	1.00E+00	9.40E-02	2.51E-08	3.99E-09
Methoxychlor	4.68E+00	3.99E+04	1.31E-02	0.00E+00	0.00E+00	3.18E+00	0.00E+00	2.31E+00	0.00E+00	1.20E-03	0.00E+00
Methylene chloride	1.25E+00	1.69E+01	1.31E-02	1.00E-03	4.51E-03	6.78E+00	6.64E-04	2.31E+00	4.63E-04	4.47E-07	2.32E-10
Naphthalene	3.37E+00	2.06E+03	1.31E-02	9.30E-01	3.45E-02	2.98E+00	1.16E-02	2.31E+00	4.30E-01	5.89E-05	2.84E-05
Nickel	0.00E+00	1.00E+00	1.31E-02	3.38E+01	2.58E+03	4.00E+02	8.45E-02	1.00E+00	6.76E+00	6.00E-03	6.85E-02
OCDD	6.10E+00	9.92E+05	1.31E-02	0.00E+00	0.00E+00	*	*	2.31E+00	0.00E+00	3.16E-02	0.00E+00
Phenanthrene	4.46E+00	2.42E+04	1.31E-02	4.30E-01	1.35E-03	1.92E+00	7.07E-04	2.31E+00	1.99E-01	7.24E-04	1.62E-04
Pyrene	5.18E+00	1.24E+05	1.31E-02	1.40E+00	8.64E-04	1.00E+01	8.64E-05	2.31E+00	6.48E-01	3.80E-03	2.76E-03
Selenium	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	7.00E+01	0.00E+00	1.00E+00	0.00E+00	1.50E-02	0.00E+00
Silver	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	3.00E-03	0.00E+00

Soil Organic Content (mg/kg): 13,100
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 1.31
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
CBU Drum Storage Area
Maximum Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Styrene	3.16E+00	1.27E+03	1.31E-02	0.00E+00	0.00E+00	2.82E+00	0.00E+00	2.31E+00	0.00E+00	3.62E-05	0.00E+00
Tetrachloroethene	2.53E+00	3.07E+02	1.31E-02	2.00E-03	4.97E-04	7.00E+00	7.10E-05	2.31E+00	9.25E-04	8.51E-06	8.84E-09
Thallium	0.00E+00	1.00E+00	1.31E-02	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	4.00E-02	0.00E+00
Toluene	2.69E+00	4.41E+02	1.31E-02	0.00E+00	0.00E+00	3.48E+00	0.00E+00	2.31E+00	0.00E+00	1.23E-05	0.00E+00
Trans-1,3-dichloropropene	1.41E+00	2.43E+01	1.31E-02	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	6.46E-07	0.00E+00
Trichloroethene	2.53E+00	3.07E+02	1.31E-02	2.00E-03	4.97E-04	5.55E+00	8.96E-05	2.31E+00	9.25E-04	8.51E-06	8.84E-09
Vanadium	0.00E+00	1.00E+00	1.31E-02	1.86E+02	1.42E+04	*	*	1.00E+00	3.72E+01	2.50E-03	1.57E-01
Vinyl acetate	3.00E-01	1.97E+00	1.31E-02	0.00E+00	0.00E+00	NA	NA	2.31E+00	0.00E+00	5.01E-08	0.00E+00
Xylenes, total	7.33E+00	1.61E+07	1.31E-02	3.00E-01	1.43E-06	NA	NA	2.31E+00	1.39E-01	5.37E-01	8.37E-02
Zinc	0.00E+00	1.00E+00	1.31E-02	4.60E+02	3.51E+04	5.00E+03	9.20E-02	2.30E+00	2.12E+02	1.00E-01	2.38E+01

Soil Organic Content (mg/kg): 13,100
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 1.31
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
CBU Drum Storage Area
Average Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
1,1,2,2-Tetrachloroethane	2.39E+00	2.23E+02	0.01	0.00E+00	0.00E+00	7.83E+00	0.00E+00	2.31E+00	0.00E+00	6.15E-06	0.00E+00
1,1,2-Trichloroethane	2.17E+00	1.36E+02	0.01	0.00E+00	0.00E+00	7.27E+00	0.00E+00	2.31E+00	0.00E+00	3.72E-06	0.00E+00
1,1-Dichloroethene	1.48E+00	2.85E+01	0.01	0.00E+00	0.00E+00	8.62E+00	0.00E+00	2.31E+00	0.00E+00	7.59E-07	0.00E+00
1,2-Dichloroethene (total)	1.48E+00	2.85E+01	0.01	0.00E+00	0.00E+00	8.62E+00	0.00E+00	2.31E+00	0.00E+00	7.59E-07	0.00E+00
1,4-Dichlorobenzene	3.39E+00	2.15E+03	0.01	1.10E-01	3.90E-03	3.37E+00	1.16E-03	2.31E+00	5.09E-02	6.17E-05	3.52E-06
2-Butanone	2.60E-01	1.80E+00	0.01	1.33E-02	5.61E-01	1.00E+01	5.61E-02	2.31E+00	6.13E-03	4.57E-08	3.14E-10
2-Methylnaphthalene	3.86E+00	6.23E+03	0.01	1.06E+00	1.30E-02	2.34E+00	5.56E-03	2.31E+00	4.92E-01	1.82E-04	1.00E-04
3,3'-Dichlorobenzidine	3.51E+00	2.82E+03	0.01	0.00E+00	0.00E+00	5.34E+00	0.00E+00	2.31E+00	0.00E+00	8.11E-05	0.00E+00
4,4'-DDD	5.99E+00	7.73E+05	0.01	1.96E+00	1.93E-04	1.00E+01	1.93E-05	2.31E+00	9.06E-01	2.00E-01	2.03E-01
4,4'-DDE	5.69E+00	3.92E+05	0.01	3.83E-02	7.44E-06	1.00E+01	7.44E-07	2.31E+00	1.77E-02	2.00E-01	3.97E-03
4,4'-DDT	6.19E+00	1.22E+06	0.01	2.23E-02	1.40E-06	1.00E+01	1.40E-07	2.31E+00	1.03E-02	2.00E-01	2.31E-03
4-Methyl-2-pentanone	1.09E+00	1.18E+01	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	3.09E-07	0.00E+00
Acenaphthene	3.92E+00	7.14E+03	0.01	0.00E+00	0.00E+00	2.43E+00	0.00E+00	2.31E+00	0.00E+00	2.09E-04	0.00E+00
Acenaphthylene	4.07E+00	1.00E+04	0.01	3.50E-02	2.67E-04	2.16E+00	1.24E-04	2.31E+00	1.62E-02	2.95E-04	5.36E-06
Acetone	-2.40E-01	5.81E-01	0.01	0.00E+00	0.00E+00	6.09E+00	0.00E+00	2.31E+00	0.00E+00	1.45E-08	0.00E+00
Aldrin	5.11E+00	1.06E+05	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	3.24E-03	0.00E+00
Alpha-Chlordane	5.99E+00	7.73E+05	0.01	1.88E-02	1.85E-06	1.00E+01	1.85E-07	2.31E+00	8.67E-03	2.45E-02	2.39E-04
Aluminum	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	1.50E-03	0.00E+00
Anthracene	4.45E+00	2.37E+04	0.01	1.38E-01	4.45E-04	1.93E+00	2.30E-04	2.31E+00	6.38E-02	7.08E-04	5.07E-05
Antimony	0.00E+00	1.00E+00	0.01	6.05E+00	4.62E+02	NA	NA	1.00E+00	1.21E+00	1.00E-03	2.04E-03
Aroclor-1248	6.20E+00	1.24E+06	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	3.97E-02	0.00E+00
Aroclor-1254	6.50E+00	2.45E+06	0.01	3.03E-01	9.42E-06	1.00E+01	9.42E-07	2.31E+00	1.40E-01	7.94E-02	1.25E-02
Aroclor-1260	6.80E+00	4.84E+06	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	1.59E-01	0.00E+00
Arsenic	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	6.00E+01	0.00E+00	1.00E+00	0.00E+00	2.00E-03	0.00E+00
Barium	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	1.50E-04	0.00E+00
Benzene	1.13E+00	1.29E+01	0.01	0.00E+00	0.00E+00	8.90E+00	0.00E+00	2.31E+00	0.00E+00	3.39E-07	0.00E+00
Benzo(a)anthracene	5.61E+00	3.27E+05	0.01	4.55E-01	1.06E-04	1.00E+01	1.06E-05	2.31E+00	2.11E-01	1.02E-02	2.42E-03
Benzo(a)pyrene	5.98E+00	7.56E+05	0.01	3.15E-01	3.18E-05	1.00E+01	3.18E-06	2.31E+00	1.46E-01	2.40E-02	3.92E-03
Benzo(b)fluoranthene	6.57E+00	2.87E+06	0.01	5.35E-01	1.42E-05	1.00E+01	1.42E-06	2.31E+00	2.48E-01	9.33E-02	2.59E-02
Benzo(g,h,i)perylene	7.23E+00	1.28E+07	0.01	2.00E-01	1.19E-06	1.00E+01	1.19E-07	2.31E+00	9.25E-02	4.27E-01	4.43E-02
Benzo(k)fluoranthene	6.84E+00	5.30E+06	0.01	3.98E-01	5.73E-06	1.00E+01	5.73E-07	2.31E+00	1.84E-01	1.74E-01	3.59E-02
Benzoic acid	1.73E+00	5.02E+01	0.01	0.00E+00	0.00E+00	9.10E+00	0.00E+00	2.31E+00	0.00E+00	1.35E-06	0.00E+00
Beryllium	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	1.00E-03	0.00E+00
Bis(2-ethylhexyl)phthalate	5.30E+00	1.62E+05	0.01	0.00E+00	0.00E+00	NA	NA	2.31E+00	0.00E+00	5.01E-03	0.00E+00
Boron	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	8.00E-04	0.00E+00
Bromodichloromethane	1.88E+00	7.06E+01	0.01	0.00E+00	0.00E+00	4.95E-01	0.00E+00	2.31E+00	0.00E+00	1.91E-06	0.00E+00
Bromomethane	1.10E+00	1.21E+01	0.01	0.00E+00	0.00E+00	2.71E+00	0.00E+00	2.31E+00	0.00E+00	3.16E-07	0.00E+00
Butyl benzyl phthalate	4.78E+00	5.00E+04	0.01	5.03E-01	7.67E-04	NA	NA	2.31E+00	2.32E-01	1.51E-03	3.95E-04
Cadmium	0.00E+00	1.00E+00	0.01	9.65E-01	7.36E+01	5.00E+01	1.93E-02	2.00E+00	3.86E-01	5.50E-04	2.53E-04
Carbazole	3.29E+00	1.72E+03	0.01	3.50E-02	1.56E-03	4.12E+00	3.78E-04	2.31E+00	1.62E-02	4.90E-05	8.90E-07

Soil Organic Content (mg/kg): 10,000
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not available

foc(%): 1.0
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
CBU Drum Storage Area
Average Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Carbon disulfide	2.16E+00	1.33E+02	0.01	0.00E+00	0.00E+00	4.18E+00	0.00E+00	2.31E+00	0.00E+00	3.63E-06	0.00E+00
Chlorobenzene	2.84E+00	6.19E+02	0.01	0.00E+00	0.00E+00	3.81E+00	0.00E+00	2.31E+00	0.00E+00	1.74E-05	0.00E+00
Chloroform	1.97E+00	8.64E+01	0.01	0.00E+00	0.00E+00	7.50E+00	0.00E+00	2.31E+00	0.00E+00	2.34E-06	0.00E+00
Chloromethane	9.10E-01	7.85E+00	0.01	0.00E+00	0.00E+00	6.78E+00	0.00E+00	2.31E+00	0.00E+00	2.04E-07	0.00E+00
Chromium	0.00E+00	1.00E+00	0.01	2.44E+01	1.86E+03	2.50E+01	9.76E-01	1.00E+00	4.88E+00	3.50E-03	2.89E-02
Chrysene	5.61E+00	3.27E+05	0.01	6.95E-01	1.62E-04	*	*	2.31E+00	3.22E-01	1.02E-02	3.69E-03
Cis-1,3-dichloropropene	1.41E+00	2.43E+01	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	6.46E-07	0.00E+00
Cobalt	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.00E-02	0.00E+00
Copper	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	3.00E+01	0.00E+00	9.30E-01	0.00E+00	1.00E-02	0.00E+00
Cyanide	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	1.00E-01	0.00E+00
Di-n-butylphthalate	5.20E+00	1.29E+05	0.01	5.78E-01	3.41E-04	NA	NA	2.31E+00	2.67E-01	3.98E-03	1.19E-03
Dibenzo(a,h)anthracene	5.97E+00	7.39E+05	0.01	5.90E-02	6.09E-06	1.00E+01	6.09E-07	2.31E+00	2.73E-02	2.34E-02	7.18E-04
Dibenzofuran	4.12E+00	1.12E+04	0.01	2.40E-02	1.63E-04	2.30E+00	7.09E-05	2.31E+00	1.11E-02	3.31E-04	4.13E-06
Dieldrin	4.09E+00	1.05E+04	0.01	2.38E-02	1.73E-04	5.32E+00	3.25E-05	2.31E+00	1.10E-02	3.09E-04	3.81E-06
Diethyl phthalate	2.96E+00	8.13E+02	0.01	0.00E+00	0.00E+00	NA	NA	2.31E+00	0.00E+00	2.29E-05	0.00E+00
Endosulfan ii	3.62E+00	3.62E+03	0.01	0.00E+00	0.00E+00	7.93E+00	0.00E+00	2.31E+00	0.00E+00	1.05E-04	0.00E+00
Endosulfan sulfate	3.65E+00	3.87E+03	0.01	0.00E+00	0.00E+00	7.93E+00	0.00E+00	2.31E+00	0.00E+00	1.12E-04	0.00E+00
Endrin	5.60E+00	3.20E+05	0.01	4.10E-03	9.78E-07	1.00E+01	9.78E-08	2.31E+00	1.90E-03	1.00E-02	2.13E-05
Endrin aldehyde	5.60E+00	3.20E+05	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	1.00E-02	0.00E+00
Endrin ketone	5.60E+00	3.20E+05	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	1.00E-02	0.00E+00
Ethylbenzene	3.15E+00	1.25E+03	0.01	7.25E-03	4.43E-04	2.89E+00	1.53E-04	2.31E+00	3.35E-03	3.55E-05	1.34E-07
Fluoranthene	5.33E+00	1.74E+05	0.01	9.75E-01	4.29E-04	1.00E+01	4.29E-05	2.31E+00	4.51E-01	5.37E-03	2.72E-03
Fluorene	4.18E+00	1.29E+04	0.01	1.52E-01	8.99E-04	2.18E+00	4.13E-04	2.31E+00	7.01E-02	3.80E-04	2.99E-05
Gamma-Chlordane	2.78E+00	5.41E+02	0.01	7.60E-03	1.07E-03	1.00E+01	1.07E-04	2.31E+00	3.52E-03	1.51E-05	5.97E-08
Heptachlor	4.40E+00	2.12E+04	0.01	0.00E+00	0.00E+00	4.19E+00	0.00E+00	2.31E+00	0.00E+00	6.31E-04	0.00E+00
Heptachlor epoxide	3.65E+00	3.87E+03	0.01	0.00E+00	0.00E+00	4.19E+00	0.00E+00	2.31E+00	0.00E+00	1.12E-04	0.00E+00
Indeno(1,2,3-Cd)pyrene	7.66E+00	3.39E+07	0.01	2.05E-01	4.62E-07	1.00E+01	4.62E-08	2.31E+00	9.48E-02	1.15E+00	1.22E-01
Iron	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.00E-02	0.00E+00
Lead	0.00E+00	1.00E+00	0.01	5.44E+01	4.15E+03	5.94E+01	9.16E-01	1.24E+00	1.35E+01	4.00E-04	8.08E-03
Manganese	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.70E-02	0.00E+00
Mercury	0.00E+00	1.00E+00	0.01	3.40E-01	2.59E+01	2.16E+00	1.57E-01	1.00E+00	6.80E-02	2.51E-08	2.89E-09
Methoxychlor	4.68E+00	3.99E+04	0.01	0.00E+00	0.00E+00	3.18E+00	0.00E+00	2.31E+00	0.00E+00	1.20E-03	0.00E+00
Methylene chloride	1.25E+00	1.69E+01	0.01	1.00E-03	4.51E-03	6.78E+00	6.64E-04	2.31E+00	4.63E-04	4.47E-07	2.32E-10
Naphthalene	3.37E+00	2.06E+03	0.01	5.58E-01	2.07E-02	2.98E+00	6.94E-03	2.31E+00	2.58E-01	5.89E-05	1.70E-05
Nickel	0.00E+00	1.00E+00	0.01	3.38E+01	2.58E+03	4.00E+02	8.45E-02	1.00E+00	6.76E+00	6.00E-03	6.85E-02
OCDD	6.10E+00	9.92E+05	0.01	0.00E+00	0.00E+00	*	*	2.31E+00	0.00E+00	3.16E-02	0.00E+00
Phenanthrene	4.46E+00	2.42E+04	0.01	4.20E-01	1.32E-03	1.92E+00	6.91E-04	2.31E+00	1.94E-01	7.24E-04	1.58E-04
Pyrene	5.18E+00	1.24E+05	0.01	9.80E-01	6.05E-04	1.00E+01	6.05E-05	2.31E+00	4.53E-01	3.80E-03	1.93E-03
Selenium	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	7.00E+01	0.00E+00	1.00E+00	0.00E+00	1.50E-02	0.00E+00
Silver	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	3.00E-03	0.00E+00

Soil Organic Content (mg/kg): 10,000
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 1.0
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
CBU Drum Storage Area
Average Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Styrene	3.16E+00	1.27E+03	0.01	0.00E+00	0.00E+00	2.82E+00	0.00E+00	2.31E+00	0.00E+00	3.62E-05	0.00E+00
Tetrachloroethene	2.53E+00	3.07E+02	0.01	2.00E-03	4.97E-04	7.00E+00	7.10E-05	2.31E+00	9.25E-04	8.51E-06	8.84E-09
Thallium	0.00E+00	1.00E+00	0.01	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	4.00E-02	0.00E+00
Toluene	2.69E+00	4.41E+02	0.01	0.00E+00	0.00E+00	3.48E+00	0.00E+00	2.31E+00	0.00E+00	1.23E-05	0.00E+00
Trans-1,3-dichloropropene	1.41E+00	2.43E+01	0.01	0.00E+00	0.00E+00	1.00E+01	0.00E+00	2.31E+00	0.00E+00	6.46E-07	0.00E+00
Trichloroethene	2.53E+00	3.07E+02	0.01	2.00E-03	4.97E-04	5.55E+00	8.96E-05	2.31E+00	9.25E-04	8.51E-06	8.84E-09
Vanadium	0.00E+00	1.00E+00	0.01	1.03E+02	7.86E+03	*	*	1.00E+00	2.06E+01	2.50E-03	8.70E-02
Vinyl acetate	3.00E-01	1.97E+00	0.01	0.00E+00	0.00E+00	NA	NA	2.31E+00	0.00E+00	5.01E-08	0.00E+00
Xylenes, total	7.33E+00	1.61E+07	0.01	6.27E-02	2.98E-07	NA	NA	2.31E+00	2.90E-02	5.37E-01	1.75E-02
Zinc	0.00E+00	1.00E+00	0.01	2.50E+02	1.91E+04	5.00E+03	5.00E-02	2.30E+00	1.15E+02	1.00E-01	1.29E+01

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Soil Organic Content (mg/kg): 10,000
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 1.0
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

CBU DRUM STORAGE AREA

MAXIMUM EXPOSURE POINT CONCENTRATIONS

TERRESTRIAL RECEPTORS

CBU

MAXIMUM EXPOSURE PT. CONCENTRATIONS

SHORT-TAILED SHREW

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
CBU Drum Storage Area						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	1.10E-01	0.00E+00	5.09E-02	0.00E+00	0.00E+00	0.00E+00
2-Butanone	2.00E-02	0.00E+00	9.25E-03	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	2.10E+00	0.00E+00	9.72E-01	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	3.90E+00	0.00E+00	1.80E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	5.80E-02	0.00E+00	2.68E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	2.60E-02	0.00E+00	1.20E-02	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	3.50E-02	0.00E+00	1.62E-02	0.00E+00	0.00E+00	0.00E+00
Acetone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	2.80E-02	0.00E+00	1.30E-02	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	1.90E-01	0.00E+00	8.79E-02	0.00E+00	0.00E+00	0.00E+00
Antimony	6.80E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	4.20E-01	0.00E+00	1.94E-01	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	4.80E+00	0.00E+00	9.60E-01	0.00E+00	0.00E+00	0.00E+00
Barium	7.57E+01	0.00E+00	1.51E+01	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	6.80E-01	0.00E+00	3.15E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	3.80E-01	0.00E+00	1.76E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	6.30E-01	0.00E+00	2.91E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	2.20E-01	0.00E+00	1.02E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	6.10E-01	0.00E+00	2.82E-01	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	1.00E+00	0.00E+00	2.00E-01	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	8.20E-01	0.00E+00	3.79E-01	0.00E+00	0.00E+00	0.00E+00
Cadmium	1.20E+00	0.00E+00	4.80E-01	0.00E+00	0.00E+00	0.00E+00
Carbazole	3.50E-02	0.00E+00	1.62E-02	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
CBU Drum Storage Area						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	3.41E+01	0.00E+00	6.82E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	1.10E+00	0.00E+00	5.09E-01	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	1.15E+02	0.00E+00	2.14E+01	0.00E+00	0.00E+00	0.00E+00
Cyanide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	9.70E-01	0.00E+00	4.49E-01	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	5.90E-02	0.00E+00	2.73E-02	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	2.40E-02	0.00E+00	1.11E-02	0.00E+00	0.00E+00	0.00E+00
Dieldrin	2.90E-02	0.00E+00	1.34E-02	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	4.10E-03	0.00E+00	1.90E-03	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	2.30E-02	0.00E+00	1.06E-02	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	1.30E+00	0.00E+00	6.01E-01	0.00E+00	0.00E+00	0.00E+00
Fluorene	2.60E-01	0.00E+00	1.20E-01	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	7.60E-03	0.00E+00	3.52E-03	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	2.10E-01	0.00E+00	9.72E-02	0.00E+00	0.00E+00	0.00E+00
Iron	1.91E+04	0.00E+00	3.82E+03	0.00E+00	0.00E+00	0.00E+00
Lead	1.04E+02	0.00E+00	2.58E+01	0.00E+00	0.00E+00	0.00E+00
Manganese	2.15E+02	0.00E+00	4.30E+01	0.00E+00	0.00E+00	0.00E+00
Mercury	4.70E-01	0.00E+00	9.40E-02	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	1.00E-03	0.00E+00	4.63E-04	0.00E+00	0.00E+00	0.00E+00
Naphthalene	9.30E-01	0.00E+00	4.30E-01	0.00E+00	0.00E+00	0.00E+00
Nickel	3.38E+01	0.00E+00	6.76E+00	0.00E+00	0.00E+00	0.00E+00
OCDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	4.30E-01	0.00E+00	1.99E-01	0.00E+00	0.00E+00	0.00E+00
Pyrene	1.40E+00	0.00E+00	6.48E-01	0.00E+00	0.00E+00	0.00E+00
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) CBU Drum Storage Area						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	2.00E-03	0.00E+00	9.25E-04	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	9.25E-04	0.00E+00	0.00E+00	0.00E+00
Vanadium	1.86E+02	0.00E+00	3.72E+01	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	3.00E-01	0.00E+00	1.39E-01	0.00E+00	0.00E+00	0.00E+00
Zinc	4.60E+02	0.00E+00	2.12E+02	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU DRUM STORAGE AREA
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			6.80E-04
2-Butanone			2.42E-03
2-Methylnaphthalene			2.78E-02
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			2.58E+00
4,4'-DDE			3.84E-02
4,4'-DDT			1.72E-02
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			1.06E-03
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			3.24E-03
Aluminum			0.00E+00
Anthracene			1.01E-03
Antimony			7.21E+01
Aroclor-1248			0.00E+00
Aroclor-1254			8.24E-01
Aroclor-1260			0.00E+00
Arsenic			1.01E+01
Barium			7.93E+00
Benzene			0.00E+00
Benzo(a)anthracene			1.80E-01
Benzo(a)pyrene			1.01E-01
Benzo(b)fluoranthene			1.67E-01
Benzo(g,h,i)perylene			5.83E-02
Benzo(k)fluoranthene			1.62E-01
Benzoic acid			0.00E+00
Beryllium			4.02E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			2.73E-02
Cadmium			1.26E+00
Carbazole			9.28E-03
TOTAL			9.96E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
DOWNSTREAM: STREAM 1
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			1.96E+01
Chrysene			2.92E-01
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			9.23E-01
Cyanide			0.00E+00
Di-n-butylphthalate			9.35E-04
Dibenzo(a,h)anthracene			1.56E-02
Dibenzofuran			6.36E-03
Dieldrin			3.84E-01
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			1.18E-02
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			1.49E-03
Fluoranthene			5.51E-02
Fluorene			1.10E-02
Gamma-Chlordane			8.79E-04
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			5.57E-02
Iron			N/A
Lead			6.89E+00
Manganese			1.29E+00
Mercury			1.89E-02
Methoxychlor			0.00E+00
Methylene chloride			9.06E-05
Naphthalene			1.23E-02
Nickel			4.48E-01
OCDD			0.00E+00
Phenanthrene			4.44E-01
Pyrene			9.89E-02
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			3.06E+01

Shrew: CBU
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU DRUM STORAGE AREA
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			7.57E-04
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			7.57E-04
Vanadium			2.35E+02
Vinyl acetate			0.00E+00
Xylenes, total			7.72E-02
Zinc			1.52E+00
TOTAL			2.36E+02

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU DRUM STORAGE AREA
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
DOWNSTREAM: STREAM 1
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU DRUM STORAGE AREA
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

Shrew: CBU Drum Storage Area
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU DRUM STORAGE AREA
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			1.09E-03
2-Butanone			3.86E-03
2-Methylnaphthalene			4.44E-02
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			4.12E+00
4,4'-DDE			6.13E-02
4,4'-DDT			2.75E-02
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			1.69E-03
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			5.17E-03
Aluminum			0.00E+00
Anthracene			1.61E-03
Antimony			4.97E+01
Aroclor-1248			0.00E+00
Aroclor-1254			1.32E+00
Aroclor-1260			0.00E+00
Arsenic			6.97E+00
Barium			5.47E+00
Benzene			0.00E+00
Benzo(a)anthracene			2.88E-01
Benzo(a)pyrene			1.61E-01
Benzo(b)fluoranthene			2.66E-01
Benzo(g,h,i)perylene			9.31E-02
Benzo(k)fluoranthene			2.58E-01
Benzoic acid			0.00E+00
Beryllium			2.77E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			4.36E-02
Cadmium			1.74E+00
Carbazole			1.48E-02
TOTAL			7.34E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
DOWNSTREAM: STREAM 1
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			1.36E+01
Chrysene			4.65E-01
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			5.93E-01
Cyanide			0.00E+00
Di-n-butylphthalate			1.49E-03
Dibenzo(a,h)anthracene			2.50E-02
Dibenzofuran			1.02E-02
Dieldrin			6.13E-01
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			1.88E-02
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			2.38E-03
Fluoranthene			8.80E-02
Fluorene			1.76E-02
Gamma-Chlordane			1.40E-03
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			8.88E-02
Iron			N/A
Lead			5.90E+00
Manganese			8.93E-01
Mercury			1.30E-02
Methoxychlor			0.00E+00
Methylene chloride			1.45E-04
Naphthalene			1.97E-02
Nickel			3.09E-01
OCDD			0.00E+00
Phenanthrene			7.09E-01
Pyrene			1.58E-01
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			2.35E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU DRUM STORAGE AREA
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			1.21E-03
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			1.21E-03
Vanadium			1.62E+02
Vinyl acetate			0.00E+00
Xylenes, total			1.23E-01
Zinc			2.42E+00
TOTAL			1.64E+02

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.10E-01							1.17E-02		1.00E+00	1.00E+00	1.17E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.09E-02			1.86E-02						1.00E+00	1.00E+00	1.86E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-02							2.12E-03		1.00E+00	1.00E+00	2.12E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.25E-03			3.38E-03						1.00E+00	1.00E+00	3.38E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000015

Shrew: CBU Drum Storage Area
Maximum Concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E-01	1.17E-02	1.71E+01	6.80E-04	
Water	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Food	5.09E-02	1.86E-02	1.71E+01	1.09E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Total					1.77E-03

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-02	2.12E-03	8.76E-01	2.42E-03	
Water	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Food	9.25E-03	3.38E-03	8.76E-01	3.86E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Total					6.28E-03

000016

Shrew: CBU Drum Storage Area
Maximu[illegible]ncentration

2-Methylnaphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.10E+00							2.23E-01		1.00E+00	1.00E+00	2.23E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.72E-01			3.55E-01						1.00E+00	1.00E+00	3.55E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

3,3'-Dichlorobenzidine	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000017

Shrew: CBU Drum Storage Area
Maximum Concentration

2-Methylnaphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E+00	2.23E-01	8.00E+00	2.78E-02	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	9.72E-01	3.55E-01	8.00E+00	4.44E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					7.22E-02

3,3'-Dichlorobenzidine	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Water	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Food	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Total					0.00E+00

Shrew: CBU Drum Storage Area
Maximu ncentration

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.90E+00							4.13E-01		1.00E+00	1.00E+00	4.13E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.80E+00			6.60E-01						1.00E+00	1.00E+00	6.60E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.80E-02							6.15E-03		1.00E+00	1.00E+00	6.15E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.68E-02			9.81E-03						1.00E+00	1.00E+00	9.81E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: CBU Drum Storage Area
Maximum Concentration

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E+00	4.13E-01	1.60E-01	2.58E+00	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	1.80E+00	6.60E-01	1.60E-01	4.12E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					6.71E+00

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.80E-02	6.15E-03	1.60E-01	3.84E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	2.68E-02	9.81E-03	1.60E-01	6.13E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					9.98E-02

Shrew: CBU Drum Storage Area
Maximu ncentration

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.60E-02							2.76E-03		1.00E+00	1.00E+00	2.76E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.20E-02			4.40E-03						1.00E+00	1.00E+00	4.40E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

Shrew: CBU Drum Storage Area
Maximum Concentration

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.60E-02	2.76E-03	1.60E-01	1.72E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	1.20E-02	4.40E-03	1.60E-01	2.75E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					4.47E-02

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Total					0.00E+00

Shrew: CBU Drum Storage Area
Maximu ncentration

Acenaphthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Acenaphthylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.50E-02							3.71E-03		1.00E+00	1.00E+00	3.71E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.62E-02			5.92E-03						1.00E+00	1.00E+00	5.92E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000023

Shrew: CBU Drum Storage Area
Maximum Concentration

Acenaphthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Total					0.00E+00

Acenaphthylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	3.71E-03	3.50E+00	1.06E-03	
Water	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Food	1.62E-02	5.92E-03	3.50E+00	1.69E-03	
Inhalation					
Air	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Total					2.75E-03

000024

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.80E-02							2.97E-03		1.00E+00	1.00E+00	2.97E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.30E-02			4.74E-03						1.00E+00	1.00E+00	4.74E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

Shrew: CBU Drum Storage Area
Maximum Concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.80E-02	2.97E-03	9.16E-01	3.24E-03	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	1.30E-02	4.74E-03	9.16E-01	5.17E-03	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					8.41E-03

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Total					0.00E+00

000026

Anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-01							2.01E-02		1.00E+00	1.00E+00	2.01E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.79E-02			3.21E-02						1.00E+00	1.00E+00	3.21E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Antimony	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.80E+00							7.21E-01		1.00E+00	1.00E+00	7.21E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.36E+00			4.97E-01						1.00E+00	1.00E+00	4.97E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000027

Shrew: CBU Drum Storage Area
Maximum Concentration

Anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	2.01E-02	2.00E+01	1.01E-03	
Water	0.00E+00	0.00E+00	2.00E+01	0.00E+00	
Food	8.79E-02	3.21E-02	2.00E+01	1.61E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+01	0.00E+00	
Total					2.61E-03

Antimony	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.80E+00	7.21E-01	1.00E-02	7.21E+01	
Water	0.00E+00	0.00E+00	1.00E-02	0.00E+00	
Food	1.36E+00	4.97E-01	1.00E-02	4.97E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E-02	0.00E+00	
Total					1.22E+02

Shrew: CBU Drum Storage Area
Maximu[illegible]ncentration

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.20E-01							4.45E-02		1.00E+00	1.00E+00	4.45E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.94E-01			7.11E-02						1.00E+00	1.00E+00	7.11E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000029

Shrew: CBU Drum Storage Area
Maximum Concentration

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.20E-01	4.45E-02	5.40E-02	8.24E-01	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	1.94E-01	7.11E-02	5.40E-02	1.32E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					2.14E+00

000030

Shrew: CBU Drum Storage Area
Maximu ncentration

Aroclor-1260	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Arsenic	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.80E+00							5.09E-01		1.00E+00	1.00E+00	5.09E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.60E-01			3.51E-01						1.00E+00	1.00E+00	3.51E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: CBU Drum Storage Area
Maximum Concentration

Aroclor-1260	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					0.00E+00

Arsenic	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.80E+00	5.09E-01	5.04E-02	1.01E+01	
Water	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Food	9.60E-01	3.51E-01	5.04E-02	6.97E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Total					1.71E+01

Shrew: CBU Drum Storage Area
Maximum Concentration

Barium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.57E+01							8.02E+00		1.00E+00	1.00E+00	8.02E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.51E+01			5.54E+00						1.00E+00	1.00E+00	5.54E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

00033

Shrew: CBU Drum Storage Area
Maximum Concentration

Barium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.57E+01	8.02E+00	1.01E+00	7.93E+00	
Water	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Food	1.51E+01	5.54E+00	1.01E+00	5.47E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Total					1.34E+01

Benzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Total					0.00E+00

Shrew: CRU Drum Storage Area
Maximu ncentration

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.80E-01							7.21E-02		1.00E+00	1.00E+00	7.21E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.15E-01			1.15E-01						1.00E+00	1.00E+00	1.15E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.80E-01							4.03E-02		1.00E+00	1.00E+00	4.03E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.76E-01			6.43E-02						1.00E+00	1.00E+00	6.43E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: CBU Drum Storage Area
Maximum Concentration

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.80E-01	7.21E-02	4.00E-01	1.80E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	3.15E-01	1.15E-01	4.00E-01	2.88E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					4.68E-01

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.80E-01	4.03E-02	4.00E-01	1.01E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.76E-01	6.43E-02	4.00E-01	1.61E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.61E-01

000036

Shrew: CRU Drum Storage Area
Maximu[illegible]ncentration

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.30E-01							6.68E-02		1.00E+00	1.00E+00	6.68E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.91E-01			1.07E-01						1.00E+00	1.00E+00	1.07E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.20E-01							2.33E-02		1.00E+00	1.00E+00	2.33E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.02E-01			3.72E-02						1.00E+00	1.00E+00	3.72E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000037

Shrew: CBU Drum Storage Area
Maximum Concentration

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.30E-01	6.68E-02	4.00E-01	1.67E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.91E-01	1.07E-01	4.00E-01	2.66E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					4.33E-01

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	2.33E-02	4.00E-01	5.83E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.02E-01	3.72E-02	4.00E-01	9.31E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.51E-01

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.10E-01							6.47E-02		1.00E+00	1.00E+00	6.47E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.82E-01			1.03E-01						1.00E+00	1.00E+00	1.03E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000039

Shrew: CBU Drum Storage Area
Maximum Concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-01	6.47E-02	4.00E-01	1.62E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.82E-01	1.03E-01	4.00E-01	2.58E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					4.20E-01

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Total					0.00E+00

000040

Shrew: CBU Drum Storage Area
Maximu ncentration

Beryllium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.00E+00							1.06E-01		1.00E+00	1.00E+00	1.06E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.00E-01			7.31E-02						1.00E+00	1.00E+00	7.31E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Bis(2-ethylexyl)phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000041

Shrew: CBU Drum Storage Area
Maximum Concentration

Beryllium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E+00	1.06E-01	2.64E-02	4.02E+00	
Water	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Food	2.00E-01	7.31E-02	2.64E-02	2.77E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Total					6.79E+00

Bis(2-ethylexyl)phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Water	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Food	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Total					0.00E+00

Shrew: CBU Drum Storage Area
Maximu[illegible]ncentration

Bromomethane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Butyl benzyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	8.20E-01							8.69E-02		1.00E+00	1.00E+00	8.69E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.79E-01			1.39E-01						1.00E+00	1.00E+00	1.39E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000043

Shrew: CBU Drum Storage Area
Maximum Concentration

Bromomethane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Water	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Food	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Total					0.00E+00

Butyl benzyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	8.20E-01	8.69E-02	3.18E+00	2.73E-02	
Water	0.00E+00	0.00E+00	3.18E+00	0.00E+00	
Food	3.79E-01	1.39E-01	3.18E+00	4.36E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.18E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.18E+00	0.00E+00	
Total					7.10E-02

000044

Shrew: CBU Drum Storage Area
Maximu ncentration

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.20E+00							1.27E-01		1.00E+00	1.00E+00	1.27E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.80E-01			1.76E-01						1.00E+00	1.00E+00	1.76E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.50E-02							3.71E-03		1.00E+00	1.00E+00	3.71E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.62E-02			5.92E-03						1.00E+00	1.00E+00	5.92E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000045

Shrew: CBU Drum Storage Area
Maximum Concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+00	1.27E-01	1.01E-01	1.26E+00	
Water	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Food	4.80E-01	1.76E-01	1.01E-01	1.74E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Total					3.00E+00

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	3.71E-03	4.00E-01	9.28E-03	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.62E-02	5.92E-03	4.00E-01	1.48E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.41E-02

Shrew: CBU Drum Storage Area
Maximu[illegible]ncentration

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.41E+01							3.61E+00		1.00E+00	1.00E+00	3.61E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.82E+00			2.49E+00						1.00E+00	1.00E+00	2.49E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.10E+00							1.17E-01		1.00E+00	1.00E+00	1.17E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.09E-01			1.86E-01						1.00E+00	1.00E+00	1.86E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: CBU
Maximum Concentration

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.41E+01	3.61E+00	1.84E-01	1.96E+01	
Water	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Food	6.82E+00	2.49E+00	1.84E-01	1.36E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Total					3.32E+01

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E+00	1.17E-01	4.00E-01	2.92E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	5.09E-01	1.86E-01	4.00E-01	4.65E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					7.57E-01

000048

Shrew: CBU
Maximum centration

Copper	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.15E+02							1.22E+01		1.00E+00	1.00E+00	1.22E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.14E+01			7.82E+00						1.00E+00	1.00E+00	7.82E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Cyanide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000049

Shrew: CBU
Maximum Concentration

Copper	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.15E+02	1.22E+01	1.32E+01	9.23E-01	
Water	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Food	2.14E+01	7.82E+00	1.32E+01	5.93E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Total					1.52E+00

Cyanide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Total					0.00E+00

Shrew: CBU
Maximur centration

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.70E-01							1.03E-01		1.00E+00	1.00E+00	1.03E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.49E-01			1.64E-01						1.00E+00	1.00E+00	1.64E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.90E-02							6.25E-03		1.00E+00	1.00E+00	6.25E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.73E-02			9.98E-03						1.00E+00	1.00E+00	9.98E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000051

Shrew: CBU
Maximum Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.70E-01	1.03E-01	1.10E+02	9.35E-04	
Water	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Food	4.49E-01	1.64E-01	1.10E+02	1.49E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Total					2.43E-03

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.90E-02	6.25E-03	4.00E-01	1.56E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.73E-02	9.98E-03	4.00E-01	2.50E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					4.06E-02

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.40E-02							2.54E-03		1.00E+00	1.00E+00	2.54E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.11E-02			4.06E-03						1.00E+00	1.00E+00	4.06E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.90E-02							3.07E-03		1.00E+00	1.00E+00	3.07E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.34E-02			4.91E-03						1.00E+00	1.00E+00	4.91E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000053

Shrew: CBU
Maximum Concentration

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-02	2.54E-03	4.00E-01	6.36E-03	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.11E-02	4.06E-03	4.00E-01	1.02E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.65E-02

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.90E-02	3.07E-03	8.00E-03	3.84E-01	
Water	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Food	1.34E-02	4.91E-03	8.00E-03	6.13E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Total					9.98E-01

000054

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.10E-03							4.35E-04		1.00E+00	1.00E+00	4.35E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.90E-03			6.94E-04						1.00E+00	1.00E+00	6.94E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000055

Shrew: CBU
Maximum Concentration

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.10E-03	4.35E-04	3.68E-02	1.18E-02	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	1.90E-03	6.94E-04	3.68E-02	1.88E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					3.07E-02

Shrew: CBI
Maximum [illegible]entration

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.30E-02							2.44E-03		1.00E+00	1.00E+00	2.44E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.06E-02			3.89E-03						1.00E+00	1.00E+00	3.89E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.30E+00							1.38E-01		1.00E+00	1.00E+00	1.38E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.01E-01			2.20E-01						1.00E+00	1.00E+00	2.20E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000057

Shrew: CBU
Maximum Concentration

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.30E-02	2.44E-03	1.63E+00	1.49E-03	
Water	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Food	1.06E-02	3.89E-03	1.63E+00	2.38E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Total					3.88E-03

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.30E+00	1.38E-01	2.50E+00	5.51E-02	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	6.01E-01	2.20E-01	2.50E+00	8.80E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					1.43E-01

Shrew: CBU
Maximum Concentration

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.60E-01							2.76E-02		1.00E+00	1.00E+00	2.76E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.20E-01			4.40E-02						1.00E+00	1.00E+00	4.40E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.60E-03							8.06E-04		1.00E+00	1.00E+00	8.06E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.52E-03			1.29E-03						1.00E+00	1.00E+00	1.29E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000059

Shrew: CBU
Maximum Concentration

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.60E-01	2.76E-02	2.50E+00	1.10E-02	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	1.20E-01	4.40E-02	2.50E+00	1.76E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					2.86E-02

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.60E-03	8.06E-04	9.16E-01	8.79E-04	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	3.52E-03	1.29E-03	9.16E-01	1.40E-03	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					2.28E-03

000060

Indeno(1,2,3-Cd)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.10E-01							2.23E-02		1.00E+00	1.00E+00	2.23E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.72E-02			3.55E-02						1.00E+00	1.00E+00	3.55E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Iron	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.91E+04							2.02E+03		1.00E+00	1.00E+00	2.02E+03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.82E+03			1.40E+03						1.00E+00	1.00E+00	1.40E+03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: CBU
Maximum Concentration

Indeno(1,2,3-Cd)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E-01	2.23E-02	4.00E-01	5.57E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	9.72E-02	3.55E-02	4.00E-01	8.88E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.44E-01

Iron	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.91E+04	2.02E+03	0.00E+00	N/A	
Water	0.00E+00	0.00E+00	0.00E+00	N/A	
Food	3.82E+03	1.40E+03	0.00E+00	N/A	
Inhalation					
Air	0.00E+00	0.00E+00	0.00E+00	N/A	
Dermal					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Total					0.00E+00

000062

Shrew: CBU
Maximur centration

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.04E+02							1.10E+01		1.00E+00	1.00E+00	1.10E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.58E+01			9.43E+00						1.00E+00	1.00E+00	9.43E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.15E+02							2.28E+01		1.00E+00	1.00E+00	2.28E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.30E+01			1.57E+01						1.00E+00	1.00E+00	1.57E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000063

Shrew: CBU
Maximum Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.04E+02	1.10E+01	1.60E+00	6.89E+00	
Water	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Food	2.58E+01	9.43E+00	1.60E+00	5.90E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Total					1.28E+01

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.15E+02	2.28E+01	1.76E+01	1.29E+00	
Water	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Food	4.30E+01	1.57E+01	1.76E+01	8.93E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Total					2.19E+00

000064

Shrew: CBU
Maximum [illegible]entration

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.70E-01							4.98E-02		1.00E+00	1.00E+00	4.98E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.40E-02			3.44E-02						1.00E+00	1.00E+00	3.44E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000065

Shrew: CBU
Maximum Concentration

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.70E-01	4.98E-02	2.64E+00	1.89E-02	
Water	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Food	9.40E-02	3.44E-02	2.64E+00	1.30E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Total					3.19E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Total					0.00E+00

000066

Shrew: CBU
Maximum centration

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.00E-03							1.06E-04		1.00E+00	1.00E+00	1.06E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.63E-04			1.69E-04						1.00E+00	1.00E+00	1.69E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.30E-01							9.86E-02		1.00E+00	1.00E+00	9.86E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.30E-01			1.57E-01						1.00E+00	1.00E+00	1.57E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000067

Shrew: CBU
Maximum Concentration

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E-03	1.06E-04	1.17E+00	9.06E-05	
Water	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Food	4.63E-04	1.69E-04	1.17E+00	1.45E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Total					2.35E-04

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.30E-01	9.86E-02	8.00E+00	1.23E-02	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	4.30E-01	1.57E-01	8.00E+00	1.97E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					3.20E-02

000068

Shrew: CRL
Maximu centration.

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.38E+01							3.58E+00		1.00E+00	1.00E+00	3.58E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.76E+00			2.47E+00						1.00E+00	1.00E+00	2.47E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000069

Shrew: CBU
Maximum Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.38E+01	3.58E+00	8.00E+00	4.48E-01	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	6.76E+00	2.47E+00	8.00E+00	3.09E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					7.57E-01

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Total					0.00E+00

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.30E-01							4.56E-02		1.00E+00	1.00E+00	4.56E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.99E-01			7.28E-02						1.00E+00	1.00E+00	7.28E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.40E+00							1.48E-01		1.00E+00	1.00E+00	1.48E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.48E-01			2.37E-01						1.00E+00	1.00E+00	2.37E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000071

Shrew: CBU
Maximum Concentration

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.30E-01	4.56E-02	1.03E-01	4.44E-01	
Water	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Food	1.99E-01	7.28E-02	1.03E-01	7.09E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Total					1.15E+00

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.40E+00	1.48E-01	1.50E+00	9.89E-02	
Water	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Food	6.48E-01	2.37E-01	1.50E+00	1.58E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Total					2.57E-01

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.25E-04			3.38E-04						1.00E+00	1.00E+00	3.38E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000073

Shrew: CBU Drum Storage Area
Maximum Concentration

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	2.80E-01	7.57E-04	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	9.25E-04	3.38E-04	2.80E-01	1.21E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					1.97E-03

000074

Shrew: CBU Drum Storage Area
Maximu[illegible]ncentration

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.25E-04			3.38E-04						1.00E+00	1.00E+00	3.38E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000075

Shrew: CBU Drum Storage Area
Maximum Concentration

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	2.80E-01	7.57E-04	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	9.25E-04	3.38E-04	2.80E-01	1.21E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					1.97E-03

000076

Vanadium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.86E+02							1.97E+01		1.00E+00	1.00E+00	1.97E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.72E+01			1.36E+01						1.00E+00	1.00E+00	1.36E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Vinyl acetate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000077

Shrew: CBU Drum Storage Area
Maximum Concentration

Vanadium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.86E+02	1.97E+01	8.40E-02	2.35E+02	
Water	0.00E+00	0.00E+00	8.40E-02	0.00E+00	
Food	3.72E+01	1.36E+01	8.40E-02	1.62E+02	
Inhalation					
Air	0.00E+00	0.00E+00	8.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.40E-02	0.00E+00	
Total					3.97E+02

Vinyl acetate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Water	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Food	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Total					0.00E+00

000078

Shrew: CBU Drum Storage Area
Maximur [illegible]centration

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.00E-01							3.18E-02		1.00E+00	1.00E+00	3.18E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.39E-01			5.08E-02						1.00E+00	1.00E+00	5.08E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.60E+02							4.88E+01		1.00E+00	1.00E+00	4.88E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.12E+02			7.74E+01						1.00E+00	1.00E+00	7.74E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000079

Shrew: CBU Drum Storage Area
Maximum Concentration

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.00E-01	3.18E-02	4.12E-01	7.72E-02	
Water	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Food	1.39E-01	5.08E-02	4.12E-01	1.23E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Total					2.00E-01

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.60E+02	4.88E+01	3.20E+01	1.52E+00	
Water	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Food	2.12E+02	7.74E+01	3.20E+01	2.42E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Total					3.94E+00

000080

Shrew: CBU Drum Storage Area
Maximur [illegible]ncentration

CBU

MAXIMUM EXPOSURE PT. CONCENTRATIONS

RED-TAILED HAWK

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3), and water (mg/L)						
CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	1.10E-01	0.00E+00	3.52E-06	0.00E+00	0.00E+00	0.00E+00
2-Butanone	2.00E-02	0.00E+00	4.75E-10	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	2.10E+00	0.00E+00	1.98E-04	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	3.90E+00	0.00E+00	4.05E-01	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	5.80E-02	0.00E+00	6.02E-03	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	2.60E-02	0.00E+00	2.70E-03	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	3.50E-02	0.00E+00	5.36E-06	0.00E+00	0.00E+00	0.00E+00
Acetone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	2.80E-02	0.00E+00	3.57E-04	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	1.90E-01	0.00E+00	6.98E-05	0.00E+00	0.00E+00	0.00E+00
Antimony	6.80E+00	0.00E+00	2.30E-03	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	4.20E-01	0.00E+00	1.73E-02	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	4.80E+00	0.00E+00	3.24E-03	0.00E+00	0.00E+00	0.00E+00
Barium	7.57E+01	0.00E+00	3.84E-03	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	6.80E-01	0.00E+00	3.61E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	3.80E-01	0.00E+00	4.73E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	6.30E-01	0.00E+00	3.05E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	2.20E-01	0.00E+00	4.87E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	6.10E-01	0.00E+00	5.50E-02	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	1.00E+00	0.00E+00	3.38E-04	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	8.20E-01	0.00E+00	6.44E-04	0.00E+00	0.00E+00	0.00E+00
Cadmium	1.20E+00	0.00E+00	3.14E-04	0.00E+00	0.00E+00	0.00E+00
Carbazole	3.50E-02	0.00E+00	8.90E-07	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3), and water (mg/L)						
CBU Drum Storage Area						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	3.41E+01	0.00E+00	4.03E-02	0.00E+00	0.00E+00	0.00E+00
Chrysene	1.10E+00	0.00E+00	5.84E-03	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	1.15E+02	0.00E+00	3.78E-01	0.00E+00	0.00E+00	0.00E+00
Cyanide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	9.70E-01	0.00E+00	2.01E-03	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	5.90E-02	0.00E+00	7.18E-04	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	2.40E-02	0.00E+00	4.13E-06	0.00E+00	0.00E+00	0.00E+00
Dieldrin	2.90E-02	0.00E+00	4.65E-06	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	4.10E-03	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	2.30E-02	0.00E+00	4.24E-07	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	1.30E+00	0.00E+00	3.62E-03	0.00E+00	0.00E+00	0.00E+00
Fluorene	2.60E-01	0.00E+00	5.13E-05	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	7.60E-03	0.00E+00	5.97E-08	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	2.10E-01	0.00E+00	1.25E-01	0.00E+00	0.00E+00	0.00E+00
Iron	1.91E+04	0.00E+00	1.29E+02	0.00E+00	0.00E+00	0.00E+00
Lead	1.04E+02	0.00E+00	1.54E-02	0.00E+00	0.00E+00	0.00E+00
Manganese	2.15E+02	0.00E+00	1.96E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	4.70E-01	0.00E+00	3.99E-09	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	1.00E-03	0.00E+00	2.32E-10	0.00E+00	0.00E+00	0.00E+00
Naphthalene	9.30E-01	0.00E+00	2.84E-05	0.00E+00	0.00E+00	0.00E+00
Nickel	3.38E+01	0.00E+00	6.85E-02	0.00E+00	0.00E+00	0.00E+00
OCDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	4.30E-01	0.00E+00	1.62E-04	0.00E+00	0.00E+00	0.00E+00
Pyrene	1.40E+00	0.00E+00	2.76E-03	0.00E+00	0.00E+00	0.00E+00
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3), and water (mg/L)						
CBU Drum Storage Area						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	2.00E-03	0.00E+00	8.84E-09	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	8.84E-09	0.00E+00	0.00E+00	0.00E+00
Vanadium	1.86E+02	0.00E+00	1.57E-01	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	3.00E-01	0.00E+00	8.37E-02	0.00E+00	0.00E+00	0.00E+00
Zinc	4.60E+02	0.00E+00	2.38E+01	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			2.57E-05
2-Butanone			9.13E-05
2-Methylnaphthalene			1.05E-03
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			6.96E+01
4,4'-DDE			1.04E+00
4,4'-DDT			4.64E-01
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			4.00E-05
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			6.54E-04
Aluminum			0.00E+00
Anthracene			3.80E-05
Antimony			2.72E+00
Aroclor-1248			0.00E+00
Aroclor-1254			1.17E-02
Aroclor-1260			0.00E+00
Arsenic			4.67E-03
Barium			1.82E-01
Benzene			0.00E+00
Benzo(a)anthracene			6.80E-03
Benzo(a)pyrene			3.80E-03
Benzo(b)fluoranthene			6.30E-03
Benzo(g,h,i)perylene			2.20E-03
Benzo(k)fluoranthene			6.10E-03
Benzoic acid			0.00E+00
Beryllium			1.52E-01
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			1.03E-03
Cadmium			8.28E-03
Carbazole			3.50E-04
TOTAL			7.42E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU Drum Storage Area
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			3.41E-01
Chrysene			1.10E-02
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			3.46E-02
Cyanide			0.00E+00
Di-n-butylphthalate			4.37E-02
Dibenzo(a,h)anthracene			5.90E-04
Dibenzofuran			2.40E-04
Dieldrin			3.77E-03
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			1.37E-04
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			5.64E-05
Fluoranthene			2.08E-04
Fluorene			4.16E-04
Gamma-Chlordane			1.78E-04
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			2.10E-03
Iron			N/A
Lead			5.40E-02
Manganese			4.89E-02
Mercury			7.34E-02
Methoxychlor			0.00E+00
Methylene chloride			3.42E-06
Naphthalene			4.65E-04
Nickel			4.37E-03
OCDD			0.00E+00
Phenanthrene			1.68E-02
Pyrene			3.73E-03
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			6.40E-01

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU Drum Storage Area
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			2.86E-05
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			2.86E-05
Vanadium			1.63E-01
Vinyl acetate			0.00E+00
Xylenes, total			2.91E-03
Zinc			7.67E-01
TOTAL			9.33E-01

Read Tail Hawk: CBU Drum Storage Area
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU Drum Storage Area
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU Drum Storage Area
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

Read Tail Hawk: CBU Drum Storage Area
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			4.03E-08
2-Butanone			1.06E-10
2-Methylnaphthalene			4.86E-06
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			3.54E+02
4,4'-DDE			5.27E+00
4,4'-DDT			2.36E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			3.00E-07
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			4.09E-04
Aluminum			0.00E+00
Anthracene			6.84E-07
Antimony			4.50E-02
Aroclor-1248			0.00E+00
Aroclor-1254			2.36E-02
Aroclor-1260			0.00E+00
Arsenic			1.55E-04
Barium			4.52E-04
Benzene			0.00E+00
Benzo(a)anthracene			1.77E-03
Benzo(a)pyrene			2.32E-03
Benzo(b)fluoranthene			1.50E-02
Benzo(g,h,i)perylene			2.39E-02
Benzo(k)fluoranthene			2.70E-02
Benzoic acid			0.00E+00
Beryllium			2.51E-03
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			3.97E-05
Cadmium			1.06E-04
Carbazole			4.36E-07
TOTAL			3.62E+02

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU Drum Storage Area
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			1.98E-02
Chrysene			2.86E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			5.57E-03
Cyanide			0.00E+00
Di-n-butylphthalate			4.43E-03
Dibenzo(a,h)anthracene			3.52E-04
Dibenzofuran			2.02E-06
Dieldrin			2.96E-05
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			3.48E-05
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			5.09E-08
Fluoranthene			2.84E-05
Fluorene			4.02E-06
Gamma-Chlordane			6.84E-08
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			6.13E-02
Iron			N/A
Lead			3.93E-04
Manganese			2.19E-02
Mercury			3.06E-08
Methoxychlor			0.00E+00
Methylene chloride			3.89E-11
Naphthalene			6.97E-07
Nickel			4.34E-04
OCDD			0.00E+00
Phenanthrene			3.09E-04
Pyrene			3.61E-04
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			1.18E-01

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU Drum Storage Area
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			6.19E-09
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			6.19E-09
Vanadium			6.77E-03
Vinyl acetate			0.00E+00
Xylenes, total			3.98E-02
Zinc			1.94E+00
TOTAL			1.99E+00

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.10E-01							2.20E-04		1.00E+00	1.00E+00	2.20E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.52E-06			3.45E-07						1.00E+00	1.00E+00	3.45E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-02							4.00E-05		1.00E+00	1.00E+00	4.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.75E-10			4.65E-11						1.00E+00	1.00E+00	4.65E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

red-tailed hawk
maximum concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E-01	2.20E-04	8.57E+00	2.57E-05	
Water	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Food	3.52E-06	3.45E-07	8.57E+00	4.03E-08	
Inhalation					
Air	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Total					2.57E-05

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-02	4.00E-05	4.38E-01	9.13E-05	
Water	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Food	4.75E-10	4.65E-11	4.38E-01	1.06E-10	
Inhalation					
Air	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Total					9.13E-05

2-Methylnaphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.10E+00							4.20E-03		1.00E+00	1.00E+00	4.20E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.98E-04			1.94E-05						1.00E+00	1.00E+00	1.94E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

3,3'-Dichlorobenzidine	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000017

red-tailed hawk
maximum concentration

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2-Methylnaphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E+00	4.20E-03	4.00E+00	1.05E-03	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	1.98E-04	1.94E-05	4.00E+00	4.86E-06	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					1.05E-03

3,3'-Dichlorobenzidine	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Water	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Food	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Total					0.00E+00

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.90E+00							7.80E-03		1.00E+00	1.00E+00	7.80E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.05E-01			3.97E-02						1.00E+00	1.00E+00	3.97E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.80E-02							1.16E-04		1.00E+00	1.00E+00	1.16E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.02E-03			5.90E-04						1.00E+00	1.00E+00	5.90E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E+00	7.80E-03	1.12E-04	6.96E+01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	4.05E-01	3.97E-02	1.12E-04	3.54E+02	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					4.24E+02

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.80E-02	1.16E-04	1.12E-04	1.04E+00	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	6.02E-03	5.90E-04	1.12E-04	5.27E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					6.31E+00

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.60E-02							5.20E-05		1.00E+00	1.00E+00	5.20E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.70E-03			2.65E-04						1.00E+00	1.00E+00	2.65E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

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red-tailed hawk
maximum concentration

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4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.60E-02	5.20E-05	1.12E-04	4.64E-01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	2.70E-03	2.65E-04	1.12E-04	2.36E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					2.83E+00

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					0.00E+00

Acenaphthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Acenaphthylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.50E-02							7.00E-05		1.00E+00	1.00E+00	7.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.36E-06			5.26E-07						1.00E+00	1.00E+00	5.26E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Acenaphthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Total					0.00E+00

Acenaphthylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	7.00E-05	1.75E+00	4.00E-05	
Water	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Food	5.36E-06	5.26E-07	1.75E+00	3.00E-07	
Inhalation					
Air	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Total					4.03E-05

000024

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.80E-02							5.60E-05		1.00E+00	1.00E+00	5.60E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.57E-04			3.50E-05						1.00E+00	1.00E+00	3.50E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

red-tailed hawk
maximum concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.80E-02	5.60E-05	8.56E-02	6.54E-04	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	3.57E-04	3.50E-05	8.56E-02	4.09E-04	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					1.06E-03

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Water	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Food	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Total					0.00E+00

000026

Anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-01							3.80E-04		1.00E+00	1.00E+00	3.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.98E-05			6.84E-06						1.00E+00	1.00E+00	6.84E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Antimony	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.80E+00							1.36E-02		1.00E+00	1.00E+00	1.36E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.30E-03			2.25E-04						1.00E+00	1.00E+00	2.25E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

red-tailed hawk
maximum concentration

Anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	3.80E-04	1.00E+01	3.80E-05	
Water	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Food	6.98E-05	6.84E-06	1.00E+01	6.84E-07	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Total					3.87E-05

Antimony	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.80E+00	1.36E-02	5.00E-03	2.72E+00	
Water	0.00E+00	0.00E+00	5.00E-03	0.00E+00	
Food	2.30E-03	2.25E-04	5.00E-03	4.50E-02	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E-03	0.00E+00	
Total					2.77E+00

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.20E-01							8.40E-04		1.00E+00	1.00E+00	8.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.73E-02			1.70E-03						1.00E+00	1.00E+00	1.70E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000029

red-tailed hawk
maximum concentration

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Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.20E-01	8.40E-04	7.20E-02	1.17E-02	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	1.73E-02	1.70E-03	7.20E-02	2.36E-02	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					3.52E-02

Aroclor-1260	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Arsenic	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.80E+00							9.60E-03		1.00E+00	1.00E+00	9.60E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.24E-03			3.18E-04						1.00E+00	1.00E+00	3.18E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000031

red-tailed hawk
maximum concentration

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Aroclor-1260	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					0.00E+00

Arsenic	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.80E+00	9.60E-03	2.05E+00	4.67E-03	
Water	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Food	3.24E-03	3.18E-04	2.05E+00	1.55E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Total					4.83E-03

Barium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.57E+01							1.51E-01		1.00E+00	1.00E+00	1.51E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.84E-03			3.76E-04						1.00E+00	1.00E+00	3.76E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000033

red-tailed hawk
maximum concentration

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Barium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.57E+01	1.51E-01	8.33E-01	1.82E-01	
Water	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Food	3.84E-03	3.76E-04	8.33E-01	4.52E-04	
Inhalation					
Air	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Total					1.82E-01

Benzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Total					0.00E+00

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.80E-01							1.36E-03		1.00E+00	1.00E+00	1.36E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.61E-03			3.54E-04						1.00E+00	1.00E+00	3.54E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.80E-01							7.60E-04		1.00E+00	1.00E+00	7.60E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.73E-03			4.64E-04						1.00E+00	1.00E+00	4.64E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000035

red-tailed hawk
maximum concentration

2:56 PM2/17/97

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.80E-01	1.36E-03	2.00E-01	6.80E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	3.61E-03	3.54E-04	2.00E-01	1.77E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					8.57E-03

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.80E-01	7.60E-04	2.00E-01	3.80E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.73E-03	4.64E-04	2.00E-01	2.32E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					6.12E-03

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.30E-01							1.26E-03		1.00E+00	1.00E+00	1.26E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.05E-02			2.99E-03						1.00E+00	1.00E+00	2.99E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.20E-01							4.40E-04		1.00E+00	1.00E+00	4.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.87E-02			4.78E-03						1.00E+00	1.00E+00	4.78E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000037

red-tailed hawk
maximum concentration

2:56 PM2/17/97

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.30E-01	1.26E-03	2.00E-01	6.30E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	3.05E-02	2.99E-03	2.00E-01	1.50E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.13E-02

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	4.40E-04	2.00E-01	2.20E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.87E-02	4.78E-03	2.00E-01	2.39E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.61E-02

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.10E-01							1.22E-03		1.00E+00	1.00E+00	1.22E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.50E-02			5.39E-03						1.00E+00	1.00E+00	5.39E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

red-tailed hawk
maximum concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-01	1.22E-03	2.00E-01	6.10E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	5.50E-02	5.39E-03	2.00E-01	2.70E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					3.31E-02

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					0.00E+00

000040

Beryllium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.00E+00							2.00E-03		1.00E+00	1.00E+00	2.00E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.38E-04			3.31E-05						1.00E+00	1.00E+00	3.31E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Bis(2-ethylexyl)phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

red-tailed hawk
maximum concentration

Beryllium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E+00	2.00E-03	1.32E-02	1.52E-01	
Water	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Food	3.38E-04	3.31E-05	1.32E-02	2.51E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Total					1.54E-01

Bis(2-ethylexyl)phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Total					0.00E+00

Bromomethane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Butyl benzyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	8.20E-01							1.64E-03		1.00E+00	1.00E+00	1.64E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.44E-04			6.32E-05						1.00E+00	1.00E+00	6.32E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Bromomethane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Water	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Food	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Total					0.00E+00

Butyl benzyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	8.20E-01	1.64E-03	1.59E+00	1.03E-03	
Water	0.00E+00	0.00E+00	1.59E+00	0.00E+00	
Food	6.44E-04	6.32E-05	1.59E+00	3.97E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.59E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.59E+00	0.00E+00	
Total					1.07E-03

000044

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.20E+00							2.40E-03		1.00E+00	1.00E+00	2.40E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.14E-04			3.08E-05						1.00E+00	1.00E+00	3.08E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.50E-02							7.00E-05		1.00E+00	1.00E+00	7.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.90E-07			8.72E-08						1.00E+00	1.00E+00	8.72E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000045

red-tailed hawk
maximum concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+00	2.40E-03	2.90E-01	8.28E-03	
Water	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Food	3.14E-04	3.08E-05	2.90E-01	1.06E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Total					8.38E-03

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	7.00E-05	2.00E-01	3.50E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	8.90E-07	8.72E-08	2.00E-01	4.36E-07	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					3.50E-04

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.41E+01							6.82E-02		1.00E+00	1.00E+00	6.82E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.03E-02			3.95E-03						1.00E+00	1.00E+00	3.95E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.10E+00							2.20E-03		1.00E+00	1.00E+00	2.20E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.84E-03			5.73E-04						1.00E+00	1.00E+00	5.73E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000047

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.41E+01	6.82E-02	2.00E-01	3.41E-01	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.03E-02	3.95E-03	2.00E-01	1.98E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					3.61E-01

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E+00	2.20E-03	2.00E-01	1.10E-02	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	5.84E-03	5.73E-04	2.00E-01	2.86E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					1.39E-02

Copper	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.15E+02							2.30E-01		1.00E+00	1.00E+00	2.30E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.78E-01			3.70E-02						1.00E+00	1.00E+00	3.70E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Cyanide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000049

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Copper	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.15E+02	2.30E-01	6.64E+00	3.46E-02	
Water	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Food	3.78E-01	3.70E-02	6.64E+00	5.57E-03	
Inhalation					
Air	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Total					4.02E-02

Cyanide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Total					0.00E+00

Red Tail Hawk: CBU Drum Storage Area
Maximu ncentration

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.70E-01							1.94E-03		1.00E+00	1.00E+00	1.94E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.01E-03			1.96E-04						1.00E+00	1.00E+00	1.96E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.90E-02							1.18E-04		1.00E+00	1.00E+00	1.18E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.18E-04			7.04E-05						1.00E+00	1.00E+00	7.04E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000051

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.70E-01	1.94E-03	4.44E-02	4.37E-02	
Water	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Food	2.01E-03	1.96E-04	4.44E-02	4.43E-03	
Inhalation					
Air	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Total					4.81E-02

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.90E-02	1.18E-04	2.00E-01	5.90E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	7.18E-04	7.04E-05	2.00E-01	3.52E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					9.42E-04

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.40E-02							4.80E-05		1.00E+00	1.00E+00	4.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.13E-06			4.04E-07						1.00E+00	1.00E+00	4.04E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.90E-02							5.80E-05		1.00E+00	1.00E+00	5.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.65E-06			4.56E-07						1.00E+00	1.00E+00	4.56E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000053

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-02	4.80E-05	2.00E-01	2.40E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.13E-06	4.04E-07	2.00E-01	2.02E-06	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.42E-04

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.90E-02	5.80E-05	1.54E-02	3.77E-03	
Water	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Food	4.65E-06	4.56E-07	1.54E-02	2.96E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Total					3.80E-03

000054

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.10E-03							8.20E-06		1.00E+00	1.00E+00	8.20E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.13E-05			2.09E-06						1.00E+00	1.00E+00	2.09E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.10E-03	8.20E-06	6.00E-02	1.37E-04	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	2.13E-05	2.09E-06	6.00E-02	3.48E-05	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					1.71E-04

Red Tail Hawk: CBU Drum Storage Area
Maximu ncentration

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.30E-02							4.60E-05		1.00E+00	1.00E+00	4.60E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.24E-07			4.15E-08						1.00E+00	1.00E+00	4.15E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.30E+00							2.60E-03		1.00E+00	1.00E+00	2.60E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.62E-03			3.55E-04						1.00E+00	1.00E+00	3.55E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000057

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.30E-02	4.60E-05	8.16E-01	5.64E-05	
Water	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Food	4.24E-07	4.15E-08	8.16E-01	5.09E-08	
Inhalation					
Air	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Total					5.64E-05

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.30E+00	2.60E-03	1.25E+01	2.08E-04	
Water	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Food	3.62E-03	3.55E-04	1.25E+01	2.84E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Total					2.36E-04

000058

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.60E-01							5.20E-04		1.00E+00	1.00E+00	5.20E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.13E-05			5.03E-06						1.00E+00	1.00E+00	5.03E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.60E-03							1.52E-05		1.00E+00	1.00E+00	1.52E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.97E-08			5.85E-09						1.00E+00	1.00E+00	5.85E-09
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000059

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.60E-01	5.20E-04	1.25E+00	4.16E-04	
Water	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Food	5.13E-05	5.03E-06	1.25E+00	4.02E-06	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Total					4.20E-04

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.60E-03	1.52E-05	8.56E-02	1.78E-04	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	5.97E-08	5.85E-09	8.56E-02	6.84E-08	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					1.78E-04

000060

Indeno(1,2,3-Cd)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.10E-01							4.20E-04		1.00E+00	1.00E+00	4.20E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.25E-01			1.23E-02						1.00E+00	1.00E+00	1.23E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Iron	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.91E+04							3.82E+01		1.00E+00	1.00E+00	3.82E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.29E+02			1.27E+01						1.00E+00	1.00E+00	1.27E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000061

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Indeno(1,2,3-Cd)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E-01	4.20E-04	2.00E-01	2.10E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	1.25E-01	1.23E-02	2.00E-01	6.13E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					6.34E-02

Iron	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.91E+04	3.82E+01	#VALUE!	N/A	
Water	0.00E+00	0.00E+00	#VALUE!	N/A	
Food	1.29E+02	1.27E+01	#VALUE!	N/A	
Inhalation					
Air	0.00E+00	0.00E+00	#VALUE!	N/A	
Dermal					
Soil	0.00E+00	0.00E+00	#VALUE!	N/A	
Total					0.00E+00

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.04E+02							2.08E-01		1.00E+00	1.00E+00	2.08E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.54E-02			1.51E-03						1.00E+00	1.00E+00	1.51E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.15E+02							4.30E-01		1.00E+00	1.00E+00	4.30E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.96E+00			1.92E-01						1.00E+00	1.00E+00	1.92E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000063

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.04E+02	2.08E-01	3.85E+00	5.40E-02	
Water	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Food	1.54E-02	1.51E-03	3.85E+00	3.93E-04	
Inhalation					
Air	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Total					5.44E-02

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.15E+02	4.30E-01	8.80E+00	4.89E-02	
Water	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Food	1.96E+00	1.92E-01	8.80E+00	2.19E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Total					7.07E-02

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.70E-01							9.40E-04		1.00E+00	1.00E+00	9.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.99E-09			3.91E-10						1.00E+00	1.00E+00	3.91E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000095

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.70E-01	9.40E-04	1.28E-02	7.34E-02	
Water	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Food	3.99E-09	3.91E-10	1.28E-02	3.06E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Total					7.34E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Red Tail Hawk: CBU Drum Storage Area
Maximu ncentration

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.00E-03							2.00E-06		1.00E+00	1.00E+00	2.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.32E-10			2.27E-11						1.00E+00	1.00E+00	2.27E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.30E-01							1.86E-03		1.00E+00	1.00E+00	1.86E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.84E-05			2.79E-06						1.00E+00	1.00E+00	2.79E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

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Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E-03	2.00E-06	5.85E-01	3.42E-06	
Water	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Food	2.32E-10	2.27E-11	5.85E-01	3.89E-11	
Inhalation					
Air	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Total					3.42E-06

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.30E-01	1.86E-03	4.00E+00	4.65E-04	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	2.84E-05	2.79E-06	4.00E+00	6.97E-07	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					4.66E-04

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.38E+01							6.76E-02		1.00E+00	1.00E+00	6.76E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.85E-02			6.72E-03						1.00E+00	1.00E+00	6.72E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

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Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.38E+01	6.76E-02	1.55E+01	4.37E-03	
Water	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Food	6.85E-02	6.72E-03	1.55E+01	4.34E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Total					4.80E-03

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Water	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Food	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Total					0.00E+00

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.30E-01							8.60E-04		1.00E+00	1.00E+00	8.60E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.62E-04			1.59E-05						1.00E+00	1.00E+00	1.59E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.40E+00							2.80E-03		1.00E+00	1.00E+00	2.80E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.76E-03			2.71E-04						1.00E+00	1.00E+00	2.71E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Red Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.30E-01	8.60E-04	5.13E-02	1.68E-02	
Water	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Food	1.62E-04	1.59E-05	5.13E-02	3.09E-04	
Inhalation					
Air	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Total					1.71E-02

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.40E+00	2.80E-03	7.50E-01	3.73E-03	
Water	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Food	2.76E-03	2.71E-04	7.50E-01	3.61E-04	
Inhalation					
Air	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Total					4.09E-03

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.84E-09			8.66E-10						1.00E+00	1.00E+00	8.66E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

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Read Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	1.40E-01	2.86E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	8.84E-09	8.66E-10	1.40E-01	6.19E-09	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					2.86E-05

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.84E-09			8.66E-10						1.00E+00	1.00E+00	8.66E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000075

Read Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	1.40E-01	2.86E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	8.84E-09	8.66E-10	1.40E-01	6.19E-09	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					2.86E-05

000076

Vanadium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.86E+02							3.72E-01		1.00E+00	1.00E+00	3.72E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.57E-01			1.54E-02						1.00E+00	1.00E+00	1.54E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Vinyl acetate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000077

Read Tail Hawk: CBU Drum Storage Area
Maximum Concentration

Vanadium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.86E+02	3.72E-01	2.28E+00	1.63E-01	
Water	0.00E+00	0.00E+00	2.28E+00	0.00E+00	
Food	1.57E-01	1.54E-02	2.28E+00	6.77E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.28E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.28E+00	0.00E+00	
Total					1.70E-01

Vinyl acetate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Water	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Food	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Total					0.00E+00

000078

Read Tail Hawk: CBU Drum Storage Area
Maximu[illegible]ncentration

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.00E-01							6.00E-04		1.00E+00	1.00E+00	6.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.37E-02			8.20E-03						1.00E+00	1.00E+00	8.20E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.60E+02							9.20E-01		1.00E+00	1.00E+00	9.20E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.38E+01			2.33E+00						1.00E+00	1.00E+00	2.33E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.00E-01	6.00E-04	2.06E-01	2.91E-03	
Water	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Food	8.37E-02	8.20E-03	2.06E-01	3.98E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Total					4.27E-02

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.60E+02	9.20E-01	1.20E+00	7.67E-01	
Water	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Food	2.38E+01	2.33E+00	1.20E+00	1.94E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Total					2.71E+00

CBU DRUM STORAGE AREA

AVERAGE EXPOSURE POINT CONCENTRATIONS

TERRESTRIAL RECEPTORS

CBU

AVERAGE EXPOSURE PT. CONCENTRATIONS

SHORT-TAILED SHREW

Predicted Chemical Concentration by Media (mg/kg except air, which is ng/m3)						
CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	1.10E-01	0.00E+00	5.09E-02	0.00E+00	0.00E+00	0.00E+00
2-Butanone	1.33E-02	0.00E+00	6.13E-03	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	1.06E+00	0.00E+00	4.92E-01	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	1.96E+00	0.00E+00	9.06E-01	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	3.83E-02	0.00E+00	1.77E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	2.23E-02	0.00E+00	1.03E-02	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	3.50E-02	0.00E+00	1.62E-02	0.00E+00	0.00E+00	0.00E+00
Acetone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	1.88E-02	0.00E+00	8.67E-03	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	1.38E-01	0.00E+00	6.38E-02	0.00E+00	0.00E+00	0.00E+00
Antimony	6.05E+00	0.00E+00	1.21E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	3.03E-01	0.00E+00	1.40E-01	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	4.55E-01	0.00E+00	2.11E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	3.15E-01	0.00E+00	1.46E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	5.35E-01	0.00E+00	2.48E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	2.00E-01	0.00E+00	9.25E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	3.98E-01	0.00E+00	1.84E-01	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	5.03E-01	0.00E+00	2.32E-01	0.00E+00	0.00E+00	0.00E+00
Cadmium	9.65E-01	0.00E+00	3.86E-01	0.00E+00	0.00E+00	0.00E+00
Carbazole	3.50E-02	0.00E+00	1.62E-02	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	2.44E+01	0.00E+00	4.88E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	6.95E-01	0.00E+00	3.22E-01	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyanide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	5.78E-01	0.00E+00	2.67E-01	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	5.90E-02	0.00E+00	2.73E-02	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	2.40E-02	0.00E+00	1.11E-02	0.00E+00	0.00E+00	0.00E+00
Dieldrin	2.38E-02	0.00E+00	1.10E-02	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	4.10E-03	0.00E+00	1.90E-03	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	7.25E-03	0.00E+00	3.35E-03	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	9.75E-01	0.00E+00	4.51E-01	0.00E+00	0.00E+00	0.00E+00
Fluorene	1.52E-01	0.00E+00	7.01E-02	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	7.60E-03	0.00E+00	3.52E-03	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	2.05E-01	0.00E+00	9.48E-02	0.00E+00	0.00E+00	0.00E+00
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	5.44E+01	0.00E+00	1.35E+01	0.00E+00	0.00E+00	0.00E+00
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	3.40E-01	0.00E+00	6.80E-02	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	1.00E-03	0.00E+00	4.63E-04	0.00E+00	0.00E+00	0.00E+00
Naphthalene	5.58E-01	0.00E+00	2.58E-01	0.00E+00	0.00E+00	0.00E+00
Nickel	3.38E+01	0.00E+00	6.76E+00	0.00E+00	0.00E+00	0.00E+00
OCDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	4.20E-01	0.00E+00	1.94E-01	0.00E+00	0.00E+00	0.00E+00
Pyrene	9.80E-01	0.00E+00	4.53E-01	0.00E+00	0.00E+00	0.00E+00
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Shrew: CBU
Average Concentration

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	2.00E-03	0.00E+00	9.25E-04	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	9.25E-04	0.00E+00	0.00E+00	0.00E+00
Vanadium	1.03E+02	0.00E+00	2.06E+01	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	6.27E-02	0.00E+00	2.90E-02	0.00E+00	0.00E+00	0.00E+00
Zinc	2.50E+02	0.00E+00	1.15E+02	0.00E+00	0.00E+00	0.00E+00

Shrew: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			6.80E-04
2-Butanone			1.60E-03
2-Methylnaphthalene			1.41E-02
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			1.30E+00
4,4'-DDE			2.53E-02
4,4'-DDT			1.47E-02
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			1.06E-03
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			2.17E-03
Aluminum			0.00E+00
Anthracene			7.31E-04
Antimony			6.41E+01
Aroclor-1248			0.00E+00
Aroclor-1254			5.94E-01
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			1.21E-01
Benzo(a)pyrene			8.35E-02
Benzo(b)fluoranthene			1.42E-01
Benzo(g,h,i)perylene			5.30E-02
Benzo(k)fluoranthene			1.05E-01
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			1.68E-02
Cadmium			1.01E+00
Carbazole			9.28E-03
TOTAL			6.76E+01

CBU: Shrew
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			1.41E+01
Chrysene			1.84E-01
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			5.57E-04
Dibenzo(a,h)anthracene			1.56E-02
Dibenzofuran			6.36E-03
Dieldrin			3.15E-01
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			1.18E-02
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			4.71E-04
Fluoranthene			4.13E-02
Fluorene			6.42E-03
Gamma-Chlordane			8.79E-04
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			5.43E-02
Iron			N/A
Lead			3.60E+00
Manganese			0.00E+00
Mercury			1.37E-02
Methoxychlor			0.00E+00
Methylene chloride			9.06E-05
Naphthalene			7.39E-03
Nickel			4.48E-01
OCDD			0.00E+00
Phenanthrene			4.34E-01
Pyrene			6.93E-02
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			1.93E+01

Shrew: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			7.57E-04
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			7.57E-04
Vanadium			1.30E+02
Vinyl acetate			0.00E+00
Xylenes, total			1.61E-02
Zinc			8.28E-01
TOTAL			1.31E+02

Shrew: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

Shrew: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

Shrew: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			1.09E-03
2-Butanone			2.56E-03
2-Methylnaphthalene			2.25E-02
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			2.07E+00
4,4'-DDE			4.04E-02
4,4'-DDT			2.35E-02
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			1.69E-03
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			3.46E-03
Aluminum			0.00E+00
Anthracene			1.17E-03
Antimony			4.42E+01
Aroclor-1248			0.00E+00
Aroclor-1254			9.48E-01
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			1.92E-01
Benzo(a)pyrene			1.33E-01
Benzo(b)fluoranthene			2.26E-01
Benzo(g,h,i)perylene			8.46E-02
Benzo(k)fluoranthene			1.68E-01
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			2.67E-02
Cadmium			1.40E+00
Carbazole			1.48E-02
TOTAL			4.96E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			9.70E+00
Chrysene			2.94E-01
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			8.88E-04
Dibenzo(a,h)anthracene			2.50E-02
Dibenzofuran			1.02E-02
Dieldrin			5.02E-01
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			1.88E-02
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			7.52E-04
Fluoranthene			6.60E-02
Fluorene			1.03E-02
Gamma-Chlordane			1.40E-03
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			8.67E-02
Iron			N/A
Lead			3.08E+00
Manganese			0.00E+00
Mercury			9.42E-03
Methoxychlor			0.00E+00
Methylene chloride			1.45E-04
Naphthalene			1.18E-02
Nickel			3.09E-01
OCDD			0.00E+00
Phenanthrene			6.92E-01
Pyrene			1.11E-01
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			1.49E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU Drum Storage
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			1.21E-03
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			1.21E-03
Vanadium			8.97E+01
Vinyl acetate			0.00E+00
Xylenes, total			2.57E-02
Zinc			1.31E+00
TOTAL			9.10E+01

Shrew: CBU
Average Concentration

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.10E-01							1.17E-02		1.00E+00	1.00E+00	1.17E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.09E-02			1.86E-02						1.00E+00	1.00E+00	1.86E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.33E-02							1.40E-03		1.00E+00	1.00E+00	1.40E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.13E-03			2.24E-03						1.00E+00	1.00E+00	2.24E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

CBU: Shrew
Average Concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E-01	1.17E-02	1.71E+01	6.80E-04	
Water	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Food	5.09E-02	1.86E-02	1.71E+01	1.09E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Total					1.77E-03

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.33E-02	1.40E-03	8.76E-01	1.60E-03	
Water	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Food	6.13E-03	2.24E-03	8.76E-01	2.56E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Total					4.16E-03

CBU: Shrew
Average Concentration

2-Methylnaphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.06E+00							1.13E-01		1.00E+00	1.00E+00	1.13E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.92E-01			1.80E-01						1.00E+00	1.00E+00	1.80E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

3,3'-Dichlorobenzidine	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

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CBU: Shrew
Average Concentration

2-Methylnaphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.06E+00	1.13E-01	8.00E+00	1.41E-02	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	4.92E-01	1.80E-01	8.00E+00	2.25E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					3.65E-02

3,3'-Dichlorobenzidine	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Water	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Food	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.40E-01	0.00E+00	
Total					0.00E+00

CBU: Shrew
Average Concentration

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.96E+00							2.08E-01		1.00E+00	1.00E+00	2.08E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.06E-01			3.31E-01						1.00E+00	1.00E+00	3.31E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.83E-02							4.05E-03		1.00E+00	1.00E+00	4.05E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.77E-02			6.47E-03						1.00E+00	1.00E+00	6.47E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

CBU: Shrew
Average Concentration

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.96E+00	2.08E-01	1.60E-01	1.30E+00	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	9.06E-01	3.31E-01	1.60E-01	2.07E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					3.37E+00

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.83E-02	4.05E-03	1.60E-01	2.53E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	1.77E-02	6.47E-03	1.60E-01	4.04E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					6.58E-02

CBU: Shrew
Average Concentration

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.23E-02							2.36E-03		1.00E+00	1.00E+00	2.36E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.03E-02			3.76E-03						1.00E+00	1.00E+00	3.76E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

CBU: Shrew
Average Concentration

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.23E-02	2.36E-03	1.60E-01	1.47E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	1.03E-02	3.76E-03	1.60E-01	2.35E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					3.83E-02

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Total					0.00E+00

CBU: Shrew
Average Concentration

Acenaphthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Acenaphthylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.50E-02							3.71E-03		1.00E+00	1.00E+00	3.71E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.62E-02			5.92E-03						1.00E+00	1.00E+00	5.92E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

CBU: Shrew
Average Concentration

Acenaphthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Total					0.00E+00

Acenaphthylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	3.71E-03	3.50E+00	1.06E-03	
Water	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Food	1.62E-02	5.92E-03	3.50E+00	1.69E-03	
Inhalation					
Air	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.50E+00	0.00E+00	
Total					2.75E-03

000024

CBU: Shrew
Average Concentration

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.88E-02							1.99E-03		1.00E+00	1.00E+00	1.99E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.67E-03			3.17E-03						1.00E+00	1.00E+00	3.17E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

CBU: Shrew
Average Concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.88E-02	1.99E-03	9.16E-01	2.17E-03	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	8.67E-03	3.17E-03	9.16E-01	3.46E-03	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					5.63E-03

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Total					0.00E+00

CBU: Shrew
Average Concentration

Anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.38E-01							1.46E-02		1.00E+00	1.00E+00	1.46E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.38E-02			2.33E-02						1.00E+00	1.00E+00	2.33E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Antimony	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.05E+00							6.41E-01		1.00E+00	1.00E+00	6.41E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.21E+00			4.42E-01						1.00E+00	1.00E+00	4.42E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000027

CBU: Shrew
Average Concentration

Anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.38E-01	1.46E-02	2.00E+01	7.31E-04	
Water	0.00E+00	0.00E+00	2.00E+01	0.00E+00	
Food	6.38E-02	2.33E-02	2.00E+01	1.17E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+01	0.00E+00	
Total					1.90E-03

Antimony	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.05E+00	6.41E-01	1.00E-02	6.41E+01	
Water	0.00E+00	0.00E+00	1.00E-02	0.00E+00	
Food	1.21E+00	4.42E-01	1.00E-02	4.42E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E-02	0.00E+00	
Total					1.08E+02

CBU: Shrew
Average Concentration

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.03E-01							3.21E-02		1.00E+00	1.00E+00	3.21E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.40E-01			5.12E-02						1.00E+00	1.00E+00	5.12E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

CBU: Shrew
Average Concentration

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.03E-01	3.21E-02	5.40E-02	5.94E-01	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	1.40E-01	5.12E-02	5.40E-02	9.48E-01	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					1.54E+00

CBU: Shrew
Average Concentration

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.55E-01							4.82E-02		1.00E+00	1.00E+00	4.82E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.11E-01			7.70E-02						1.00E+00	1.00E+00	7.70E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.15E-01							3.34E-02		1.00E+00	1.00E+00	3.34E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.46E-01			5.33E-02						1.00E+00	1.00E+00	5.33E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

CBU: Shrew
Average Concentration

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.55E-01	4.82E-02	4.00E-01	1.21E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.11E-01	7.70E-02	4.00E-01	1.92E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					3.13E-01

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.15E-01	3.34E-02	4.00E-01	8.35E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.46E-01	5.33E-02	4.00E-01	1.33E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.17E-01

CBU: Shrew
Average Concentration

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.35E-01							5.67E-02		1.00E+00	1.00E+00	5.67E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.48E-01			9.05E-02						1.00E+00	1.00E+00	9.05E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-01							2.12E-02		1.00E+00	1.00E+00	2.12E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.25E-02			3.38E-02						1.00E+00	1.00E+00	3.38E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000033

CBU: Shrew
Average Concentration

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.35E-01	5.67E-02	4.00E-01	1.42E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.48E-01	9.05E-02	4.00E-01	2.26E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					3.68E-01

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-01	2.12E-02	4.00E-01	5.30E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	9.25E-02	3.38E-02	4.00E-01	8.46E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.38E-01

CBU: Shrew
Average Concentration

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.98E-01							4.21E-02		1.00E+00	1.00E+00	4.21E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.84E-01			6.73E-02						1.00E+00	1.00E+00	6.73E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000035

CBU: Shrew
Average Concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.98E-01	4.21E-02	4.00E-01	1.05E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.84E-01	6.73E-02	4.00E-01	1.68E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.73E-01

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Total					0.00E+00

CBU: Shrew
Average Concentration

Bromomethane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Butyl benzyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.03E-01							5.33E-02		1.00E+00	1.00E+00	5.33E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.32E-01			8.50E-02						1.00E+00	1.00E+00	8.50E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000037

CBU: Shrew
Average Concentration

Bromomethane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Water	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Food	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-02	0.00E+00	
Total					0.00E+00

Butyl benzyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.03E-01	5.33E-02	3.18E+00	1.68E-02	
Water	0.00E+00	0.00E+00	3.18E+00	0.00E+00	
Food	2.32E-01	8.50E-02	3.18E+00	2.67E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.18E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.18E+00	0.00E+00	
Total					4.35E-02

CBU: Shrew
Average Concentration

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.65E-01							1.02E-01		1.00E+00	1.00E+00	1.02E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.86E-01			1.41E-01						1.00E+00	1.00E+00	1.41E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.50E-02							3.71E-03		1.00E+00	1.00E+00	3.71E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.62E-02			5.92E-03						1.00E+00	1.00E+00	5.92E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000039

CBU: Shrew
Average Concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.65E-01	1.02E-01	1.01E-01	1.01E+00	
Water	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Food	3.86E-01	1.41E-01	1.01E-01	1.40E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Total					2.42E+00

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	3.71E-03	4.00E-01	9.28E-03	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.62E-02	5.92E-03	4.00E-01	1.48E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.41E-02

CBU: Shrew
Average Concentration

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.44E+01							2.59E+00		1.00E+00	1.00E+00	2.59E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.88E+00			1.78E+00						1.00E+00	1.00E+00	1.78E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.95E-01							7.37E-02		1.00E+00	1.00E+00	7.37E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.22E-01			1.18E-01						1.00E+00	1.00E+00	1.18E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: CBU
Average Concentration

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.44E+01	2.59E+00	1.84E-01	1.41E+01	
Water	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Food	4.88E+00	1.78E+00	1.84E-01	9.70E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Total					2.38E+01

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.95E-01	7.37E-02	4.00E-01	1.84E-01	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	3.22E-01	1.18E-01	4.00E-01	2.94E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					4.78E-01

Shrew: CBU
Averagr centration

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.78E-01							6.12E-02		1.00E+00	1.00E+00	6.12E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.67E-01			9.77E-02						1.00E+00	1.00E+00	9.77E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthra	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.90E-02							6.25E-03		1.00E+00	1.00E+00	6.25E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.73E-02			9.98E-03						1.00E+00	1.00E+00	9.98E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: CBU
Average Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.78E-01	6.12E-02	1.10E+02	5.57E-04	
Water	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Food	2.67E-01	9.77E-02	1.10E+02	8.88E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Total					1.44E-03

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.90E-02	6.25E-03	4.00E-01	1.56E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.73E-02	9.98E-03	4.00E-01	2.50E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					4.06E-02

Shrew: CBU
Averag centration

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.40E-02							2.54E-03		1.00E+00	1.00E+00	2.54E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.11E-02			4.06E-03						1.00E+00	1.00E+00	4.06E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.38E-02							2.52E-03		1.00E+00	1.00E+00	2.52E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.10E-02			4.02E-03						1.00E+00	1.00E+00	4.02E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000045

Shrew: CBU
Average Concentration

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-02	2.54E-03	4.00E-01	6.36E-03	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	1.11E-02	4.06E-03	4.00E-01	1.02E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.65E-02

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.38E-02	2.52E-03	8.00E-03	3.15E-01	
Water	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Food	1.10E-02	4.02E-03	8.00E-03	5.02E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Total					8.17E-01

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.10E-03							4.35E-04		1.00E+00	1.00E+00	4.35E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.90E-03			6.94E-04						1.00E+00	1.00E+00	6.94E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000047

Shrew: CBU
Average Concentration

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.10E-03	4.35E-04	3.68E-02	1.18E-02	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	1.90E-03	6.94E-04	3.68E-02	1.88E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					3.07E-02

Shrew: CBU
Averag centration

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.25E-03							7.69E-04		1.00E+00	1.00E+00	7.69E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.35E-03			1.23E-03						1.00E+00	1.00E+00	1.23E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.75E-01							1.03E-01		1.00E+00	1.00E+00	1.03E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.51E-01			1.65E-01						1.00E+00	1.00E+00	1.65E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000049

Shrew: CBU
Average Concentration

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.25E-03	7.69E-04	1.63E+00	4.71E-04	
Water	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Food	3.35E-03	1.23E-03	1.63E+00	7.52E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Total					1.22E-03

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.75E-01	1.03E-01	2.50E+00	4.13E-02	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	4.51E-01	1.65E-01	2.50E+00	6.60E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					1.07E-01

000050

Shrew: CRU
Averag centration

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.52E-01							1.61E-02		1.00E+00	1.00E+00	1.61E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.01E-02			2.56E-02						1.00E+00	1.00E+00	2.56E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.60E-03							8.06E-04		1.00E+00	1.00E+00	8.06E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.52E-03			1.29E-03						1.00E+00	1.00E+00	1.29E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000051

Shrew: CBU
Average Concentration

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.52E-01	1.61E-02	2.50E+00	6.42E-03	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	7.01E-02	2.56E-02	2.50E+00	1.03E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					1.67E-02

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.60E-03	8.06E-04	9.16E-01	8.79E-04	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	3.52E-03	1.29E-03	9.16E-01	1.40E-03	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					2.28E-03

Indeno(1,2,3-Cd)py	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.05E-01							2.17E-02		1.00E+00	1.00E+00	2.17E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.48E-02			3.47E-02						1.00E+00	1.00E+00	3.47E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Iron	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000053

Shrew: CBU
Average Concentration

Indeno(1,2,3-Cd)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.05E-01	2.17E-02	4.00E-01	5.43E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	9.48E-02	3.47E-02	4.00E-01	8.67E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.41E-01

Iron	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Water	0.00E+00	0.00E+00	0.00E+00	N/A	
Food	0.00E+00	0.00E+00	0.00E+00	N/A	
Inhalation					
Air	0.00E+00	0.00E+00	0.00E+00	N/A	
Dermal					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Total					0.00E+00

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.44E+01							5.77E+00		1.00E+00	1.00E+00	5.77E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.35E+01			4.93E+00						1.00E+00	1.00E+00	4.93E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000055

Shrew: CBU
Average Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.44E+01	5.77E+00	1.60E+00	3.60E+00	
Water	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Food	1.35E+01	4.93E+00	1.60E+00	3.08E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Total					6.69E+00

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Total					0.00E+00

000056

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.40E-01							3.60E-02		1.00E+00	1.00E+00	3.60E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.80E-02			2.49E-02						1.00E+00	1.00E+00	2.49E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000057

Shrew: CBU
Average Concentration

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.40E-01	3.60E-02	2.64E+00	1.37E-02	
Water	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Food	6.80E-02	2.49E-02	2.64E+00	9.42E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Total					2.31E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Total					0.00E+00

Shrew: CBU
Average entration

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.00E-03							1.06E-04		1.00E+00	1.00E+00	1.06E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.63E-04			1.69E-04						1.00E+00	1.00E+00	1.69E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.58E-01							5.91E-02		1.00E+00	1.00E+00	5.91E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.58E-01			9.43E-02						1.00E+00	1.00E+00	9.43E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000059

Shrew: CBU
Average Concentration

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E-03	1.06E-04	1.17E+00	9.06E-05	
Water	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Food	4.63E-04	1.69E-04	1.17E+00	1.45E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Total					2.35E-04

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.58E-01	5.91E-02	8.00E+00	7.39E-03	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	2.58E-01	9.43E-02	8.00E+00	1.18E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					1.92E-02

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.38E+01							3.58E+00		1.00E+00	1.00E+00	3.58E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.76E+00			2.47E+00						1.00E+00	1.00E+00	2.47E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000061

Shrew: CBU
Average Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.38E+01	3.58E+00	8.00E+00	4.48E-01	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	6.76E+00	2.47E+00	8.00E+00	3.09E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					7.57E-01

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Total					0.00E+00

Shrew: CBU
Average entration

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.20E-01							4.45E-02		1.00E+00	1.00E+00	4.45E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.94E-01			7.11E-02						1.00E+00	1.00E+00	7.11E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptak from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.80E-01							1.04E-01		1.00E+00	1.00E+00	1.04E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.53E-01			1.66E-01						1.00E+00	1.00E+00	1.66E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: CBU
Average Concentration

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.20E-01	4.45E-02	1.03E-01	4.34E-01	
Water	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Food	1.94E-01	7.11E-02	1.03E-01	6.92E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Total					1.13E+00

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.80E-01	1.04E-01	1.50E+00	6.93E-02	
Water	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Food	4.53E-01	1.66E-01	1.50E+00	1.11E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Total					1.80E-01

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.25E-04			3.38E-04						1.00E+00	1.00E+00	3.38E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000065

Shrew: CBU
Average Concentration

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	2.80E-01	7.57E-04	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	9.25E-04	3.38E-04	2.80E-01	1.21E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					1.97E-03

000066

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.25E-04			3.38E-04						1.00E+00	1.00E+00	3.38E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000067

Shrew: CBU
Average Concentration

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	2.80E-01	7.57E-04	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	9.25E-04	3.38E-04	2.80E-01	1.21E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					1.97E-03

000068

Shrew: CBU
Average entration

Vanadium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.03E+02							1.09E+01		1.00E+00	1.00E+00	1.09E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.06E+01			7.53E+00						1.00E+00	1.00E+00	7.53E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Vinyl acetate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000069

Shrew: CBU
Average Concentration

Vanadium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.03E+02	1.09E+01	8.40E-02	1.30E+02	
Water	0.00E+00	0.00E+00	8.40E-02	0.00E+00	
Food	2.06E+01	7.53E+00	8.40E-02	8.97E+01	
Inhalation					
Air	0.00E+00	0.00E+00	8.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.40E-02	0.00E+00	
Total					2.20E+02

Vinyl acetate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Water	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Food	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.54E+01	0.00E+00	
Total					0.00E+00

000070

Shrew: CBU
Average ntration

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.27E-02							6.64E-03		1.00E+00	1.00E+00	6.64E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.90E-02			1.06E-02						1.00E+00	1.00E+00	1.06E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.50E+02							2.65E+01		1.00E+00	1.00E+00	2.65E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.15E+02			4.21E+01						1.00E+00	1.00E+00	4.21E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000071

Shrew: CBU
Average Concentration

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.27E-02	6.64E-03	4.12E-01	1.61E-02	
Water	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Food	2.90E-02	1.06E-02	4.12E-01	2.57E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Total					4.19E-02

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.50E+02	2.65E+01	3.20E+01	8.28E-01	
Water	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Food	1.15E+02	4.21E+01	3.20E+01	1.31E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Total					2.14E+00

Shrew: CBU
Average entration

CBU

AVERAGE EXPOSURE PT. CONCENTRATIONS

RED-TAILED HAWK

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	1.10E-01	0.00E+00	3.52E-06	0.00E+00	0.00E+00	0.00E+00
2-Butanone	1.33E-02	0.00E+00	3.14E-10	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	1.06E+00	0.00E+00	1.00E-04	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	1.96E+00	0.00E+00	2.03E-01	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	3.83E-02	0.00E+00	3.97E-03	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	2.23E-02	0.00E+00	2.31E-03	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	3.50E-02	0.00E+00	5.36E-06	0.00E+00	0.00E+00	0.00E+00
Acetone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aldrin	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	1.88E-02	0.00E+00	2.39E-04	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	1.38E-01	0.00E+00	5.07E-05	0.00E+00	0.00E+00	0.00E+00
Antimony	6.05E+00	0.00E+00	2.04E-03	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	3.03E-01	0.00E+00	1.25E-02	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	4.55E-01	0.00E+00	2.42E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	3.15E-01	0.00E+00	3.92E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	5.35E-01	0.00E+00	2.59E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	2.00E-01	0.00E+00	4.43E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	3.98E-01	0.00E+00	3.59E-02	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	5.03E-01	0.00E+00	3.95E-04	0.00E+00	0.00E+00	0.00E+00
Cadmium	9.65E-01	0.00E+00	2.53E-04	0.00E+00	0.00E+00	0.00E+00
Carbazole	3.50E-02	0.00E+00	8.90E-07	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	2.44E+01	0.00E+00	2.89E-02	0.00E+00	0.00E+00	0.00E+00
Chrysene	6.95E-01	0.00E+00	3.69E-03	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyanide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	5.78E-01	0.00E+00	1.19E-03	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	5.90E-02	0.00E+00	7.18E-04	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	2.40E-02	0.00E+00	4.13E-06	0.00E+00	0.00E+00	0.00E+00
Dieldrin	2.38E-02	0.00E+00	3.81E-06	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	4.10E-03	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	7.25E-03	0.00E+00	1.34E-07	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	9.75E-01	0.00E+00	2.72E-03	0.00E+00	0.00E+00	0.00E+00
Fluorene	1.52E-01	0.00E+00	2.99E-05	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	7.60E-03	0.00E+00	5.97E-08	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	2.05E-01	0.00E+00	1.22E-01	0.00E+00	0.00E+00	0.00E+00
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	5.44E+01	0.00E+00	8.08E-03	0.00E+00	0.00E+00	0.00E+00
Manganese	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	3.40E-01	0.00E+00	2.89E-09	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	1.00E-03	0.00E+00	2.32E-10	0.00E+00	0.00E+00	0.00E+00
Naphthalene	5.58E-01	0.00E+00	1.70E-05	0.00E+00	0.00E+00	0.00E+00
Nickel	3.38E+01	0.00E+00	6.85E-02	0.00E+00	0.00E+00	0.00E+00
OCDD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	4.20E-01	0.00E+00	1.58E-04	0.00E+00	0.00E+00	0.00E+00
Pyrene	9.80E-01	0.00E+00	1.93E-03	0.00E+00	0.00E+00	0.00E+00
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) CBU Drum Storage						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	2.00E-03	0.00E+00	8.84E-09	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	8.84E-09	0.00E+00	0.00E+00	0.00E+00
Vanadium	1.03E+02	0.00E+00	8.70E-02	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	6.27E-02	0.00E+00	1.75E-02	0.00E+00	0.00E+00	0.00E+00
Zinc	2.50E+02	0.00E+00	1.29E+01	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			2.57E-05
2-Butanone			6.05E-05
2-Methylnaphthalene			5.31E-04
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			3.50E+01
4,4'-DDE			6.83E-01
4,4'-DDT			3.97E-01
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			4.00E-05
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			4.38E-04
Aluminum			0.00E+00
Anthracene			2.76E-05
Antimony			2.42E+00
Aroclor-1248			0.00E+00
Aroclor-1254			8.40E-03
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			4.55E-03
Benzo(a)pyrene			3.15E-03
Benzo(b)fluoranthene			5.35E-03
Benzo(g,h,i)perylene			2.00E-03
Benzo(k)fluoranthene			3.98E-03
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			6.32E-04
Cadmium			6.66E-03
Carbazole			3.50E-04
TOTAL			3.85E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			2.44E-01
Chrysene			6.95E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			2.60E-02
Dibenzo(a,h)anthracene			5.90E-04
Dibenzofuran			2.40E-04
Dieldrin			3.08E-03
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			1.37E-04
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			1.78E-05
Fluoranthene			1.56E-04
Fluorene			2.42E-04
Gamma-Chlordane			1.78E-04
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			2.05E-03
Iron			N/A
Lead			2.83E-02
Manganese			0.00E+00
Mercury			5.31E-02
Methoxychlor			0.00E+00
Methylene chloride			3.42E-06
Naphthalene			2.79E-04
Nickel			4.37E-03
OCDD			0.00E+00
Phenanthrene			1.64E-02
Pyrene			2.61E-03
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			3.89E-01

RTHawk: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			2.86E-05
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			2.86E-05
Vanadium			9.05E-02
Vinyl acetate			0.00E+00
Xylenes, total			6.08E-04
Zinc			4.17E-01
TOTAL			5.08E-01

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

RTHawk: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichioropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

RTHawk: CBU
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			4.03E-08
2-Butanone			7.04E-11
2-Methylnaphthalene			2.46E-06
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			1.78E+02
4,4'-DDE			3.48E+00
4,4'-DDT			2.02E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			3.00E-07
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			2.74E-04
Aluminum			0.00E+00
Anthracene			4.97E-07
Antimony			4.01E-02
Aroclor-1248			0.00E+00
Aroclor-1254			1.70E-02
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			1.18E-03
Benzo(a)pyrene			1.92E-03
Benzo(b)fluoranthene			1.27E-02
Benzo(g,h,i)perylene			2.17E-02
Benzo(k)fluoranthene			1.76E-02
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			2.43E-05
Cadmium			8.54E-05
Carbazole			4.36E-07
TOTAL			1.84E+02

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			1.41E-02
Chrysene			1.81E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			2.63E-03
Dibenzo(a,h)anthracene			3.52E-04
Dibenzofuran			2.02E-06
Dieldrin			2.43E-05
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			3.48E-05
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			1.60E-08
Fluoranthene			2.13E-05
Fluorene			2.34E-06
Gamma-Chlordane			6.84E-08
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			5.99E-02
Iron			N/A
Lead			2.06E-04
Manganese			0.00E+00
Mercury			2.21E-08
Methoxychlor			0.00E+00
Methylene chloride			3.89E-11
Naphthalene			4.18E-07
Nickel			4.34E-04
OCDD			0.00E+00
Phenanthrene			3.02E-04
Pyrene			2.53E-04
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			8.01E-02

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
CBU DRUM STORAGE
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			6.19E-09
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			6.19E-09
Vanadium			3.75E-03
Vinyl acetate			0.00E+00
Xylenes, total			8.31E-03
Zinc			1.06E+00
TOTAL			1.07E+00

RTHawk: CBU
Average Concentration

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.10E-01							2.20E-04		1.00E+00	1.00E+00	2.20E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.52E-06			3.45E-07						1.00E+00	1.00E+00	3.45E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.33E-02							2.65E-05		1.00E+00	1.00E+00	2.65E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.14E-10			3.08E-11						1.00E+00	1.00E+00	3.08E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000015

RTHawk: CBU
Average Concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E-01	2.20E-04	8.57E+00	2.57E-05	
Water	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Food	3.52E-06	3.45E-07	8.57E+00	4.03E-08	
Inhalation					
Air	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Total					2.57E-05

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.33E-02	2.65E-05	4.38E-01	6.05E-05	
Water	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Food	3.14E-10	3.08E-11	4.38E-01	7.04E-11	
Inhalation					
Air	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Total					6.05E-05

000016

2-Methylnaphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.06E+00							2.13E-03		1.00E+00	1.00E+00	2.13E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.00E-04			9.84E-06						1.00E+00	1.00E+00	9.84E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

3,3'-Dichlorobenzidine	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000017

2-Methylnaphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.06E+00	2.13E-03	4.00E+00	5.31E-04	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	1.00E-04	9.84E-06	4.00E+00	2.46E-06	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					5.34E-04

3,3'-Dichlorobenzidine	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Water	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Food	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.70E-01	0.00E+00	
Total					0.00E+00

000018

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.96E+00							3.92E-03		1.00E+00	1.00E+00	3.92E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.03E-01			1.99E-02						1.00E+00	1.00E+00	1.99E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.83E-02							7.65E-05		1.00E+00	1.00E+00	7.65E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.97E-03			3.89E-04						1.00E+00	1.00E+00	3.89E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000019

RTHawk: CBU
Average Concentration

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.96E+00	3.92E-03	1.12E-04	3.50E+01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	2.03E-01	1.99E-02	1.12E-04	1.78E+02	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					2.13E+02

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.83E-02	7.65E-05	1.12E-04	6.83E-01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	3.97E-03	3.89E-04	1.12E-04	3.48E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					4.16E+00

000020

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.23E-02							4.45E-05		1.00E+00	1.00E+00	4.45E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.31E-03			2.26E-04						1.00E+00	1.00E+00	2.26E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

RTHawk: CBU
Average Concentration

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.23E-02	4.45E-05	1.12E-04	3.97E-01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	2.31E-03	2.26E-04	1.12E-04	2.02E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					2.42E+00

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					0.00E+00

000022

Acenaphthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Acenaphthylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.50E-02							7.00E-05		1.00E+00	1.00E+00	7.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.36E-06			5.26E-07						1.00E+00	1.00E+00	5.26E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000023

Acenaphthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Total					0.00E+00

Acenaphthylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	7.00E-05	1.75E+00	4.00E-05	
Water	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Food	5.36E-06	5.26E-07	1.75E+00	3.00E-07	
Inhalation					
Air	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.75E+00	0.00E+00	
Total					4.03E-05

000024

RTHawk: CBU
Average entration

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.88E-02							3.75E-05		1.00E+00	1.00E+00	3.75E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.39E-04			2.34E-05						1.00E+00	1.00E+00	2.34E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000025

RTHawk: CBU
Average Concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.88E-02	3.75E-05	8.56E-02	4.38E-04	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	2.39E-04	2.34E-05	8.56E-02	2.74E-04	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					7.12E-04

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Water	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Food	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Total					0.00E+00

000026

Anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.38E-01							2.76E-04		1.00E+00	1.00E+00	2.76E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.07E-05			4.97E-06						1.00E+00	1.00E+00	4.97E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Antimony	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.05E+00							1.21E-02		1.00E+00	1.00E+00	1.21E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.04E-03			2.00E-04						1.00E+00	1.00E+00	2.00E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000027

RTHawk: CBU
Average Concentration

Anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.38E-01	2.76E-04	1.00E+01	2.76E-05	
Water	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Food	5.07E-05	4.97E-06	1.00E+01	4.97E-07	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Total					2.81E-05

Antimony	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.05E+00	1.21E-02	5.00E-03	2.42E+00	
Water	0.00E+00	0.00E+00	5.00E-03	0.00E+00	
Food	2.04E-03	2.00E-04	5.00E-03	4.01E-02	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E-03	0.00E+00	
Total					2.46E+00

000028

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.03E-01							6.05E-04		1.00E+00	1.00E+00	6.05E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.25E-02			1.22E-03						1.00E+00	1.00E+00	1.22E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000029

RTHawk: CBU
Average Concentration

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.03E-01	6.05E-04	7.20E-02	8.40E-03	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	1.25E-02	1.22E-03	7.20E-02	1.70E-02	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					2.54E-02

000030

RTHawk: CBU
Average entration

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.55E-01							9.10E-04		1.00E+00	1.00E+00	9.10E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.42E-03			2.37E-04						1.00E+00	1.00E+00	2.37E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.15E-01							6.30E-04		1.00E+00	1.00E+00	6.30E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.92E-03			3.84E-04						1.00E+00	1.00E+00	3.84E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000031

RTHawk: CBU
Average Concentration

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.55E-01	9.10E-04	2.00E-01	4.55E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.42E-03	2.37E-04	2.00E-01	1.18E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					5.73E-03

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.15E-01	6.30E-04	2.00E-01	3.15E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	3.92E-03	3.84E-04	2.00E-01	1.92E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					5.07E-03

000032

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.35E-01							1.07E-03		1.00E+00	1.00E+00	1.07E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.59E-02			2.54E-03						1.00E+00	1.00E+00	2.54E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-01							4.00E-04		1.00E+00	1.00E+00	4.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.43E-02			4.34E-03						1.00E+00	1.00E+00	4.34E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000033

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.35E-01	1.07E-03	2.00E-01	5.35E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.59E-02	2.54E-03	2.00E-01	1.27E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					1.81E-02

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-01	4.00E-04	2.00E-01	2.00E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.43E-02	4.34E-03	2.00E-01	2.17E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.37E-02

000034

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.98E-01							7.95E-04		1.00E+00	1.00E+00	7.95E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.59E-02			3.51E-03						1.00E+00	1.00E+00	3.51E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000035

RTHawk: CBU
Average Concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.98E-01	7.95E-04	2.00E-01	3.98E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	3.59E-02	3.51E-03	2.00E-01	1.76E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.15E-02

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					0.00E+00

000036

Bromomethane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Butyl benzyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.03E-01							1.01E-03		1.00E+00	1.00E+00	1.01E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.95E-04			3.87E-05						1.00E+00	1.00E+00	3.87E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000037

RTHawk: CBU
Average Concentration.

Bromomethane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Water	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Food	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-02	0.00E+00	
Total					0.00E+00

Butyl benzyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.03E-01	1.01E-03	1.59E+00	6.32E-04	
Water	0.00E+00	0.00E+00	1.59E+00	0.00E+00	
Food	3.95E-04	3.87E-05	1.59E+00	2.43E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.59E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.59E+00	0.00E+00	
Total					6.56E-04

000038

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.65E-01							1.93E-03		1.00E+00	1.00E+00	1.93E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.53E-04			2.48E-05						1.00E+00	1.00E+00	2.48E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.50E-02							7.00E-05		1.00E+00	1.00E+00	7.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.90E-07			8.72E-08						1.00E+00	1.00E+00	8.72E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000039

RTHawk: CBU
Average Concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.65E-01	1.93E-03	2.90E-01	6.66E-03	
Water	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Food	2.53E-04	2.48E-05	2.90E-01	8.54E-05	
Inhalation					
Air	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Total					6.74E-03

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.50E-02	7.00E-05	2.00E-01	3.50E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	8.90E-07	8.72E-08	2.00E-01	4.36E-07	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					3.50E-04

000040

RTHawk: CBU
Average entration

Chromium:	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.44E+01							4.88E-02		1.00E+00	1.00E+00	4.88E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.89E-02			2.83E-03						1.00E+00	1.00E+00	2.83E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.95E-01							1.39E-03		1.00E+00	1.00E+00	1.39E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.69E-03			3.62E-04						1.00E+00	1.00E+00	3.62E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000041

RTHawk: CBU
Average Concentration

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.44E+01	4.88E-02	2.00E-01	2.44E-01	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.89E-02	2.83E-03	2.00E-01	1.41E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.58E-01

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.95E-01	1.39E-03	2.00E-01	6.95E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	3.69E-03	3.62E-04	2.00E-01	1.81E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					8.76E-03

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.78E-01							1.16E-03		1.00E+00	1.00E+00	1.16E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.19E-03			1.17E-04						1.00E+00	1.00E+00	1.17E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.90E-02							1.18E-04		1.00E+00	1.00E+00	1.18E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.18E-04			7.04E-05						1.00E+00	1.00E+00	7.04E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000043

RTHawk: CBU
Average Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.78E-01	1.16E-03	4.44E-02	2.60E-02	
Water	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Food	1.19E-03	1.17E-04	4.44E-02	2.63E-03	
Inhalation					
Air	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Total					2.86E-02

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.90E-02	1.18E-04	2.00E-01	5.90E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	7.18E-04	7.04E-05	2.00E-01	3.52E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					9.42E-04

000044

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.40E-02							4.80E-05		1.00E+00	1.00E+00	4.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.13E-06			4.04E-07						1.00E+00	1.00E+00	4.04E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.38E-02							4.75E-05		1.00E+00	1.00E+00	4.75E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.81E-06			3.73E-07						1.00E+00	1.00E+00	3.73E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000045

RTHawk: CBU
Average Concentration

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-02	4.80E-05	2.00E-01	2.40E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.13E-06	4.04E-07	2.00E-01	2.02E-06	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.42E-04

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.38E-02	4.75E-05	1.54E-02	3.08E-03	
Water	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Food	3.81E-06	3.73E-07	1.54E-02	2.43E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Total					3.11E-03

000046

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.10E-03							8.20E-06		1.00E+00	1.00E+00	8.20E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.13E-05			2.09E-06						1.00E+00	1.00E+00	2.09E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000047

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.10E-03	8.20E-06	6.00E-02	1.37E-04	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	2.13E-05	2.09E-06	6.00E-02	3.48E-05	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					1.71E-04

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.25E-03							1.45E-05		1.00E+00	1.00E+00	1.45E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.34E-07			1.31E-08						1.00E+00	1.00E+00	1.31E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.75E-01							1.95E-03		1.00E+00	1.00E+00	1.95E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.72E-03			2.66E-04						1.00E+00	1.00E+00	2.66E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000049

RTHawk: CBU
Average Concentration

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.25E-03	1.45E-05	8.16E-01	1.78E-05	
Water	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Food	1.34E-07	1.31E-08	8.16E-01	1.60E-08	
Inhalation					
Air	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Total					1.78E-05

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.75E-01	1.95E-03	1.25E+01	1.56E-04	
Water	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Food	2.72E-03	2.66E-04	1.25E+01	2.13E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Total					1.77E-04

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.52E-01							3.03E-04		1.00E+00	1.00E+00	3.03E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.99E-05			2.93E-06						1.00E+00	1.00E+00	2.93E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.60E-03							1.52E-05		1.00E+00	1.00E+00	1.52E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.97E-08			5.85E-09						1.00E+00	1.00E+00	5.85E-09
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.52E-01	3.03E-04	1.25E+00	2.42E-04	
Water	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Food	2.99E-05	2.93E-06	1.25E+00	2.34E-06	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Total					2.45E-04

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.60E-03	1.52E-05	8.56E-02	1.78E-04	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	5.97E-08	5.85E-09	8.56E-02	6.84E-08	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					1.78E-04

000052

Indeno(1,2,3-Cd)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.05E-01							4.10E-04		1.00E+00	1.00E+00	4.10E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.22E-01			1.20E-02						1.00E+00	1.00E+00	1.20E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Iron	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000053

RTHawk: CBU
Average Concentration

Indeno(1,2,3-Cd)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.05E-01	4.10E-04	2.00E-01	2.05E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	1.22E-01	1.20E-02	2.00E-01	5.99E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					6.19E-02

Iron	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Water	0.00E+00	0.00E+00	0.00E+00	N/A	
Food	0.00E+00	0.00E+00	0.00E+00	N/A	
Inhalation					
Air	0.00E+00	0.00E+00	0.00E+00	N/A	
Dermal					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Total					0.00E+00

000054

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.44E+01							1.09E-01		1.00E+00	1.00E+00	1.09E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.08E-03			7.91E-04						1.00E+00	1.00E+00	7.91E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000055

RTHawk: CBU
Average Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.44E+01	1.09E-01	3.85E+00	2.83E-02	
Water	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Food	8.08E-03	7.91E-04	3.85E+00	2.06E-04	
Inhalation					
Air	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Total					2.85E-02

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Total					0.00E+00

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.40E-01							6.80E-04		1.00E+00	1.00E+00	6.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.89E-09			2.83E-10						1.00E+00	1.00E+00	2.83E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000057

RTHawk: CBU
Average Concentration

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.40E-01	6.80E-04	1.28E-02	5.31E-02	
Water	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Food	2.89E-09	2.83E-10	1.28E-02	2.21E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Total					5.31E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.00E-03							2.00E-06		1.00E+00	1.00E+00	2.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.32E-10			2.27E-11						1.00E+00	1.00E+00	2.27E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.58E-01							1.12E-03		1.00E+00	1.00E+00	1.12E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.70E-05			1.67E-06						1.00E+00	1.00E+00	1.67E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000059

RTHawk: CBU
Average Concentration

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E-03	2.00E-06	5.85E-01	3.42E-06	
Water	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Food	2.32E-10	2.27E-11	5.85E-01	3.89E-11	
Inhalation					
Air	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Total					3.42E-06

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.58E-01	1.12E-03	4.00E+00	2.79E-04	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	1.70E-05	1.67E-06	4.00E+00	4.18E-07	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					2.79E-04

090000

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.38E+01							6.76E-02		1.00E+00	1.00E+00	6.76E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.85E-02			6.72E-03						1.00E+00	1.00E+00	6.72E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000081

RTHawk: CBU
Average Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.38E+01	6.76E-02	1.55E+01	4.37E-03	
Water	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Food	6.85E-02	6.72E-03	1.55E+01	4.34E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Total					4.80E-03

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Water	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Food	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Total					0.00E+00

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.20E-01							8.40E-04		1.00E+00	1.00E+00	8.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.58E-04			1.55E-05						1.00E+00	1.00E+00	1.55E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.80E-01							1.96E-03		1.00E+00	1.00E+00	1.96E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.93E-03			1.90E-04						1.00E+00	1.00E+00	1.90E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000063

RTHawk: CBU
Average Concentration

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.20E-01	8.40E-04	5.13E-02	1.64E-02	
Water	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Food	1.58E-04	1.55E-05	5.13E-02	3.02E-04	
Inhalation					
Air	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Total					1.67E-02

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.80E-01	1.96E-03	7.50E-01	2.61E-03	
Water	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Food	1.93E-03	1.90E-04	7.50E-01	2.53E-04	
Inhalation					
Air	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Total					2.87E-03

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.84E-09			8.66E-10						1.00E+00	1.00E+00	8.66E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000095

RTHawk: CBU
Average Concentration

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	1.40E-01	2.86E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	8.84E-09	8.66E-10	1.40E-01	6.19E-09	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					2.86E-05

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.84E-09			8.66E-10						1.00E+00	1.00E+00	8.66E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000067

RTHawk: CBU
Average Concentration

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	1.40E-01	2.86E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	8.84E-09	8.66E-10	1.40E-01	6.19E-09	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					2.86E-05

000068

Vanadium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.03E+02							2.06E-01		1.00E+00	1.00E+00	2.06E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.70E-02			8.53E-03						1.00E+00	1.00E+00	8.53E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Vinyl acetate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000069

RTHawk: CBU
Average Concentration

Vanadium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.03E+02	2.06E-01	2.28E+00	9.05E-02	
Water	0.00E+00	0.00E+00	2.28E+00	0.00E+00	
Food	8.70E-02	8.53E-03	2.28E+00	3.75E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.28E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.28E+00	0.00E+00	
Total					9.43E-02

Vinyl acetate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Water	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Food	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.77E+01	0.00E+00	
Total					0.00E+00

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.27E-02							1.25E-04		1.00E+00	1.00E+00	1.25E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.75E-02			1.71E-03						1.00E+00	1.00E+00	1.71E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.50E+02							5.00E-01		1.00E+00	1.00E+00	5.00E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.29E+01			1.27E+00						1.00E+00	1.00E+00	1.27E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000071

RTHawk: CBU
Average Concentration

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.27E-02	1.25E-04	2.06E-01	6.08E-04	
Water	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Food	1.75E-02	1.71E-03	2.06E-01	8.31E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Total					8.92E-03

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.50E+02	5.00E-01	1.20E+00	4.17E-01	
Water	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Food	1.29E+01	1.27E+00	1.20E+00	1.06E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Total					1.47E+00

APPENDIX I.2

SITE 2 - AREA A LANDFILL

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR THE SHREW
BASED ON ACUTE DOSES AND MAXIMUM AND AVERAGE EXPOSURE CONCENTRATIONS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Chemical	Maximum Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Maximum Acute HI
OCDD	7.3E+06	2.0E-07	1.5E+00	6.0E-04	2.5E+03
Aroclor 1260	1.3E+02	5.4E-02	7.2E+00	1.4E+01	5.3E-01
Xylenes, total	1.1E+02	4.1E-01	4.5E+01	2.1E+01	2.2E+00
Beryllium	4.5E+01	2.6E-02	2.2E-01	6.6E+00	1.5E-01

Chemical	Highest Average Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Highest Average Acute HI
OCDD	6.1E+06	2.0E-07	1.2E+00	6.0E-04	2.1E+03
Lead	1.0E+01	1.6E+00	1.6E+01	5.0E+01	3.2E-01
Xylenes	7.8E+00	4.1E-01	3.2E+00	2.1E+01	1.6E-01
Barium	6.3E+00	1.0E+00	6.4E+00	1.4E+02	3.6E-02

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR THE RED-TAILED HAWK
BASED ON ACUTE DOSES AND MAXIMUM AND AVERAGE EXPOSURE CONCENTRATIONS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Chemical	Maximum Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Maximum Acute HI
OCDD	4.9E+03	2.8E-06	1.4E-02	1.0E-01	1.4E-01
4,4'-DDT	5.0E+02	1.1E-04	5.6E-03	2.1E+01	2.6E-04
4,4'-DDD	5.0E+01	1.1E-04	5.6E-02	3.0E+01	1.8E-03
Xylenes	2.2E+01	2.6E-01	4.6E+00	2.1E+01	2.2E-01

Chemical	Highest Average Chronic HI	Derived NOAEL (mg/kg/d)	Acute Dose (mg/kg/d)	Acute Threshold (mg/kg/d)	Highest Average Acute HI
OCDD	4.0E+03	2.8E-06	1.1E-02	1.0E-01	1.1E-01
4,4'-DDT	4.1E+01	1.1E-04	4.6E-03	2.1E+01	4.7E-02
4,4'-DDD	1.2E+01	1.1E-04	1.3E-03	3.0E+01	4.3E-05
4,4'-DDE	6.4E+00	1.1E-04	7.2E-04	3.4E+00	2.1E-04

000002

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON MAXIMUM CONCENTRATIONS IN SOILS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Compound	Maximum Exposure Point Concentration (mg/kg)		Background Screening Value (mg/kg)	Exceeds Background Screening Value	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Inorganic Chemicals							
Aluminum	8.06E+3	b	1.76E+4		5.00E+1	X	1.6E+2
Arsenic	2.50E+0	b	3.60E+0		1.00E+1		
Barium	1.99E+2		3.90E+1	X	5.00E+2		
Beryllium	1.20E+0	b	7.20E-1	X	1.00E+1		
Cadmium	4.70E+0		2.40E-1	X	3.00E+0	X	1.6E+0
Calcium	3.68E+3	b	3.14E+2	X			
Chromium	1.72E+1	b	1.93E+1		1.00E+0	X	1.7E+1
Cobalt	8.20E+0	b	7.00E+0	X	2.00E+1		
Copper	7.94E+2	b	1.79E+1	X	1.00E+2	X	7.9E+0
Cyanide	2.20E-1						
Iron	1.20E+4	b	1.68E+4				
Lead	3.67E+2	b	1.75E+1	X	5.00E+1	X	7.3E+0
Magnesium	3.96E+3		2.46E+3	X			
Manganese	2.12E+2	b	1.72E+2	X	5.00E+2		
Mercury	6.10E-1		5.50E-2	X	3.00E-1	X	2.0E+0
Nickel	3.36E+1	b	5.00E+0	X	3.00E+1	X	1.1E+0
Potassium	1.66E+3	b	6.69E+2	X			
Selenium	4.70E-1		4.45E-1	X	1.00E+0		
Sodium	8.30E+2	b	1.66E+1	X			
Vanadium	2.49E+1	b	3.33E+1		2.00E+0	X	1.2E+1
Zinc	2.14E+3	b	2.56E+1	X	5.00E+1	X	4.3E+1

Notes:
a = Maximum Exposure Point Concentration replaced with 95% UCL (Normal Distribution) Concentration.
b = Maximum Exposure Point Concentration replaced with 95% UCL (Lognormal Distribution) Concentration.

000003

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON MAXIMUM CONCENTRATIONS IN SOILS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Compound	Maximum Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Organic Chemicals				
2-Butanone	2.00E-3			
4,4'-DDD	2.30E-1			
4,4'-DDE	6.70E-2			
4,4'-DDT	2.30E+0			
Acetone	1.50E-2			
Aldrin	5.60E-4			
Alpha-Chlordane	3.90E-2			
Aroclor-1254	4.90E-1	4.00E+1		
Aroclor-1260	1.20E+1	4.00E+1		
Benzo(a)anthracene	2.00E-1			
Benzo(a)pyrene	1.90E-1			
Benzo(b)fluoranthene	2.20E-1			
Benzo(g,h,i)perylene	4.40E-2			
Benzo(k)fluoranthene	2.10E-1			
Bis(2-Ethylhexyl)phthalate	3.90E-1			
Chlorobenzene	4.50E+0			
Chrysene	1.90E-1			
Di-N-butyl phthalate	6.10E-2	2.00E+2		
Dieldrin	7.50E-3			
Endosulfan ii	2.00E-3			
Endrin	2.40E-3			
Endrin aldehyde	1.90E-2			
Endrin ketone	5.70E-1			
Ethylbenzene	1.40E+1			
Fluoranthene	3.00E-1			
Gamma-Chlordane	6.10E-2			

000004

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON MAXIMUM CONCENTRATIONS IN SOILS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Compound	Maximum Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Methoxychlor	1.90E-2			
Methylene chloride	6.00E-3			
Phenanthrene	1.50E-1			
Pyrene	1.10E+0			
Tetrachloroethene	4.00E-3			
Toluene	1.60E-2	2.00E+2		
Trichloroethene	2.00E-3			
Xylenes, total	7.50E+1	1.00E+2		

000005

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON AVERAGE CONCENTRATIONS IN SOILS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Compound	Average Exposure Point Concentration (mg/kg)	Background Screening Value (mg/kg)	Exceeds Background Screening Value	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Inorganic Chemicals						
Aluminum	7.19E+3	1.76E+4		5.00E+1	X	1.4E+2
Arsenic	1.57E+0	3.60E+0		1.00E+1		
Barium	6.04E+1	3.90E+1	X	5.00E+2		
Beryllium	7.60E-1	7.20E-1	X	1.00E+1		
Cadmium	1.88E+0	2.40E-1	X	3.00E+0		
Calcium	2.38E+3	3.14E+2	X			
Chromium	1.41E+1	1.93E+1		1.00E+0	X	1.4E+1
Cobalt	6.87E+0	7.00E+0		2.00E+1		
Copper	1.24E+2	1.79E+1	X	1.00E+2	X	1.2E+0
Cyanide	2.20E-1					
Iron	1.10E+4	1.68E+4				
Lead	8.19E+1	1.75E+1	X	5.00E+1	X	1.6E+0
Magnesium	2.68E+3	2.46E+3	X			
Manganese	1.81E+2	1.72E+2	X	5.00E+2		
Mercury	9.46E-2	5.50E-2	X	3.00E-1		
Nickel	1.94E+1	5.00E+0	X	3.00E+1		
Potassium	1.50E+3	6.69E+2	X			
Selenium	1.98E-1	4.45E-1		1.00E+0		
Sodium	3.05E+2	1.66E+1	X			
Vanadium	2.16E+1	3.33E+1		2.00E+0	X	1.1E+1
Zinc	5.58E+2	2.56E+1	X	5.00E+1	X	1.1E+1

000006

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION BASED ON AVERAGE CONCENTRATIONS IN SOILS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Compound	Average Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Organic Chemicals				
2-Butanone	2.00E-3			
4,4'-DDD	5.48E-2			
4,4'-DDE	2.98E-2			
4,4'-DDT	1.92E-1			
Acetone	1.50E-2			
Aldrin	5.60E-4			
Alpha-Chlordane	3.90E-2			
Aroclor-1254	2.19E-1	4.00E+1		
Aroclor-1260	9.79E-1	4.00E+1		
Benzo(a)anthracene	2.00E-1			
Benzo(a)pyrene	1.90E-1			
Benzo(b)fluoranthene	2.20E-1			
Benzo(g,h,i)perylene	4.40E-2			
Benzo(k)fluoranthene	2.10E-1			
Bis(2-Ethylhexyl)phthalate	3.90E-1			
Chlorobenzene	3.29E-1			
Chrysene	1.90E-1			
Di-N-butyl phthalate	6.10E-2	2.00E+2		
Dieldrin	7.50E-3			
Endosulfan ii	2.00E-3			
Endrin	2.40E-3			
Endrin aldehyde	3.75E-3			
Endrin ketone	4.94E-2			
Ethylbenzene	1.00E+0			
Fluoranthene	3.00E-1			
Gamma-Chlordane	6.10E-2			

000007

IDENTIFICATION OF CONTRIBUTORS TO RISK FOR TERRESTRIAL VEGETATION
BASED ON AVERAGE CONCENTRATIONS IN SOILS
SITE 2 - AREA A LANDFILL
NSB-NLON, GROTON, CONNECTICUT

Compound	Average Exposure Point Concentration (mg/kg)	Phytotoxicity Benchmark Values (mg/kg)	Exceeds Phytotoxicity Benchmark Value	Exposure Point Hazard Quotient
Methoxychlor	1.90E-2			
Methylene chloride	6.00E-3			
Phenanthrene	1.50E-1			
Pyrene	1.10E+0			
Tetrachloroethene	4.00E-3			
Toluene	1.60E-2	2.00E+2		
Trichloroethene	2.00E-3			
Xylenes, total	5.36E+0	1.00E+2		

000008

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
Area A Landfill
Maximum Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
1,1,2,2-Tetrachloroethane	2.39E+00	2.23E+02	4.50E-03	0.00E+00	0.00E+00	7.83E+00	0.00E+00	6.73E+00	0.00E+00	6.15E-06	0.00E+00
1,1,2-Trichloroethane	2.17E+00	1.36E+02	4.50E-03	0.00E+00	0.00E+00	7.27E+00	0.00E+00	6.73E+00	0.00E+00	3.72E-06	0.00E+00
1,1-Dichloroethene	1.48E+00	2.85E+01	4.50E-03	0.00E+00	0.00E+00	8.62E+00	0.00E+00	6.73E+00	0.00E+00	7.59E-07	0.00E+00
1,2-Dichloroethene (total)	1.48E+00	2.85E+01	4.50E-03	0.00E+00	0.00E+00	8.62E+00	0.00E+00	6.73E+00	0.00E+00	7.59E-07	0.00E+00
1,4-Dichlorobenzene	3.39E+00	2.15E+03	4.50E-03	0.00E+00	0.00E+00	3.37E+00	0.00E+00	6.73E+00	0.00E+00	6.17E-05	0.00E+00
2-Butanone	2.60E-01	1.80E+00	4.50E-03	2.00E-03	2.47E-01	1.00E+01	2.47E-02	6.73E+00	2.69E-03	4.57E-08	1.03E-10
2-Methylnaphthalene	3.86E+00	6.23E+03	4.50E-03	0.00E+00	0.00E+00	2.34E+00	0.00E+00	6.73E+00	0.00E+00	1.82E-04	0.00E+00
3,3'-Dichlorobenzidine	3.51E+00	2.82E+03	4.50E-03	0.00E+00	0.00E+00	5.34E+00	0.00E+00	6.73E+00	0.00E+00	8.11E-05	0.00E+00
4,4'-DDD	5.99E+00	7.73E+05	4.50E-03	2.30E-01	6.61E-05	1.00E+01	6.61E-06	6.73E+00	3.10E-01	2.00E-01	5.19E-02
4,4'-DDE	5.69E+00	3.92E+05	4.50E-03	6.70E-02	3.80E-05	1.00E+01	3.80E-06	6.73E+00	9.02E-02	2.00E-01	1.51E-02
4,4'-DDT	6.19E+00	1.22E+06	4.50E-03	2.30E+00	4.20E-04	1.00E+01	4.20E-05	6.73E+00	3.10E+00	2.00E-01	5.19E-01
4-Methyl-2-pentanone	1.09E+00	1.18E+01	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	3.09E-07	0.00E+00
Acenaphthene	3.92E+00	7.14E+03	4.50E-03	0.00E+00	0.00E+00	2.43E+00	0.00E+00	6.73E+00	0.00E+00	2.09E-04	0.00E+00
Acenaphthylene	4.07E+00	1.00E+04	4.50E-03	0.00E+00	0.00E+00	2.16E+00	0.00E+00	6.73E+00	0.00E+00	2.95E-04	0.00E+00
Acetone	-2.40E-01	5.81E-01	4.50E-03	1.50E-02	5.73E+00	6.09E+00	9.41E-01	6.73E+00	2.02E-02	1.45E-08	2.45E-10
Aldrin	5.11E+00	1.06E+05	4.50E-03	5.60E-04	1.18E-06	1.00E+01	1.18E-07	6.73E+00	7.54E-04	3.24E-03	2.05E-06
Alpha-Chlordane	5.99E+00	7.73E+05	4.50E-03	3.90E-02	1.12E-05	1.00E+01	1.12E-06	6.73E+00	5.25E-02	2.45E-02	1.08E-03
Aluminum	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	1.50E-03	0.00E+00
Anthracene	4.45E+00	2.37E+04	4.50E-03	0.00E+00	0.00E+00	1.93E+00	0.00E+00	6.73E+00	0.00E+00	7.08E-04	0.00E+00
Antimony	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	1.00E-03	0.00E+00
Aroclor-1248	6.20E+00	1.24E+06	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	3.97E-02	0.00E+00
Aroclor-1254	6.50E+00	2.45E+06	4.50E-03	4.90E-01	4.44E-05	1.00E+01	4.44E-06	6.73E+00	6.60E-01	7.94E-02	4.39E-02
Aroclor-1260	6.80E+00	4.84E+06	4.50E-03	1.20E+01	5.51E-04	1.00E+01	5.51E-05	6.73E+00	1.62E+01	1.59E-01	2.15E+00
Arsenic	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	6.00E+01	0.00E+00	1.00E+00	0.00E+00	2.00E-03	0.00E+00
Barium	0.00E+00	1.00E+00	4.50E-03	1.99E+02	4.42E+04	*	*	1.00E+00	3.98E+01	1.50E-04	1.01E-02
Benzene	1.13E+00	1.29E+01	4.50E-03	0.00E+00	0.00E+00	8.90E+00	0.00E+00	6.73E+00	0.00E+00	3.39E-07	0.00E+00
Benzo(a)anthracene	5.61E+00	3.27E+05	4.50E-03	2.00E-01	1.36E-04	1.00E+01	1.36E-05	6.73E+00	2.69E-01	1.02E-02	2.31E-03
Benzo(a)pyrene	5.98E+00	7.56E+05	4.50E-03	1.90E-01	5.58E-05	1.00E+01	5.58E-06	6.73E+00	2.56E-01	2.40E-02	5.15E-03
Benzo(b)fluoranthene	6.57E+00	2.87E+06	4.50E-03	2.20E-01	1.70E-05	1.00E+01	1.70E-06	6.73E+00	2.96E-01	9.33E-02	2.32E-02
Benzo(g,h,i)perylene	7.23E+00	1.28E+07	4.50E-03	4.40E-02	7.64E-07	1.00E+01	7.64E-08	6.73E+00	5.93E-02	4.27E-01	2.12E-02
Benzo(k)fluoranthene	6.84E+00	5.30E+06	4.50E-03	2.10E-01	8.81E-06	1.00E+01	8.81E-07	6.73E+00	2.83E-01	1.74E-01	4.12E-02
Benzoic acid	1.73E+00	5.02E+01	4.50E-03	0.00E+00	0.00E+00	9.10E+00	0.00E+00	6.73E+00	0.00E+00	1.35E-06	0.00E+00
Beryllium	0.00E+00	1.00E+00	4.50E-03	1.20E+00	2.66E+02	NA	NA	1.00E+00	2.40E-01	1.00E-03	4.06E-04
Bis(2-ethylhexyl)phthalate	5.30E+00	1.62E+05	4.50E-03	3.90E-01	5.34E-04	NA	NA	6.73E+00	5.25E-01	5.01E-03	2.21E-03
Boron	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	8.00E-04	0.00E+00
Bromodichloromethane	1.88E+00	7.06E+01	4.50E-03	0.00E+00	0.00E+00	4.95E-01	0.00E+00	6.73E+00	0.00E+00	1.91E-06	0.00E+00
Bromomethane	1.10E+00	1.21E+01	4.50E-03	0.00E+00	0.00E+00	2.71E+00	0.00E+00	6.73E+00	0.00E+00	3.16E-07	0.00E+00
Butyl benzyl phthalate	4.78E+00	5.00E+04	4.50E-03	0.00E+00	0.00E+00	NA	NA	6.73E+00	0.00E+00	1.51E-03	0.00E+00
Cadmium	0.00E+00	1.00E+00	4.50E-03	4.70E+00	1.04E+03	5.00E+01	9.40E-02	2.00E+00	1.88E+00	5.50E-04	1.23E-03
Carbazole	3.29E+00	1.72E+03	4.50E-03	0.00E+00	0.00E+00	4.12E+00	0.00E+00	6.73E+00	0.00E+00	4.90E-05	0.00E+00

Soil Organic Content (mg/kg): 4,500
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 0.45
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
Area A Landfill
Maximum Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Carbon disulfide	2.16E+00	1.33E+02	4.50E-03	0.00E+00	0.00E+00	4.18E+00	0.00E+00	6.73E+00	0.00E+00	3.63E-06	0.00E+00
Chlorobenzene	2.84E+00	6.19E+02	4.50E-03	4.50E+00	1.61E+00	3.81E+00	4.23E-01	6.73E+00	6.06E+00	1.74E-05	8.83E-05
Chloroform	1.97E+00	8.64E+01	4.50E-03	0.00E+00	0.00E+00	7.50E+00	0.00E+00	6.73E+00	0.00E+00	2.34E-06	0.00E+00
Chloromethane	9.10E-01	7.85E+00	4.50E-03	0.00E+00	0.00E+00	6.78E+00	0.00E+00	6.73E+00	0.00E+00	2.04E-07	0.00E+00
Chromium	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	2.50E+01	0.00E+00	1.00E+00	0.00E+00	3.50E-03	0.00E+00
Chrysene	5.61E+00	3.27E+05	4.50E-03	1.90E-01	1.29E-04	*	*	6.73E+00	2.56E-01	1.02E-02	2.20E-03
Cis-1,3-dichloropropene	1.41E+00	2.43E+01	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	6.46E-07	0.00E+00
Cobalt	0.00E+00	1.00E+00	4.50E-03	8.20E+00	1.82E+03	*	*	1.00E+00	1.64E+00	2.00E-02	5.54E-02
Copper	0.00E+00	1.00E+00	4.50E-03	7.94E+02	1.76E+05	3.00E+01	2.65E+01	9.30E-01	1.48E+02	1.00E-02	2.61E+00
Cyanide	0.00E+00	1.00E+00	4.50E-03	2.20E-01	4.89E+01	NA	NA	1.00E+00	4.40E-02	1.00E-01	7.44E-03
Di-n-butylphthalate	5.20E+00	1.29E+05	4.50E-03	6.10E-02	1.05E-04	NA	NA	6.73E+00	8.22E-02	3.98E-03	2.74E-04
Dibenzo(a,h)anthracene	5.97E+00	7.39E+05	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	2.34E-02	0.00E+00
Dibenzofuran	4.12E+00	1.12E+04	4.50E-03	0.00E+00	0.00E+00	2.30E+00	0.00E+00	6.73E+00	0.00E+00	3.31E-04	0.00E+00
Dieldrin	4.09E+00	1.05E+04	4.50E-03	7.50E-03	1.59E-04	5.32E+00	2.99E-05	6.73E+00	1.01E-02	3.09E-04	2.62E-06
Diethyl phthalate	2.96E+00	8.13E+02	4.50E-03	0.00E+00	0.00E+00	NA	NA	6.73E+00	0.00E+00	2.29E-05	0.00E+00
Endosulfan ii	3.62E+00	3.62E+03	4.50E-03	2.00E-03	1.23E-04	7.93E+00	1.55E-05	6.73E+00	2.69E-03	1.05E-04	2.37E-07
Endosulfan sulfate	3.65E+00	3.87E+03	4.50E-03	0.00E+00	0.00E+00	7.93E+00	0.00E+00	6.73E+00	0.00E+00	1.12E-04	0.00E+00
Endrin	5.60E+00	3.20E+05	4.50E-03	2.40E-03	1.67E-06	1.00E+01	1.67E-07	6.73E+00	3.23E-03	1.00E-02	2.71E-05
Endrin aldehyde	5.60E+00	3.20E+05	4.50E-03	1.90E-02	1.32E-05	1.00E+01	1.32E-06	6.73E+00	2.56E-02	1.00E-02	2.15E-04
Endrin ketone	5.60E+00	3.20E+05	4.50E-03	5.70E-01	3.96E-04	1.00E+01	3.96E-05	6.73E+00	7.68E-01	1.00E-02	6.44E-03
Ethylbenzene	3.15E+00	1.25E+03	4.50E-03	1.40E+01	2.49E+00	2.89E+00	8.62E-01	6.73E+00	1.89E+01	3.55E-05	5.61E-04
Fluoranthene	5.33E+00	1.74E+05	4.50E-03	3.00E-01	3.84E-04	1.00E+01	3.84E-05	6.73E+00	4.04E-01	5.37E-03	1.82E-03
Fluorene	4.18E+00	1.29E+04	4.50E-03	0.00E+00	0.00E+00	2.18E+00	0.00E+00	6.73E+00	0.00E+00	3.80E-04	0.00E+00
Gamma-Chlordane	2.78E+00	5.41E+02	4.50E-03	6.10E-02	2.51E-02	1.00E+01	2.51E-03	6.73E+00	8.22E-02	1.51E-05	1.04E-06
Heptachlor	4.40E+00	2.12E+04	4.50E-03	0.00E+00	0.00E+00	4.19E+00	0.00E+00	6.73E+00	0.00E+00	6.31E-04	0.00E+00
Heptachlor epoxide	3.65E+00	3.87E+03	4.50E-03	0.00E+00	0.00E+00	4.19E+00	0.00E+00	6.73E+00	0.00E+00	1.12E-04	0.00E+00
Indeno(1,2,3-Cd)pyrene	7.66E+00	3.39E+07	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	1.15E+00	0.00E+00
Iron	0.00E+00	1.00E+00	4.50E-03	1.20E+04	2.66E+06	*	*	1.00E+00	2.40E+03	2.00E-02	8.11E+01
Lead	0.00E+00	1.00E+00	4.50E-03	3.67E+02	8.15E+04	5.94E+01	6.18E+00	1.24E+00	9.10E+01	4.00E-04	5.45E-02
Manganese	0.00E+00	1.00E+00	4.50E-03	2.12E+02	4.71E+04	*	*	1.00E+00	4.24E+01	2.70E-02	1.93E+00
Mercury	0.00E+00	1.00E+00	4.50E-03	6.10E-01	1.35E+02	2.16E+00	2.82E-01	1.00E+00	1.22E-01	2.51E-08	5.18E-09
Methoxychlor	4.68E+00	3.99E+04	4.50E-03	1.90E-02	1.06E-04	3.18E+00	3.33E-05	6.73E+00	2.56E-02	1.20E-03	2.58E-05
Methylene chloride	1.25E+00	1.69E+01	4.50E-03	6.00E-03	7.87E-02	6.78E+00	1.16E-02	6.73E+00	8.08E-03	4.47E-07	3.03E-09
Naphthalene	3.37E+00	2.06E+03	4.50E-03	0.00E+00	0.00E+00	2.98E+00	0.00E+00	6.73E+00	0.00E+00	5.89E-05	0.00E+00
Nickel	0.00E+00	1.00E+00	4.50E-03	3.36E+01	7.46E+03	4.00E+02	8.40E-02	1.00E+00	6.72E+00	6.00E-03	6.81E-02
OCDD	6.10E+00	9.92E+05	4.50E-03	2.50E+00	5.60E-04	*	*	6.73E+00	3.37E+00	3.16E-02	8.93E-02
Phenanthrene	4.46E+00	2.42E+04	4.50E-03	1.50E-01	1.38E-03	1.92E+00	7.18E-04	6.73E+00	2.02E-01	7.24E-04	1.23E-04
Pyrene	5.18E+00	1.24E+05	4.50E-03	1.10E+00	1.98E-03	1.00E+01	1.98E-04	6.73E+00	1.48E+00	3.80E-03	4.72E-03
Selenium	0.00E+00	1.00E+00	4.50E-03	4.70E-01	1.04E+02	7.00E+01	6.71E-03	1.00E+00	9.40E-02	1.50E-02	2.38E-03
Silver	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	3.00E-03	0.00E+00

Soil Organic Content (mg/kg): 4,500
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 0.45
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

000010

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
Area A Landfill
Maximum Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Styrene	3.16E+00	1.27E+03	4.50E-03	0.00E+00	0.00E+00	2.82E+00	0.00E+00	6.73E+00	0.00E+00	3.62E-05	0.00E+00
Tetrachloroethene	2.53E+00	3.07E+02	4.50E-03	4.00E-03	2.89E-03	7.00E+00	4.13E-04	6.73E+00	5.39E-03	8.51E-06	3.84E-08
Thallium	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	4.00E-02	0.00E+00
Toluene	2.69E+00	4.41E+02	4.50E-03	1.60E-02	8.06E-03	3.48E+00	2.32E-03	6.73E+00	2.15E-02	1.23E-05	2.22E-07
Trans-1,3-dichloropropene	1.41E+00	2.43E+01	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	6.46E-07	0.00E+00
Trichloroethene	2.53E+00	3.07E+02	4.50E-03	2.00E-03	1.45E-03	5.55E+00	2.61E-04	6.73E+00	2.69E-03	8.51E-06	1.92E-08
Vanadium	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.50E-03	0.00E+00
Vinyl acetate	3.00E-01	1.97E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	6.73E+00	0.00E+00	5.01E-08	0.00E+00
Xylenes, total	7.33E+00	1.61E+07	4.50E-03	7.50E+01	1.04E-03	NA	NA	6.73E+00	1.01E+02	5.37E-01	4.55E+01
Zinc	0.00E+00	1.00E+00	4.50E-03	2.14E+03	4.75E+05	5.00E+03	4.28E-01	2.30E+00	9.84E+02	1.00E-01	1.11E+02

Soil Organic Content (mg/kg): 4,500
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 0.45
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
Area A Landfill
Average Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
1,1,2,2-Tetrachloroethane	2.39E+00	2.23E+02	4.50E-03	0.00E+00	0.00E+00	7.83E+00	0.00E+00	6.73E+00	0.00E+00	6.15E-06	0.00E+00
1,1,2-Trichloroethane	2.17E+00	1.36E+02	4.50E-03	0.00E+00	0.00E+00	7.27E+00	0.00E+00	6.73E+00	0.00E+00	3.72E-06	0.00E+00
1,1-Dichloroethene	1.48E+00	2.85E+01	4.50E-03	0.00E+00	0.00E+00	8.62E+00	0.00E+00	6.73E+00	0.00E+00	7.59E-07	0.00E+00
1,2-Dichloroethene (total)	1.48E+00	2.85E+01	4.50E-03	0.00E+00	0.00E+00	8.62E+00	0.00E+00	6.73E+00	0.00E+00	7.59E-07	0.00E+00
1,4-Dichlorobenzene	3.39E+00	2.15E+03	4.50E-03	0.00E+00	0.00E+00	3.37E+00	0.00E+00	6.73E+00	0.00E+00	6.17E-05	0.00E+00
2-Butanone	2.60E-01	1.80E+00	4.50E-03	2.00E-03	2.47E-01	1.00E+01	2.47E-02	6.73E+00	2.69E-03	4.57E-08	1.03E-10
2-Methylnaphthalene	3.86E+00	6.23E+03	4.50E-03	0.00E+00	0.00E+00	2.34E+00	0.00E+00	6.73E+00	0.00E+00	1.82E-04	0.00E+00
3,3'-Dichlorobenzidine	3.51E+00	2.82E+03	4.50E-03	0.00E+00	0.00E+00	5.34E+00	0.00E+00	6.73E+00	0.00E+00	8.11E-05	0.00E+00
4,4'-DDD	5.99E+00	7.73E+05	4.50E-03	5.48E-02	1.57E-05	1.00E+01	1.57E-06	6.73E+00	7.38E-02	2.00E-01	1.24E-02
4,4'-DDE	5.69E+00	3.92E+05	4.50E-03	2.98E-02	1.69E-05	1.00E+01	1.69E-06	6.73E+00	4.01E-02	2.00E-01	6.72E-03
4,4'-DDT	6.19E+00	1.22E+06	4.50E-03	1.92E-01	3.51E-05	1.00E+01	3.51E-06	6.73E+00	2.59E-01	2.00E-01	4.34E-02
4-Methyl-2-pentanone	1.09E+00	1.18E+01	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	3.09E-07	0.00E+00
Acenaphthene	3.92E+00	7.14E+03	4.50E-03	0.00E+00	0.00E+00	2.43E+00	0.00E+00	6.73E+00	0.00E+00	2.09E-04	0.00E+00
Acenaphthylene	4.07E+00	1.00E+04	4.50E-03	0.00E+00	0.00E+00	2.16E+00	0.00E+00	6.73E+00	0.00E+00	2.95E-04	0.00E+00
Acetone	-2.40E-01	5.81E-01	4.50E-03	1.50E-02	5.73E+00	6.09E+00	9.41E-01	6.73E+00	2.02E-02	1.45E-08	2.45E-10
Aldrin	5.11E+00	1.06E+05	4.50E-03	5.60E-04	1.18E-06	1.00E+01	1.18E-07	6.73E+00	7.54E-04	3.24E-03	2.05E-06
Alpha-Chlordane	5.99E+00	7.73E+05	4.50E-03	3.90E-02	1.12E-05	1.00E+01	1.12E-06	6.73E+00	5.25E-02	2.45E-02	1.08E-03
Aluminum	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	1.50E-03	0.00E+00
Anthracene	4.45E+00	2.37E+04	4.50E-03	0.00E+00	0.00E+00	1.93E+00	0.00E+00	6.73E+00	0.00E+00	7.08E-04	0.00E+00
Antimony	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	1.00E-03	0.00E+00
Aroclor-1248	6.20E+00	1.24E+06	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	3.97E-02	0.00E+00
Aroclor-1254	6.50E+00	2.45E+06	4.50E-03	2.19E-01	1.99E-05	1.00E+01	1.99E-06	6.73E+00	2.95E-01	7.94E-02	1.97E-02
Aroclor-1260	6.80E+00	4.84E+06	4.50E-03	9.79E-01	4.49E-05	1.00E+01	4.49E-06	6.73E+00	1.32E+00	1.59E-01	1.75E-01
Arsenic	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	6.00E+01	0.00E+00	1.00E+00	0.00E+00	2.00E-03	0.00E+00
Barium	0.00E+00	1.00E+00	4.50E-03	6.04E+01	1.34E+04	*	*	1.00E+00	1.21E+01	1.50E-04	3.06E-03
Benzene	1.13E+00	1.29E+01	4.50E-03	0.00E+00	0.00E+00	8.90E+00	0.00E+00	6.73E+00	0.00E+00	3.39E-07	0.00E+00
Benzo(a)anthracene	5.61E+00	3.27E+05	4.50E-03	2.00E-01	1.36E-04	1.00E+01	1.36E-05	6.73E+00	2.69E-01	1.02E-02	2.31E-03
Benzo(a)pyrene	5.98E+00	7.56E+05	4.50E-03	1.90E-01	5.58E-05	1.00E+01	5.58E-06	6.73E+00	2.56E-01	2.40E-02	5.15E-03
Benzo(b)fluoranthene	6.57E+00	2.87E+06	4.50E-03	2.20E-01	1.70E-05	1.00E+01	1.70E-06	6.73E+00	2.96E-01	9.33E-02	2.32E-02
Benzo(g,h,i)perylene	7.23E+00	1.28E+07	4.50E-03	4.40E-02	7.64E-07	1.00E+01	7.64E-08	6.73E+00	5.93E-02	4.27E-01	2.12E-02
Benzo(k)fluoranthene	6.84E+00	5.30E+06	4.50E-03	2.10E-01	8.81E-06	1.00E+01	8.81E-07	6.73E+00	2.83E-01	1.74E-01	4.12E-02
Benzoic acid	1.73E+00	5.02E+01	4.50E-03	0.00E+00	0.00E+00	9.10E+00	0.00E+00	6.73E+00	0.00E+00	1.35E-06	0.00E+00
Beryllium	0.00E+00	1.00E+00	4.50E-03	7.60E-01	1.69E+02	NA	NA	1.00E+00	1.52E-01	1.00E-03	2.57E-04
Bis(2-ethylhexyl)phthalate	5.30E+00	1.62E+05	4.50E-03	3.90E-01	5.34E-04	NA	NA	6.73E+00	5.25E-01	5.01E-03	2.21E-03
Boron	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	8.00E-04	0.00E+00
Bromodichloromethane	1.88E+00	7.06E+01	4.50E-03	0.00E+00	0.00E+00	4.95E-01	0.00E+00	6.73E+00	0.00E+00	1.91E-06	0.00E+00
Bromomethane	1.10E+00	1.21E+01	4.50E-03	0.00E+00	0.00E+00	2.71E+00	0.00E+00	6.73E+00	0.00E+00	3.16E-07	0.00E+00
Butyl benzyl phthalate	4.78E+00	5.00E+04	4.50E-03	0.00E+00	0.00E+00	NA	NA	6.73E+00	0.00E+00	1.51E-03	0.00E+00
Cadmium	0.00E+00	1.00E+00	4.50E-03	1.88E+00	4.18E+02	5.00E+01	3.76E-02	2.00E+00	7.52E-01	5.50E-04	4.92E-04
Carbazole	3.29E+00	1.72E+03	4.50E-03	0.00E+00	0.00E+00	4.12E+00	0.00E+00	6.73E+00	0.00E+00	4.90E-05	0.00E+00

Soil Organic Content (mg/kg): 4500
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 0.45
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

000012

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
Area A Landfill
Average Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Carbon disulfide	2.16E+00	1.33E+02	4.50E-03	0.00E+00	0.00E+00	4.18E+00	0.00E+00	6.73E+00	0.00E+00	3.63E-06	0.00E+00
Chlorobenzene	2.84E+00	6.19E+02	4.50E-03	3.29E-01	1.18E-01	3.81E+00	3.09E-02	6.73E+00	4.43E-01	1.74E-05	6.45E-06
Chloroform	1.97E+00	8.64E+01	4.50E-03	0.00E+00	0.00E+00	7.50E+00	0.00E+00	6.73E+00	0.00E+00	2.34E-06	0.00E+00
Chloromethane	9.10E-01	7.85E+00	4.50E-03	0.00E+00	0.00E+00	6.78E+00	0.00E+00	6.73E+00	0.00E+00	2.04E-07	0.00E+00
Chromium	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	2.50E+01	0.00E+00	1.00E+00	0.00E+00	3.50E-03	0.00E+00
Chrysene	5.61E+00	3.27E+05	4.50E-03	1.90E-01	1.29E-04	*	*	6.73E+00	2.56E-01	1.02E-02	2.20E-03
Cis-1,3-dichloropropene	1.41E+00	2.43E+01	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	6.46E-07	0.00E+00
Cobalt	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.00E-02	0.00E+00
Copper	0.00E+00	1.00E+00	4.50E-03	1.24E+02	2.76E+04	3.00E+01	4.15E+00	9.30E-01	2.31E+01	1.00E-02	4.08E-01
Cyanide	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	1.00E-01	0.00E+00
Di-n-butylphthalate	5.20E+00	1.29E+05	4.50E-03	6.10E-02	1.05E-04	NA	NA	6.73E+00	8.22E-02	3.98E-03	2.74E-04
Dibenzo(a,h)anthracene	5.97E+00	7.39E+05	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	2.34E-02	0.00E+00
Dibenzofuran	4.12E+00	1.12E+04	4.50E-03	0.00E+00	0.00E+00	2.30E+00	0.00E+00	6.73E+00	0.00E+00	3.31E-04	0.00E+00
Dieldrin	4.09E+00	1.05E+04	4.50E-03	7.50E-03	1.59E-04	5.32E+00	2.99E-05	6.73E+00	1.01E-02	3.09E-04	2.62E-06
Diethyl phthalate	2.96E+00	8.13E+02	4.50E-03	0.00E+00	0.00E+00	NA	NA	6.73E+00	0.00E+00	2.29E-05	0.00E+00
Endosulfan ii	3.62E+00	3.62E+03	4.50E-03	2.00E-03	1.23E-04	7.93E+00	1.55E-05	6.73E+00	2.69E-03	1.05E-04	2.37E-07
Endosulfan sulfate	3.65E+00	3.87E+03	4.50E-03	0.00E+00	0.00E+00	7.93E+00	0.00E+00	6.73E+00	0.00E+00	1.12E-04	0.00E+00
Endrin	5.60E+00	3.20E+05	4.50E-03	2.40E-03	1.67E-06	1.00E+01	1.67E-07	6.73E+00	3.23E-03	1.00E-02	2.71E-05
Endrin aldehyde	5.60E+00	3.20E+05	4.50E-03	3.75E-03	2.60E-06	1.00E+01	2.60E-07	6.73E+00	5.04E-03	1.00E-02	4.23E-05
Endrin ketone	5.60E+00	3.20E+05	4.50E-03	4.94E-02	3.43E-05	1.00E+01	3.43E-06	6.73E+00	6.66E-02	1.00E-02	5.58E-04
Ethylbenzene	3.15E+00	1.25E+03	4.50E-03	1.00E+00	1.79E-01	2.89E+00	6.18E-02	6.73E+00	1.35E+00	3.55E-05	4.02E-05
Fluoranthene	5.33E+00	1.74E+05	4.50E-03	3.00E-01	3.84E-04	1.00E+01	3.84E-05	6.73E+00	4.04E-01	5.37E-03	1.82E-03
Fluorene	4.18E+00	1.29E+04	4.50E-03	0.00E+00	0.00E+00	2.18E+00	0.00E+00	6.73E+00	0.00E+00	3.80E-04	0.00E+00
Gamma-Chlordane	2.78E+00	5.41E+02	4.50E-03	6.10E-02	2.51E-02	1.00E+01	2.51E-03	6.73E+00	8.22E-02	1.51E-05	1.04E-06
Heptachlor	4.40E+00	2.12E+04	4.50E-03	0.00E+00	0.00E+00	4.19E+00	0.00E+00	6.73E+00	0.00E+00	6.31E-04	0.00E+00
Heptachlor epoxide	3.65E+00	3.87E+03	4.50E-03	0.00E+00	0.00E+00	4.19E+00	0.00E+00	6.73E+00	0.00E+00	1.12E-04	0.00E+00
Indeno(1,2,3-Cd)pyrene	7.66E+00	3.39E+07	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	1.15E+00	0.00E+00
Iron	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.00E-02	0.00E+00
Lead	0.00E+00	1.00E+00	4.50E-03	8.19E+01	1.82E+04	5.94E+01	1.38E+00	1.24E+00	2.03E+01	4.00E-04	1.22E-02
Manganese	0.00E+00	1.00E+00	4.50E-03	1.81E+02	4.02E+04	*	*	1.00E+00	3.62E+01	2.70E-02	1.65E+00
Mercury	0.00E+00	1.00E+00	4.50E-03	9.46E-02	2.10E+01	2.16E+00	4.38E-02	1.00E+00	1.89E-02	2.51E-08	8.03E-10
Methoxychlor	4.68E+00	3.99E+04	4.50E-03	1.90E-02	1.06E-04	3.18E+00	3.33E-05	6.73E+00	2.56E-02	1.20E-03	2.58E-05
Methylene chloride	1.25E+00	1.69E+01	4.50E-03	6.00E-03	7.87E-02	6.78E+00	1.16E-02	6.73E+00	8.08E-03	4.47E-07	3.03E-09
Naphthalene	3.37E+00	2.06E+03	4.50E-03	0.00E+00	0.00E+00	2.98E+00	0.00E+00	6.73E+00	0.00E+00	5.89E-05	0.00E+00
Nickel	0.00E+00	1.00E+00	4.50E-03	1.94E+01	4.31E+03	4.00E+02	4.85E-02	1.00E+00	3.88E+00	6.00E-03	3.93E-02
OCDD	6.10E+00	9.92E+05	4.50E-03	2.05E+00	4.59E-04	*	*	6.73E+00	2.76E+00	3.16E-02	7.32E-02
Phenanthrene	4.46E+00	2.42E+04	4.50E-03	1.50E-01	1.38E-03	1.92E+00	7.18E-04	6.73E+00	2.02E-01	7.24E-04	1.23E-04
Pyrene	5.18E+00	1.24E+05	4.50E-03	1.10E+00	1.98E-03	1.00E+01	1.98E-04	6.73E+00	1.48E+00	3.80E-03	4.72E-03
Selenium	0.00E+00	1.00E+00	4.50E-03	1.98E-01	4.39E+01	7.00E+01	2.83E-03	1.00E+00	3.96E-02	1.50E-02	1.00E-03
Silver	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	3.00E-03	0.00E+00

Soil Organic Content (mg/kg): 4500
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not Available

foc(%): 0.45
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

Earthworm Hazard Quotient; Bioaccumulation Spreadsheet
Area A Landfill
Average Surface Soil Concentrations

Soil Contaminant	log Kow	Koc	foc	Soil Concentration (mg/kg)	Concentration Interstitial Water (mg/L)	Earthworm Benchmark Value (mg/L & mg/kg)	Earthworm Hazard Quotient	Site Specific BAF	Earthworm Tissue Concentration (wet wt.; mg/kg)	Shrew Transfer Factor	Shrew Tissue Concentration (mg/kg)
Styrene	3.16E+00	1.27E+03	4.50E-03	0.00E+00	0.00E+00	2.82E+00	0.00E+00	6.73E+00	0.00E+00	3.62E-05	0.00E+00
Tetrachloroethene	2.53E+00	3.07E+02	4.50E-03	4.00E-03	2.89E-03	7.00E+00	4.13E-04	6.73E+00	5.39E-03	8.51E-06	3.84E-08
Thallium	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	1.00E+00	0.00E+00	4.00E-02	0.00E+00
Toluene	2.69E+00	4.41E+02	4.50E-03	1.60E-02	8.06E-03	3.48E+00	2.32E-03	6.73E+00	2.15E-02	1.23E-05	2.22E-07
Trans-1,3-dichloropropene	1.41E+00	2.43E+01	4.50E-03	0.00E+00	0.00E+00	1.00E+01	0.00E+00	6.73E+00	0.00E+00	6.46E-07	0.00E+00
Trichloroethene	2.53E+00	3.07E+02	4.50E-03	2.00E-03	1.45E-03	5.55E+00	2.61E-04	6.73E+00	2.69E-03	8.51E-06	1.92E-08
Vanadium	0.00E+00	1.00E+00	4.50E-03	0.00E+00	0.00E+00	*	*	1.00E+00	0.00E+00	2.50E-03	0.00E+00
Vinyl acetate	3.00E-01	1.97E+00	4.50E-03	0.00E+00	0.00E+00	NA	NA	6.73E+00	0.00E+00	5.01E-08	0.00E+00
Xylenes, total	7.33E+00	1.61E+07	4.50E-03	5.36E+00	7.42E-05	NA	NA	6.73E+00	7.22E+00	5.37E-01	3.25E+00
Zinc	0.00E+00	1.00E+00	4.50E-03	5.58E+02	1.24E+05	5.00E+03	1.12E-01	2.30E+00	2.57E+02	1.00E-01	2.89E+01

Soil Organic Content (mg/kg): 4500
%Earthworm Lipid Content: 2.00
%Dry Weight: 20.00
NA: Not available

foc(%): 0.45
%soil in diet - short tail shrew: 20.00
%animal in diet - short tail shrew: 69.00
* : see text for discussion

000014

AREA A LANDFILL

MAXIMUM EXPOSURE POINT CONCENTRATIONS

TERRESTRIAL RECEPTORS

AREA A LANDFILL

MAXIMUM EXPOSURE PT. CONCENTRATIONS

SHORT-TAILED SHREW

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Butanone	2.00E-03	0.00E+00	2.69E-03	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	2.30E-01	0.00E+00	3.10E-01	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	6.70E-02	0.00E+00	9.02E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	2.30E+00	0.00E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetone	1.50E-02	0.00E+00	2.02E-02	0.00E+00	0.00E+00	0.00E+00
Aldrin	5.60E-04	0.00E+00	7.54E-04	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	3.90E-02	0.00E+00	5.25E-02	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	4.90E-01	0.00E+00	6.60E-01	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	1.20E+01	0.00E+00	1.62E+01	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	1.99E+02	0.00E+00	3.98E+01	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	2.00E-01	0.00E+00	2.69E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	1.90E-01	0.00E+00	2.56E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	2.20E-01	0.00E+00	2.96E-01	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	4.40E-02	0.00E+00	5.93E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	2.10E-01	0.00E+00	2.83E-01	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	1.20E+00	0.00E+00	2.40E-01	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	3.90E-01	0.00E+00	5.25E-01	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	4.70E+00	0.00E+00	1.88E+00	0.00E+00	0.00E+00	0.00E+00
Carbazole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)

Area A Landfill

Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	4.50E+00	0.00E+00	6.06E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	1.90E-01	0.00E+00	2.56E-01	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	8.20E+00	0.00E+00	1.64E+00	0.00E+00	0.00E+00	0.00E+00
Copper	7.94E+02	0.00E+00	1.48E+02	0.00E+00	0.00E+00	0.00E+00
Cyanide	2.20E-01	0.00E+00	4.40E-02	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	6.10E-02	0.00E+00	8.22E-02	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dieldrin	7.50E-03	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	2.00E-03	0.00E+00	2.69E-03	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	2.40E-03	0.00E+00	3.23E-03	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	1.90E-02	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	5.70E-01	0.00E+00	7.68E-01	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	1.40E+01	0.00E+00	1.89E+01	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	3.00E-01	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00
Fluorene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	6.10E-02	0.00E+00	8.22E-02	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iron	1.20E+04	0.00E+00	2.40E+03	0.00E+00	0.00E+00	0.00E+00
Lead	3.67E+02	0.00E+00	9.10E+01	0.00E+00	0.00E+00	0.00E+00
Manganese	2.12E+02	0.00E+00	4.24E+01	0.00E+00	0.00E+00	0.00E+00
Mercury	6.10E-01	0.00E+00	1.22E-01	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	1.90E-02	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	6.00E-03	0.00E+00	8.08E-03	0.00E+00	0.00E+00	0.00E+00
Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	3.36E+01	0.00E+00	6.72E+00	0.00E+00	0.00E+00	0.00E+00
OCDD	2.50E+00	0.00E+00	3.37E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	1.50E-01	0.00E+00	2.02E-01	0.00E+00	0.00E+00	0.00E+00
Pyrene	1.10E+00	0.00E+00	1.48E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	4.70E-01	0.00E+00	9.40E-02	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	4.00E-03	0.00E+00	5.39E-03	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	1.60E-02	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	2.69E-03	0.00E+00	0.00E+00	0.00E+00
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	7.50E+01	0.00E+00	1.01E+02	0.00E+00	0.00E+00	0.00E+00
Zinc	2.14E+03	0.00E+00	9.84E+02	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			2.42E-04
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			1.52E-01
4,4'-DDE			4.44E-02
4,4'-DDT			1.52E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			7.95E-04
Aldrin			1.48E-03
Alpha-Chlordane			4.51E-03
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			9.62E-01
Aroclor-1260			2.36E+01
Arsenic			0.00E+00
Barium			2.08E+01
Benzene			0.00E+00
Benzo(a)anthracene			5.30E-02
Benzo(a)pyrene			5.04E-02
Benzo(b)fluoranthene			5.83E-02
Benzo(g,h,i)perylene			1.17E-02
Benzo(k)fluoranthene			5.57E-02
Benzoic acid			0.00E+00
Beryllium			4.82E+00
Bis(2-ethylexyl)phthalate			1.13E-02
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			4.94E+00
Carbazole			0.00E+00
TOTAL			5.71E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			8.75E-01
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			5.04E-02
Cis-1,3-dichloropropene			0.00E+00
Cobalt			8.69E+00
Copper			6.38E+00
Cyanide			8.49E-03
Di-n-butylphthalate			5.88E-05
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			9.94E-02
Diethyl phthalate			0.00E+00
Endosulfan ii			7.07E-03
Endosulfan sulfate			0.00E+00
Endrin			6.91E-03
Endrin aldehyde			5.47E-02
Endrin ketone			1.64E+00
Ethylbenzene			9.09E-01
Fluoranthene			1.27E-02
Fluorene			0.00E+00
Gamma-Chlordane			7.06E-03
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			2.43E+01
Manganese			1.28E+00
Mercury			2.45E-02
Methoxychlor			2.52E-03
Methylene chloride			5.44E-04
Naphthalene			0.00E+00
Nickel			4.45E-01
OCDD			1.33E+06
Phenanthrene			1.55E-01
Pyrene			7.77E-02
Selenium			1.66E+00
Silver			0.00E+00
TOTAL			1.33E+06

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			1.51E-03
Thallium			0.00E+00
Toluene			1.63E-04
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			7.57E-04
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			1.93E+01
Zinc			7.09E+00
TOTAL			2.64E+01

Shrew: Area A Landfill
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

Shrew: Area A Landfill
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			1.12E-03
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			7.08E-01
4,4'-DDE			2.06E-01
4,4'-DDT			7.08E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			3.69E-03
Aldrin			6.90E-03
Alpha-Chlordane			2.10E-02
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			4.47E+00
Aroclor-1260			1.09E+02
Arsenic			0.00E+00
Barium			1.44E+01
Benzene			0.00E+00
Benzo(a)anthracene			2.46E-01
Benzo(a)pyrene			2.34E-01
Benzo(b)fluoranthene			2.71E-01
Benzo(g,h,i)perylene			5.42E-02
Benzo(k)fluoranthene			2.59E-01
Benzoic acid			0.00E+00
Beryllium			3.32E+00
Bis(2-ethylexyl)phthalate			5.25E-02
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			6.82E+00
Carbazole			0.00E+00
TOTAL			1.48E+02

Shrew: Area A Landfill
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			4.07E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			2.34E-01
Cis-1,3-dichloropropene			0.00E+00
Cobalt			6.00E+00
Copper			4.09E+00
Cyanide			5.86E-03
Di-n-butylphthalate			2.73E-04
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			4.62E-01
Diethyl phthalate			0.00E+00
Endosulfan ii			3.28E-02
Endosulfan sulfate			0.00E+00
Endrin			3.21E-02
Endrin aldehyde			2.54E-01
Endrin ketone			7.63E+00
Ethylbenzene			4.23E+00
Fluoranthene			5.91E-02
Fluorene			0.00E+00
Gamma-Chlordane			3.28E-02
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			2.08E+01
Manganese			8.81E-01
Mercury			1.69E-02
Methoxychlor			1.17E-02
Methylene chloride			2.53E-03
Naphthalene			0.00E+00
Nickel			3.07E-01
OCDD			6.16E+06
Phenanthrene			7.20E-01
Pyrene			3.61E-01
Selenium			1.15E+00
Silver			0.00E+00
TOTAL			6.16E+06

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			7.04E-03
Thallium			0.00E+00
Toluene			7.58E-04
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			3.52E-03
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			8.97E+01
Zinc			1.12E+01
TOTAL			1.01E+02

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
.Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.69E-03			9.85E-04						1.00E+00	1.00E+00	9.85E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Total					0.00E+00

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	8.76E-01	2.42E-04	
Water	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Food	2.69E-03	9.85E-04	8.76E-01	1.12E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Total					1.37E-03

000016

Shrew: Area A Landfill
Maximum Concentration

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.30E-01							2.44E-02		1.00E+00	1.00E+00	2.44E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.10E-01			1.13E-01						1.00E+00	1.00E+00	1.13E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.70E-02							7.10E-03		1.00E+00	1.00E+00	7.10E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.02E-02			3.30E-02						1.00E+00	1.00E+00	3.30E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000017

Shrew: Area A Landfill
Maximum Concentration

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.30E-01	2.44E-02	1.60E-01	1.52E-01	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	3.10E-01	1.13E-01	1.60E-01	7.08E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					8.60E-01

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.70E-02	7.10E-03	1.60E-01	4.44E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	9.02E-02	3.30E-02	1.60E-01	2.06E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					2.51E-01

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.30E+00							2.44E-01		1.00E+00	1.00E+00	2.44E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.10E+00			1.13E+00						1.00E+00	1.00E+00	1.13E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.30E+00	2.44E-01	1.60E-01	1.52E+00	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	3.10E+00	1.13E+00	1.60E-01	7.08E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					8.60E+00

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Total					0.00E+00

000020

Shrew: Area A Landfill
Maximur ncentration

Acetone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.50E-02							1.59E-03		1.00E+00	1.00E+00	1.59E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.02E-02			7.39E-03						1.00E+00	1.00E+00	7.39E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.60E-04							5.94E-05		1.00E+00	1.00E+00	5.94E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.54E-04			2.76E-04						1.00E+00	1.00E+00	2.76E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

Shrew: Area A Landfill
Maximum Concentration

Acetone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-02	1.59E-03	2.00E+00	7.95E-04	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	2.02E-02	7.39E-03	2.00E+00	3.69E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					4.49E-03

Aldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.60E-04	5.94E-05	4.00E-02	1.48E-03	
Water	0.00E+00	0.00E+00	4.00E-02	0.00E+00	
Food	7.54E-04	2.76E-04	4.00E-02	6.90E-03	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-02	0.00E+00	
Total					8.38E-03

000022

Shrew: Area A Landfill
Maximu[illegible]ncentration

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.90E-02							4.13E-03		1.00E+00	1.00E+00	4.13E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
.Food-an.	5.25E-02			1.92E-02						1.00E+00	1.00E+00	1.92E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000023

Shrew: Area A Landfill
Maximum Concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-02	4.13E-03	9.16E-01	4.51E-03	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	5.25E-02	1.92E-02	9.16E-01	2.10E-02	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					2.55E-02

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Total					0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.90E-01							5.19E-02		1.00E+00	1.00E+00	5.19E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.60E-01			2.41E-01						1.00E+00	1.00E+00	2.41E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000025

Shrew: Area A Landfill
Maximum Concentration

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.90E-01	5.19E-02	5.40E-02	9.62E-01	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	6.60E-01	2.41E-01	5.40E-02	4.47E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					5.43E+00

000026

Shrew: Area A Landfill
Maximu[illegible]ncentration

Aroclor-1260	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.20E+01							1.27E+00		1.00E+00	1.00E+00	1.27E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.62E+01			5.91E+00						1.00E+00	1.00E+00	5.91E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Arsenic	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000027

Shrew: Area A Landfill
Maximum Concentration

Aroclor-1260	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+01	1.27E+00	5.40E-02	2.36E+01	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	1.62E+01	5.91E+00	5.40E-02	1.09E+02	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					1.33E+02

Arsenic	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Water	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Food	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Total					0.00E+00

Barium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.99E+02							2.11E+01		1.00E+00	1.00E+00	2.11E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.98E+01			1.46E+01						1.00E+00	1.00E+00	1.46E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000029

Shrew: Area A Landfill
Maximum Concentration

Barium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.99E+02	2.11E+01	1.01E+00	2.08E+01	
Water	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Food	3.98E+01	1.46E+01	1.01E+00	1.44E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Total					3.52E+01

Benzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Total					0.00E+00

000030

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-01							2.12E-02		1.00E+00	1.00E+00	2.12E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
.Food-an.	2.69E-01			9.85E-02						1.00E+00	1.00E+00	9.85E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-01							2.01E-02		1.00E+00	1.00E+00	2.01E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.56E-01			9.36E-02						1.00E+00	1.00E+00	9.36E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-01	2.12E-02	4.00E-01	5.30E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.69E-01	9.85E-02	4.00E-01	2.46E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.99E-01

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	2.01E-02	4.00E-01	5.04E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.56E-01	9.36E-02	4.00E-01	2.34E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.84E-01

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.20E-01							2.33E-02		1.00E+00	1.00E+00	2.33E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
.Food-an.	2.96E-01			1.08E-01						1.00E+00	1.00E+00	1.08E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.40E-02							4.66E-03		1.00E+00	1.00E+00	4.66E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.93E-02			2.17E-02						1.00E+00	1.00E+00	2.17E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	2.33E-02	4.00E-01	5.83E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.96E-01	1.08E-01	4.00E-01	2.71E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					3.29E-01

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.40E-02	4.66E-03	4.00E-01	1.17E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	5.93E-02	2.17E-02	4.00E-01	5.42E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					6.58E-02

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.10E-01							2.23E-02		1.00E+00	1.00E+00	2.23E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.83E-01			1.03E-01						1.00E+00	1.00E+00	1.03E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000035

Shrew: Area A Landfill
Maximum Concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E-01	2.23E-02	4.00E-01	5.57E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.83E-01	1.03E-01	4.00E-01	2.59E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					3.14E-01

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Total					0.00E+00

Beryllium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.20E+00							1.27E-01		1.00E+00	1.00E+00	1.27E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.40E-01			8.78E-02						1.00E+00	1.00E+00	8.78E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Bis(2-ethylexyl)phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.90E-01							4.13E-02		1.00E+00	1.00E+00	4.13E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.25E-01			1.92E-01						1.00E+00	1.00E+00	1.92E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000037

Shrew: Area A Landfill
Maximum Concentration

Beryllium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+00	1.27E-01	2.64E-02	4.82E+00	
Water	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Food	2.40E-01	8.78E-02	2.64E-02	3.32E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Total					8.14E+00

Bis(2-ethylexyl)phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-01	4.13E-02	3.66E+00	1.13E-02	
Water	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Food	5.25E-01	1.92E-01	3.66E+00	5.25E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Total					6.38E-02

000038

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.70E+00							4.98E-01		1.00E+00	1.00E+00	4.98E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.88E+00			6.88E-01						1.00E+00	1.00E+00	6.88E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000039

Shrew: Area A Landfill
Maximum Concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.70E+00	4.98E-01	1.01E-01	4.94E+00	
Water	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Food	1.88E+00	6.88E-01	1.01E-01	6.82E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Total					1.18E+01

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Carbon disulfide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.50E+00							4.77E-01		1.00E+00	1.00E+00	4.77E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.06E+00			2.22E+00						1.00E+00	1.00E+00	2.22E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000041

Shrew: Area A Landfill
Maximum Concentration

Carbon disulfide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Total					0.00E+00

Chlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.50E+00	4.77E-01	5.45E-01	8.75E-01	
Water	0.00E+00	0.00E+00	5.45E-01	0.00E+00	
Food	6.06E+00	2.22E+00	5.45E-01	4.07E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.45E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.45E-01	0.00E+00	
Total					4.94E+00

Shrew: Area A Landfill
Maximu ncentration

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-01							2.01E-02		1.00E+00	1.00E+00	2.01E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.56E-01			9.36E-02						1.00E+00	1.00E+00	9.36E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000043

Shrew: Area A Landfill
Maximum Concentration

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Water	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Food	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Total					0.00E+00

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	2.01E-02	4.00E-01	5.04E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.56E-01	9.36E-02	4.00E-01	2.34E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.84E-01

000044

Cis-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Cobalt	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	8.20E+00							8.69E-01		1.00E+00	1.00E+00	8.69E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.64E+00			6.00E-01						1.00E+00	1.00E+00	6.00E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000045

Shrew: Area A Landfill
Maximum Concentration

Cis-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					0.00E+00

Cobalt	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	8.20E+00	8.69E-01	1.00E-01	8.69E+00	
Water	0.00E+00	0.00E+00	1.00E-01	0.00E+00	
Food	1.64E+00	6.00E-01	1.00E-01	6.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E-01	0.00E+00	
Total					1.47E+01

000046

Shrew: Area A Landfill
Maximu[illegible]ncentration

Copper	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.94E+02							8.42E+01		1.00E+00	1.00E+00	8.42E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.48E+02			5.40E+01						1.00E+00	1.00E+00	5.40E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Cyanide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.20E-01							2.33E-02		1.00E+00	1.00E+00	2.33E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.40E-02			1.61E-02						1.00E+00	1.00E+00	1.61E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000047

Shrew: Area A Landfill
Maximum Concentration

Copper	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.94E+02	8.42E+01	1.32E+01	6.38E+00	
Water	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Food	1.48E+02	5.40E+01	1.32E+01	4.09E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Total					1.05E+01

Cyanide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	2.33E-02	2.75E+00	8.49E-03	
Water	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Food	4.40E-02	1.61E-02	2.75E+00	5.86E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Total					1.43E-02

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.10E-02							6.47E-03		1.00E+00	1.00E+00	6.47E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.22E-02			3.00E-02						1.00E+00	1.00E+00	3.00E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000049

Shrew: Area A Landfill
Maximum Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	6.47E-03	1.10E+02	5.88E-05	
Water	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Food	8.22E-02	3.00E-02	1.10E+02	2.73E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Total					3.32E-04

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.50E-03							7.95E-04		1.00E+00	1.00E+00	7.95E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.01E-02			3.69E-03						1.00E+00	1.00E+00	3.69E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000051

Shrew: Area A Landfill
Maximum Concentration

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.50E-03	7.95E-04	8.00E-03	9.94E-02	
Water	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Food	1.01E-02	3.69E-03	8.00E-03	4.62E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Total					5.61E-01

000052

Diethyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endosulfan ii	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.69E-03			9.85E-04						1.00E+00	1.00E+00	9.85E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

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Shrew: Area A Landfill
Maximum Concentration

Diethyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Water	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Food	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Total					0.00E+00

Endosulfan ii	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	3.00E-02	7.07E-03	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	2.69E-03	9.85E-04	3.00E-02	3.28E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					3.99E-02

Shrew: Area A Landfill
Maximu[illegible]ncentration

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.40E-03							2.54E-04		1.00E+00	1.00E+00	2.54E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.23E-03			1.18E-03						1.00E+00	1.00E+00	1.18E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-03	2.54E-04	3.68E-02	6.91E-03	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	3.23E-03	1.18E-03	3.68E-02	3.21E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					3.90E-02

Endrin aldehyde	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-02							2.01E-03		1.00E+00	1.00E+00	2.01E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.56E-02			9.36E-03						1.00E+00	1.00E+00	9.36E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Endrin ketone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.70E-01							6.04E-02		1.00E+00	1.00E+00	6.04E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.68E-01			2.81E-01						1.00E+00	1.00E+00	2.81E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Endrin aldehyde	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-02	2.01E-03	3.68E-02	5.47E-02	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	2.56E-02	9.36E-03	3.68E-02	2.54E-01	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					3.09E-01

Endrin ketone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.70E-01	6.04E-02	3.68E-02	1.64E+00	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	7.68E-01	2.81E-01	3.68E-02	7.63E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					9.27E+00

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.40E+01							1.48E+00		1.00E+00	1.00E+00	1.48E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.89E+01			6.90E+00						1.00E+00	1.00E+00	6.90E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.00E-01							3.18E-02		1.00E+00	1.00E+00	3.18E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.04E-01			1.48E-01						1.00E+00	1.00E+00	1.48E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.40E+01	1.48E+00	1.63E+00	9.09E-01	
Water	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Food	1.89E+01	6.90E+00	1.63E+00	4.23E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Total					5.13E+00

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.00E-01	3.18E-02	2.50E+00	1.27E-02	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	4.04E-01	1.48E-01	2.50E+00	5.91E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					7.18E-02

000060

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.10E-02							6.47E-03		1.00E+00	1.00E+00	6.47E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.22E-02			3.00E-02						1.00E+00	1.00E+00	3.00E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					0.00E+00

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	6.47E-03	9.16E-01	7.06E-03	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	8.22E-02	3.00E-02	9.16E-01	3.28E-02	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					3.99E-02

Shrew: Area A Landfill
Maximu[illegible]ncentration

Indeno(1,2,3-Cd)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Iron	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.20E+04							1.27E+03		1.00E+00	1.00E+00	1.27E+03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.40E+03			8.78E+02						1.00E+00	1.00E+00	8.78E+02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Indeno(1,2,3-Cd)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Iron	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+04	1.27E+03	0.00E+00	N/A	
Water	0.00E+00	0.00E+00	0.00E+00	N/A	
Food	2.40E+03	8.78E+02	0.00E+00	N/A	
Inhalation					
Air	0.00E+00	0.00E+00	0.00E+00	N/A	
Dermal					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Total					0.00E+00

000034

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.67E+02							3.89E+01		1.00E+00	1.00E+00	3.89E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.10E+01			3.33E+01						1.00E+00	1.00E+00	3.33E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.12E+02							2.25E+01		1.00E+00	1.00E+00	2.25E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.24E+01			1.55E+01						1.00E+00	1.00E+00	1.55E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.67E+02	3.89E+01	1.60E+00	2.43E+01	
Water	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Food	9.10E+01	3.33E+01	1.60E+00	2.08E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Total					4.51E+01

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.12E+02	2.25E+01	1.76E+01	1.28E+00	
Water	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Food	4.24E+01	1.55E+01	1.76E+01	8.81E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Total					2.16E+00

000036

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.10E-01							6.47E-02		1.00E+00	1.00E+00	6.47E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.22E-01			4.46E-02						1.00E+00	1.00E+00	4.46E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-02							2.01E-03		1.00E+00	1.00E+00	2.01E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.56E-02			9.36E-03						1.00E+00	1.00E+00	9.36E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-01	6.47E-02	2.64E+00	2.45E-02	
Water	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Food	1.22E-01	4.46E-02	2.64E+00	1.69E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Total					4.14E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-02	2.01E-03	8.00E-01	2.52E-03	
Water	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Food	2.56E-02	9.36E-03	8.00E-01	1.17E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Total					1.42E-02

000038

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.00E-03							6.36E-04		1.00E+00	1.00E+00	6.36E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.08E-03			2.96E-03						1.00E+00	1.00E+00	2.96E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.00E-03	6.36E-04	1.17E+00	5.44E-04	
Water	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Food	8.08E-03	2.96E-03	1.17E+00	2.53E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Total					3.07E-03

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					0.00E+00

000070

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.36E+01							3.56E+00		1.00E+00	1.00E+00	3.56E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.72E+00			2.46E+00						1.00E+00	1.00E+00	2.46E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.50E+00							2.65E-01		1.00E+00	1.00E+00	2.65E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.37E+00			1.23E+00						1.00E+00	1.00E+00	1.23E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.36E+01	3.56E+00	8.00E+00	4.45E-01	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	6.72E+00	2.46E+00	8.00E+00	3.07E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					7.52E-01

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.50E+00	2.65E-01	2.00E-07	1.33E+06	
Water	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Food	3.37E+00	1.23E+00	2.00E-07	6.16E+06	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Total					7.48E+06

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.50E-01							1.59E-02		1.00E+00	1.00E+00	1.59E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.02E-01			7.39E-02						1.00E+00	1.00E+00	7.39E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.10E+00							1.17E-01		1.00E+00	1.00E+00	1.17E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.48E+00			5.42E-01						1.00E+00	1.00E+00	5.42E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000073

Shrew: Area A Landfill
Maximum Concentration

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-01	1.59E-02	1.03E-01	1.55E-01	
Water	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Food	2.02E-01	7.39E-02	1.03E-01	7.20E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Total					8.74E-01

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E+00	1.17E-01	1.50E+00	7.77E-02	
Water	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Food	1.48E+00	5.42E-01	1.50E+00	3.61E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Total					4.39E-01

Selenium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.70E-01							4.98E-02		1.00E+00	1.00E+00	4.98E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.40E-02			3.44E-02						1.00E+00	1.00E+00	3.44E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Silver	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000075

Shrew: Area A Landfill
Maximum Concentration

Selenium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.70E-01	4.98E-02	3.00E-02	1.66E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	9.40E-02	3.44E-02	3.00E-02	1.15E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					2.81E+00

Silver	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Water	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Food	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E+01	0.00E+00	

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.00E-03							4.24E-04		1.00E+00	1.00E+00	4.24E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.39E-03			1.97E-03						1.00E+00	1.00E+00	1.97E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000077

Shrew: Area A Landfill
Maximum Concentration

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.00E-03	4.24E-04	2.80E-01	1.51E-03	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	5.39E-03	1.97E-03	2.80E-01	7.04E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					8.55E-03

000078

Shrew: Area A Landfill
Maximur [illegible]ncentration

Thallium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Toluene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.60E-02							1.70E-03		1.00E+00	1.00E+00	1.70E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.15E-02			7.88E-03						1.00E+00	1.00E+00	7.88E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000079

Shrew: Area A Landfill
Maximum Concentration

Thallium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Water	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Food	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Total					0.00E+00

Toluene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.60E-02	1.70E-03	1.04E+01	1.63E-04	
Water	0.00E+00	0.00E+00	1.04E+01	0.00E+00	
Food	2.15E-02	7.88E-03	1.04E+01	7.58E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.04E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.04E+01	0.00E+00	
Total					9.22E-04

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.69E-03			9.85E-04						1.00E+00	1.00E+00	9.85E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	2.80E-01	7.57E-04	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	2.69E-03	9.85E-04	2.80E-01	3.52E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					4.28E-03

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.50E+01							7.95E+00		1.00E+00	1.00E+00	7.95E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.01E+02			3.69E+01						1.00E+00	1.00E+00	3.69E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.14E+03							2.27E+02		1.00E+00	1.00E+00	2.27E+02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	9.84E+02			3.60E+02						1.00E+00	1.00E+00	3.60E+02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Maximum Concentration

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.50E+01	7.95E+00	4.12E-01	1.93E+01	
Water	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Food	1.01E+02	3.69E+01	4.12E-01	8.97E+01	
Inhalation					
Air	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Total					1.09E+02

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.14E+03	2.27E+02	3.20E+01	7.09E+00	
Water	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Food	9.84E+02	3.60E+02	3.20E+01	1.12E+01	
Inhalation					
Air	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Total					1.83E+01

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Shrew: Area A Landfill
Maximum Concentration

AREA A LANDFILL

MAXIMUM EXPOSURE PT. CONCENTRATIONS

RED-TAILED HAWK

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)

Area A Landfill

Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Butanone	2.00E-03	0.00E+00	1.03E-10	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	2.30E-01	0.00E+00	5.19E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	6.70E-02	0.00E+00	1.51E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	2.30E+00	0.00E+00	5.19E-01	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetone	1.50E-02	0.00E+00	2.45E-10	0.00E+00	0.00E+00	0.00E+00
Aldrin	5.60E-04	0.00E+00	2.05E-06	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	3.90E-02	0.00E+00	1.08E-03	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	4.90E-01	0.00E+00	4.39E-02	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	1.20E+01	0.00E+00	2.15E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	1.99E+02	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	2.00E-01	0.00E+00	2.31E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	1.90E-01	0.00E+00	5.15E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	2.20E-01	0.00E+00	2.32E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	4.40E-02	0.00E+00	2.12E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	2.10E-01	0.00E+00	4.12E-02	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	1.20E+00	0.00E+00	4.06E-04	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	3.90E-01	0.00E+00	2.21E-03	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	4.70E+00	0.00E+00	1.23E-03	0.00E+00	0.00E+00	0.00E+00
Carbazole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	4.50E+00	0.00E+00	8.83E-05	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	1.90E-01	0.00E+00	2.20E-03	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	8.20E+00	0.00E+00	5.54E-02	0.00E+00	0.00E+00	0.00E+00
Copper	7.94E+02	0.00E+00	2.61E+00	0.00E+00	0.00E+00	0.00E+00
Cyanide	2.20E-01	0.00E+00	7.44E-03	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	6.10E-02	0.00E+00	2.74E-04	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dieldrin	7.50E-03	0.00E+00	2.62E-06	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	2.00E-03	0.00E+00	2.37E-07	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	2.40E-03	0.00E+00	2.71E-05	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	1.90E-02	0.00E+00	2.15E-04	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	5.70E-01	0.00E+00	6.44E-03	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	1.40E+01	0.00E+00	5.61E-04	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	3.00E-01	0.00E+00	1.82E-03	0.00E+00	0.00E+00	0.00E+00
Fluorene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	6.10E-02	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iron	1.20E+04	0.00E+00	8.11E+01	0.00E+00	0.00E+00	0.00E+00
Lead	3.67E+02	0.00E+00	5.45E-02	0.00E+00	0.00E+00	0.00E+00
Manganese	2.12E+02	0.00E+00	1.93E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	6.10E-01	0.00E+00	5.18E-09	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	1.90E-02	0.00E+00	2.58E-05	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	6.00E-03	0.00E+00	3.03E-09	0.00E+00	0.00E+00	0.00E+00
Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	3.36E+01	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00
OCDD	2.50E+00	0.00E+00	8.93E-02	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	1.50E-01	0.00E+00	1.23E-04	0.00E+00	0.00E+00	0.00E+00
Pyrene	1.10E+00	0.00E+00	4.72E-03	0.00E+00	0.00E+00	0.00E+00
Selenium	4.70E-01	0.00E+00	2.38E-03	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	4.00E-03	0.00E+00	3.84E-08	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	1.60E-02	0.00E+00	2.22E-07	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	1.92E-08	0.00E+00	0.00E+00	0.00E+00
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	7.50E+01	0.00E+00	4.55E+01	0.00E+00	0.00E+00	0.00E+00
Zinc	2.14E+03	0.00E+00	1.11E+02	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			9.13E-06
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			4.11E+00
4,4'-DDE			1.20E+00
4,4'-DDT			4.11E+01
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			3.00E-05
Aldrin			5.60E-05
Alpha-Chlordane			9.11E-04
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			1.36E-02
Aroclor-1260			3.33E-01
Arsenic			0.00E+00
Barium			4.78E-01
Benzene			0.00E+00
Benzo(a)anthracene			2.00E-03
Benzo(a)pyrene			1.90E-03
Benzo(b)fluoranthene			2.20E-03
Benzo(g,h,i)perylene			4.40E-04
Benzo(k)fluoranthene			2.10E-03
Benzoic acid			0.00E+00
Beryllium			1.82E-01
Bis(2-ethylexyl)phthalate			3.51E-03
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			3.24E-02
Carbazole			0.00E+00
TOTAL			4.74E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			3.30E-02
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			1.90E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			3.28E-01
Copper			2.39E-01
Cyanide			3.20E-04
Di-n-butylphthalate			2.75E-03
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			9.74E-04
Diethyl phthalate			0.00E+00
Endosulfan ii			2.00E-06
Endosulfan sulfate			0.00E+00
Endrin			8.00E-05
Endrin aldehyde			6.33E-04
Endrin ketone			1.90E-02
Ethylbenzene			3.43E-02
Fluoranthene			4.80E-05
Fluorene			0.00E+00
Gamma-Chlordane			1.43E-03
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			1.91E-01
Manganese			4.82E-02
Mercury			9.53E-02
Methoxychlor			9.50E-05
Methylene chloride			2.05E-05
Naphthalene			0.00E+00
Nickel			4.34E-03
OCDD			1.79E+03
Phenanthrene			5.84E-03
Pyrene			2.93E-03
Selenium			1.18E-02
Silver			0.00E+00
TOTAL			1.79E+03

Red Tail Hawk: Area A Landfill
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			5.71E-05
Thallium			0.00E+00
Toluene			6.16E-06
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			2.86E-05
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			7.28E-01
Zinc			3.57E+00
TOTAL			4.29E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			2.31E-11
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			4.55E+01
4,4'-DDE			1.32E+01
4,4'-DDT			4.55E+02
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			2.40E-11
Aldrin			1.00E-05
Alpha-Chlordane			1.24E-03
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			5.98E-02
Aroclor-1260			2.92E+00
Arsenic			0.00E+00
Barium			1.19E-03
Benzene			0.00E+00
Benzo(a)anthracene			1.13E-03
Benzo(a)pyrene			2.52E-03
Benzo(b)fluoranthene			1.14E-02
Benzo(g,h,i)perylene			1.04E-02
Benzo(k)fluoranthene			2.02E-02
Benzoic acid			0.00E+00
Beryllium			3.01E-03
Bis(2-ethylexyl)phthalate			9.74E-04
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			4.16E-04
Carbazole			0.00E+00
TOTAL			5.16E+02

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			3.18E-05
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			1.08E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			1.09E-01
Copper			3.85E-02
Cyanide			5.30E-04
Di-n-butylphthalate			6.05E-04
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			1.67E-05
Diethyl phthalate			0.00E+00
Endosulfan ii			1.16E-08
Endosulfan sulfate			0.00E+00
Endrin			4.43E-05
Endrin aldehyde			3.50E-04
Endrin ketone			1.05E-02
Ethylbenzene			6.74E-05
Fluoranthene			1.43E-05
Fluorene			0.00E+00
Gamma-Chlordane			1.19E-06
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			1.39E-03
Manganese			2.15E-02
Mercury			3.97E-08
Methoxychlor			6.32E-06
Methylene chloride			5.07E-10
Naphthalene			0.00E+00
Nickel			4.31E-04
OCDD			3.12E+03
Phenanthrene			2.34E-04
Pyrene			6.17E-04
Selenium			2.92E-03
Silver			0.00E+00
TOTAL			3.12E+03

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			2.69E-08
Thallium			0.00E+00
Toluene			4.19E-09
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			1.35E-08
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			2.16E+01
Zinc			9.04E+00
TOTAL			3.07E+01

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.03E-10			1.01E-11						1.00E+00	1.00E+00	1.01E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000015

Red Tail Hawk: Area A Landfill
Maximum Concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Total					0.00E+00

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	4.38E-01	9.13E-06	
Water	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Food	1.03E-10	1.01E-11	4.38E-01	2.31E-11	
Inhalation					
Air	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Total					9.13E-06

000016

Red Tail Hawk: Area A Landfill
Maximur ncentration

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.30E-01							4.60E-04		1.00E+00	1.00E+00	4.60E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.19E-02			5.09E-03						1.00E+00	1.00E+00	5.09E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.70E-02							1.34E-04		1.00E+00	1.00E+00	1.34E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.51E-02			1.48E-03						1.00E+00	1.00E+00	1.48E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000017

Red Tail Hawk: Area A Landfill
Maximum Concentration

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.30E-01	4.60E-04	1.12E-04	4.11E+00	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	5.19E-02	5.09E-03	1.12E-04	4.55E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					4.96E+01

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.70E-02	1.34E-04	1.12E-04	1.20E+00	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	1.51E-02	1.48E-03	1.12E-04	1.32E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					1.44E+01

000018

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.30E+00							4.60E-03		1.00E+00	1.00E+00	4.60E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.19E-01			5.09E-02						1.00E+00	1.00E+00	5.09E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.30E+00	4.60E-03	1.12E-04	4.11E+01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	5.19E-01	5.09E-02	1.12E-04	4.55E+02	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					4.96E+02

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					0.00E+00

Acetone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.50E-02							3.00E-05		1.00E+00	1.00E+00	3.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.45E-10			2.40E-11						1.00E+00	1.00E+00	2.40E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.60E-04							1.12E-06		1.00E+00	1.00E+00	1.12E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.05E-06			2.01E-07						1.00E+00	1.00E+00	2.01E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

Red Tail Hawk: Area A Landfill
Maximum Concentration

Acetone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-02	3.00E-05	1.00E+00	3.00E-05	
Water	0.00E+00	0.00E+00	1.00E+00	0.00E+00	
Food	2.45E-10	2.40E-11	1.00E+00	2.40E-11	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+00	0.00E+00	
Total					3.00E-05

Aldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.60E-04	1.12E-06	2.00E-02	5.60E-05	
Water	0.00E+00	0.00E+00	2.00E-02	0.00E+00	
Food	2.05E-06	2.01E-07	2.00E-02	1.00E-05	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-02	0.00E+00	
Total					6.60E-05

000022

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.90E-02							7.80E-05		1.00E+00	1.00E+00	7.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.08E-03			1.06E-04						1.00E+00	1.00E+00	1.06E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-02	7.80E-05	8.56E-02	9.11E-04	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	1.08E-03	1.06E-04	8.56E-02	1.24E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					2.15E-03

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Water	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Food	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Total					0.00E+00

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.90E-01							9.80E-04		1.00E+00	1.00E+00	9.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.39E-02			4.30E-03						1.00E+00	1.00E+00	4.30E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.90E-01	9.80E-04	7.20E-02	1.36E-02	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	4.39E-02	4.30E-03	7.20E-02	5.98E-02	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					7.34E-02

000026

Red Tail Hawk: Area A Landfill
Maximum Concentration

Aroclor-1260	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.20E+01							2.40E-02		1.00E+00	1.00E+00	2.40E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.15E+00			2.10E-01						1.00E+00	1.00E+00	2.10E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Arsenic	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000027

Aroclor-1260	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+01	2.40E-02	7.20E-02	3.33E-01	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	2.15E+00	2.10E-01	7.20E-02	2.92E+00	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					3.26E+00

Arsenic	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Total					0.00E+00

000028

Red Tail Hawk: Area A Landfill
Maximum Concentration

Barium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.99E+02							3.98E-01		1.00E+00	1.00E+00	3.98E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.01E-02			9.89E-04						1.00E+00	1.00E+00	9.89E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000029

Red Tail Hawk: Area A Landfill
Maximum Concentration

Barium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.99E+02	3.98E-01	8.33E-01	4.78E-01	
Water	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Food	1.01E-02	9.89E-04	8.33E-01	1.19E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Total					4.79E-01

Benzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Total					0.00E+00

000030

Red Tail Hawk: Area A Landfill
Maximu ncentration

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-01							4.00E-04		1.00E+00	1.00E+00	4.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.31E-03			2.26E-04						1.00E+00	1.00E+00	2.26E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-01							3.80E-04		1.00E+00	1.00E+00	3.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.15E-03			5.04E-04						1.00E+00	1.00E+00	5.04E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-01	4.00E-04	2.00E-01	2.00E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.31E-03	2.26E-04	2.00E-01	1.13E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					3.13E-03

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	3.80E-04	2.00E-01	1.90E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	5.15E-03	5.04E-04	2.00E-01	2.52E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					4.42E-03

000032

Red Tail Hawk: Area A Landfill
Maximur centration

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.20E-01							4.40E-04		1.00E+00	1.00E+00	4.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.32E-02			2.27E-03						1.00E+00	1.00E+00	2.27E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.40E-02							8.80E-05		1.00E+00	1.00E+00	8.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.12E-02			2.08E-03						1.00E+00	1.00E+00	2.08E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	4.40E-04	2.00E-01	2.20E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.32E-02	2.27E-03	2.00E-01	1.14E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					1.36E-02

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.40E-02	8.80E-05	2.00E-01	4.40E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.12E-02	2.08E-03	2.00E-01	1.04E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					1.08E-02

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.10E-01							4.20E-04		1.00E+00	1.00E+00	4.20E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.12E-02			4.04E-03						1.00E+00	1.00E+00	4.04E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E-01	4.20E-04	2.00E-01	2.10E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.12E-02	4.04E-03	2.00E-01	2.02E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.23E-02

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					0.00E+00

Beryllium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.20E+00							2.40E-03		1.00E+00	1.00E+00	2.40E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.06E-04			3.97E-05						1.00E+00	1.00E+00	3.97E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Bis(2-ethylexyl)phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.90E-01							7.80E-04		1.00E+00	1.00E+00	7.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.21E-03			2.16E-04						1.00E+00	1.00E+00	2.16E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Beryllium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+00	2.40E-03	1.32E-02	1.82E-01	
Water	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Food	4.06E-04	3.97E-05	1.32E-02	3.01E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Total					1.85E-01

Bis(2-ethylexyl)phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-01	7.80E-04	2.22E-01	3.51E-03	
Water	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Food	2.21E-03	2.16E-04	2.22E-01	9.74E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Total					4.49E-03

000038

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.70E+00							9.40E-03		1.00E+00	1.00E+00	9.40E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.23E-03			1.21E-04						1.00E+00	1.00E+00	1.21E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.70E+00	9.40E-03	2.90E-01	3.24E-02	
Water	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Food	1.23E-03	1.21E-04	2.90E-01	4.16E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Total					3.28E-02

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Carbon disulfide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.50E+00							9.00E-03		1.00E+00	1.00E+00	9.00E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.83E-05			8.65E-06						1.00E+00	1.00E+00	8.65E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Carbon disulfide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Total					0.00E+00

Chlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.50E+00	9.00E-03	2.73E-01	3.30E-02	
Water	0.00E+00	0.00E+00	2.73E-01	0.00E+00	
Food	8.83E-05	8.65E-06	2.73E-01	3.18E-05	
Inhalation					
Air	0.00E+00	0.00E+00	2.73E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.73E-01	0.00E+00	
Total					3.31E-02

000042

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-01							3.80E-04		1.00E+00	1.00E+00	3.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.20E-03			2.15E-04						1.00E+00	1.00E+00	2.15E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000043

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	3.80E-04	2.00E-01	1.90E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.20E-03	2.15E-04	2.00E-01	1.08E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.98E-03

Cis-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Cobalt	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	8.20E+00							1.64E-02		1.00E+00	1.00E+00	1.64E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.54E-02			5.43E-03						1.00E+00	1.00E+00	5.43E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000045

Cis-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Cobalt	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	8.20E+00	1.64E-02	5.00E-02	3.28E-01	
Water	0.00E+00	0.00E+00	5.00E-02	0.00E+00	
Food	5.54E-02	5.43E-03	5.00E-02	1.09E-01	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E-02	0.00E+00	
Total					4.37E-01

000046

Copper	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.94E+02							1.59E+00		1.00E+00	1.00E+00	1.59E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.61E+00			2.55E-01						1.00E+00	1.00E+00	2.55E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Cyanide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.20E-01							4.40E-04		1.00E+00	1.00E+00	4.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.44E-03			7.29E-04						1.00E+00	1.00E+00	7.29E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000047

Red Tail Hawk: Area A Landfill
Maximum Concentration

Copper	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.94E+02	1.59E+00	6.64E+00	2.39E-01	
Water	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Food	2.61E+00	2.55E-01	6.64E+00	3.85E-02	
Inhalation					
Air	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Total					2.78E-01

Cyanide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	4.40E-04	1.37E+00	3.20E-04	
Water	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Food	7.44E-03	7.29E-04	1.37E+00	5.30E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Total					8.51E-04

000048

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.10E-02							1.22E-04		1.00E+00	1.00E+00	1.22E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.74E-04			2.69E-05						1.00E+00	1.00E+00	2.69E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000049

Red Tail Hawk: Area A Landfill
Maximum Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	1.22E-04	4.44E-02	2.75E-03	
Water	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Food	2.74E-04	2.69E-05	4.44E-02	6.05E-04	
Inhalation					
Air	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Total					3.35E-03

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.50E-03							1.50E-05		1.00E+00	1.00E+00	1.50E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.62E-06			2.57E-07						1.00E+00	1.00E+00	2.57E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.50E-03	1.50E-05	1.54E-02	9.74E-04	
Water	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Food	2.62E-06	2.57E-07	1.54E-02	1.67E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Total					9.91E-04

Diethyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endosulfan ii	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.37E-07			2.32E-08						1.00E+00	1.00E+00	2.32E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Diethyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Water	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Food	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Total					0.00E+00

Endosulfan ii	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	2.00E+00	2.00E-06	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	2.37E-07	2.32E-08	2.00E+00	1.16E-08	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					2.01E-06

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.40E-03							4.80E-06		1.00E+00	1.00E+00	4.80E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.71E-05			2.66E-06						1.00E+00	1.00E+00	2.66E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-03	4.80E-06	6.00E-02	8.00E-05	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	2.71E-05	2.66E-06	6.00E-02	4.43E-05	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					1.24E-04

Endrin aldehyde	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-02							3.80E-05		1.00E+00	1.00E+00	3.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.15E-04			2.10E-05						1.00E+00	1.00E+00	2.10E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Endrin ketone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.70E-01							1.14E-03		1.00E+00	1.00E+00	1.14E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.44E-03			6.31E-04						1.00E+00	1.00E+00	6.31E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Endrin aldehyde	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-02	3.80E-05	6.00E-02	6.33E-04	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	2.15E-04	2.10E-05	6.00E-02	3.50E-04	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					9.84E-04

Endrin ketone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.70E-01	1.14E-03	6.00E-02	1.90E-02	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	6.44E-03	6.31E-04	6.00E-02	1.05E-02	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					2.95E-02

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.40E+01							2.80E-02		1.00E+00	1.00E+00	2.80E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.61E-04			5.50E-05						1.00E+00	1.00E+00	5.50E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.00E-01							6.00E-04		1.00E+00	1.00E+00	6.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.82E-03			1.78E-04						1.00E+00	1.00E+00	1.78E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.40E+01	2.80E-02	8.16E-01	3.43E-02	
Water	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Food	5.61E-04	5.50E-05	8.16E-01	6.74E-05	
Inhalation					
Air	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Total					3.44E-02

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.00E-01	6.00E-04	1.25E+01	4.80E-05	
Water	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Food	1.82E-03	1.78E-04	1.25E+01	1.43E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Total					6.23E-05

000060

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.10E-02							1.22E-04		1.00E+00	1.00E+00	1.22E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.04E-06			1.02E-07						1.00E+00	1.00E+00	1.02E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000061

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Total					0.00E+00

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	1.22E-04	8.56E-02	1.43E-03	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	1.04E-06	1.02E-07	8.56E-02	1.19E-06	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					1.43E-03

Indeno(1,2,3-Cd)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Iron	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.20E+04							2.40E+01		1.00E+00	1.00E+00	2.40E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.11E+01			7.95E+00						1.00E+00	1.00E+00	7.95E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Indeno(1,2,3-Cd)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Iron	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.20E+04	2.40E+01	0.00E+00	N/A	
Water	0.00E+00	0.00E+00	0.00E+00	N/A	
Food	8.11E+01	7.95E+00	0.00E+00	N/A	
Inhalation					
Air	0.00E+00	0.00E+00	0.00E+00	N/A	
Dermal					
Soil	0.00E+00	0.00E+00	0.00E+00	N/A	
Total					0.00E+00

000064

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.67E+02							7.34E-01		1.00E+00	1.00E+00	7.34E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.45E-02			5.34E-03						1.00E+00	1.00E+00	5.34E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.12E+02							4.24E-01		1.00E+00	1.00E+00	4.24E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.93E+00			1.90E-01						1.00E+00	1.00E+00	1.90E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.67E+02	7.34E-01	3.85E+00	1.91E-01	
Water	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Food	5.45E-02	5.34E-03	3.85E+00	1.39E-03	
Inhalation					
Air	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Total					1.92E-01

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.12E+02	4.24E-01	8.80E+00	4.82E-02	
Water	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Food	1.93E+00	1.90E-01	8.80E+00	2.15E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Total					6.97E-02

000096

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.10E-01							1.22E-03		1.00E+00	1.00E+00	1.22E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.18E-09			5.08E-10						1.00E+00	1.00E+00	5.08E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-02							3.80E-05		1.00E+00	1.00E+00	3.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.58E-05			2.53E-06						1.00E+00	1.00E+00	2.53E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000067

Red Tail Hawk: Area A Landfill
Maximum Concentration

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-01	1.22E-03	1.28E-02	9.53E-02	
Water	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Food	5.18E-09	5.08E-10	1.28E-02	3.97E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Total					9.53E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-02	3.80E-05	4.00E-01	9.50E-05	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.58E-05	2.53E-06	4.00E-01	6.32E-06	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.01E-04

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.00E-03							1.20E-05		1.00E+00	1.00E+00	1.20E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.03E-09			2.97E-10						1.00E+00	1.00E+00	2.97E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000069

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.00E-03	1.20E-05	5.85E-01	2.05E-05	
Water	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Food	3.03E-09	2.97E-10	5.85E-01	5.07E-10	
Inhalation					
Air	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Total					2.05E-05

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					0.00E+00

000070

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.36E+01							6.72E-02		1.00E+00	1.00E+00	6.72E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.81E-02			6.68E-03						1.00E+00	1.00E+00	6.68E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.50E+00							5.00E-03		1.00E+00	1.00E+00	5.00E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.93E-02			8.75E-03						1.00E+00	1.00E+00	8.75E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Red Tail Hawk: Area A Landfill
Maximum Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.36E+01	6.72E-02	1.55E+01	4.34E-03	
Water	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Food	6.81E-02	6.68E-03	1.55E+01	4.31E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Total					4.77E-03

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.50E+00	5.00E-03	2.80E-06	1.79E+03	
Water	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Food	8.93E-02	8.75E-03	2.80E-06	3.12E+03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Total					4.91E+03

000072

Red Tail Hawk: Area A Landfill
Maximur ncentration

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.50E-01							3.00E-04		1.00E+00	1.00E+00	3.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.23E-04			1.20E-05						1.00E+00	1.00E+00	1.20E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.10E+00							2.20E-03		1.00E+00	1.00E+00	2.20E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.72E-03			4.63E-04						1.00E+00	1.00E+00	4.63E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000073

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-01	3.00E-04	5.13E-02	5.84E-03	
Water	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Food	1.23E-04	1.20E-05	5.13E-02	2.34E-04	
Inhalation					
Air	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Total					6.08E-03

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E+00	2.20E-03	7.50E-01	2.93E-03	
Water	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Food	4.72E-03	4.63E-04	7.50E-01	6.17E-04	
Inhalation					
Air	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Total					3.55E-03

000074

Red Tail Hawk: Area A Landfill
Maximum Concentration

Selenium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.70E-01							9.40E-04		1.00E+00	1.00E+00	9.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.38E-03			2.34E-04						1.00E+00	1.00E+00	2.34E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Silver	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000075

Red Tail Hawk: Area A Landfill
Maximum Concentration

Selenium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.70E-01	9.40E-04	8.00E-02	1.18E-02	
Water	0.00E+00	0.00E+00	8.00E-02	0.00E+00	
Food	2.38E-03	2.34E-04	8.00E-02	2.92E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-02	0.00E+00	
Total					1.47E-02

Silver	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Total					0.00E+00

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.00E-03							8.00E-06		1.00E+00	1.00E+00	8.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.84E-08			3.77E-09						1.00E+00	1.00E+00	3.77E-09
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000077

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.00E-03	8.00E-06	1.40E-01	5.71E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	3.84E-08	3.77E-09	1.40E-01	2.69E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					5.72E-05

Thallium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Toluene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.60E-02							3.20E-05		1.00E+00	1.00E+00	3.20E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.22E-07			2.18E-08						1.00E+00	1.00E+00	2.18E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000079

Thallium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Water	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Food	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Total					0.00E+00

Toluene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.60E-02	3.20E-05	5.20E+00	6.16E-06	
Water	0.00E+00	0.00E+00	5.20E+00	0.00E+00	
Food	2.22E-07	2.18E-08	5.20E+00	4.19E-09	
Inhalation					
Air	0.00E+00	0.00E+00	5.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.20E+00	0.00E+00	
Total					6.16E-06

080000

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.92E-08			1.88E-09						1.00E+00	1.00E+00	1.88E-09
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000081

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	1.40E-01	2.86E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	1.92E-08	1.88E-09	1.40E-01	1.35E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					2.86E-05

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.50E+01							1.50E-01		1.00E+00	1.00E+00	1.50E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.55E+01			4.46E+00						1.00E+00	1.00E+00	4.46E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.14E+03							4.28E+00		1.00E+00	1.00E+00	4.28E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.11E+02			1.09E+01						1.00E+00	1.00E+00	1.09E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.50E+01	1.50E-01	2.06E-01	7.28E-01	
Water	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Food	4.55E+01	4.46E+00	2.06E-01	2.16E+01	
Inhalation					
Air	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Total					2.24E+01

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.14E+03	4.28E+00	1.20E+00	3.57E+00	
Water	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Food	1.11E+02	1.09E+01	1.20E+00	9.04E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Total					1.26E+01

AREA A LANDFILL

AVERAGE EXPOSURE POINT CONCENTRATIONS

TERRESTRIAL RECEPTORS

AREA A LANDFILL

AVERAGE EXPOSURE PT. CONCENTRATIONS

SHORT-TAILED SHREW

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Butanone	2.00E-03	0.00E+00	1.03E-10	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	5.48E-02	0.00E+00	1.24E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	2.98E-02	0.00E+00	6.72E-03	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	1.92E-01	0.00E+00	4.34E-02	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetone	1.50E-02	0.00E+00	2.45E-10	0.00E+00	0.00E+00	0.00E+00
Aldrin	5.60E-04	0.00E+00	2.05E-06	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	3.90E-02	0.00E+00	1.08E-03	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	2.19E-01	0.00E+00	1.97E-02	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	9.79E-01	0.00E+00	1.75E-01	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	6.04E+01	0.00E+00	3.06E-03	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	2.00E-01	0.00E+00	2.31E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	1.90E-01	0.00E+00	5.15E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	2.20E-01	0.00E+00	2.32E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	4.40E-02	0.00E+00	2.12E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	2.10E-01	0.00E+00	4.12E-02	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	7.60E-01	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	3.90E-01	0.00E+00	2.21E-03	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	1.88E+00	0.00E+00	4.92E-04	0.00E+00	0.00E+00	0.00E+00
Carbazole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	3.29E-01	0.00E+00	4.43E-01	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	1.90E-01	0.00E+00	2.56E-01	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	1.24E+02	0.00E+00	2.31E+01	0.00E+00	0.00E+00	0.00E+00
Cyanide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	6.10E-02	0.00E+00	8.22E-02	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dieldrin	7.50E-03	0.00E+00	1.01E-02	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	2.00E-03	0.00E+00	2.69E-03	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	2.40E-03	0.00E+00	3.23E-03	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	3.75E-03	0.00E+00	5.04E-03	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	4.94E-02	0.00E+00	6.66E-02	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	1.00E+00	0.00E+00	1.35E+00	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	3.00E-01	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00
Fluorene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	6.10E-02	0.00E+00	8.22E-02	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	8.19E+01	0.00E+00	2.03E+01	0.00E+00	0.00E+00	0.00E+00
Manganese	1.81E+02	0.00E+00	3.62E+01	0.00E+00	0.00E+00	0.00E+00
Mercury	9.46E-02	0.00E+00	1.89E-02	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	1.90E-02	0.00E+00	2.56E-02	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	6.00E-03	0.00E+00	8.08E-03	0.00E+00	0.00E+00	0.00E+00
Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	1.94E+01	0.00E+00	3.88E+00	0.00E+00	0.00E+00	0.00E+00
OCDD	2.05E+00	0.00E+00	2.76E+00	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	1.50E-01	0.00E+00	2.02E-01	0.00E+00	0.00E+00	0.00E+00
Pyrene	1.10E+00	0.00E+00	1.48E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	1.98E-01	0.00E+00	3.96E-02	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)						
Area A Landfill						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	4.00E-03	0.00E+00	5.39E-03	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	1.60E-02	0.00E+00	2.15E-02	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	2.69E-03	0.00E+00	0.00E+00	0.00E+00
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	5.36E+00	0.00E+00	7.22E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	5.58E+02	0.00E+00	2.57E+02	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			2.42E-04
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			3.63E-02
4,4'-DDE			1.97E-02
4,4'-DDT			1.27E-01
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			7.95E-04
Aldrin			1.48E-03
Alpha-Chlordane			4.51E-03
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			4.30E-01
Aroclor-1260			1.92E+00
Arsenic			0.00E+00
Barium			6.33E+00
Benzene			0.00E+00
Benzo(a)anthracene			5.30E-02
Benzo(a)pyrene			5.04E-02
Benzo(b)fluoranthene			5.83E-02
Benzo(g,h,i)perylene			1.17E-02
Benzo(k)fluoranthene			5.57E-02
Benzoic acid			0.00E+00
Beryllium			3.05E+00
Bis(2-ethylexyl)phthalate			1.13E-02
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			1.98E+00
Carbazole			0.00E+00
TOTAL			1.41E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			6.40E-02
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			5.04E-02
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			9.99E-01
Cyanide			0.00E+00
Di-n-butylphthalate			5.88E-05
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			9.94E-02
Diethyl phthalate			0.00E+00
Endosulfan ii			7.07E-03
Endosulfan sulfate			0.00E+00
Endrin			6.91E-03
Endrin aldehyde			1.08E-02
Endrin ketone			1.42E-01
Ethylbenzene			6.52E-02
Fluoranthene			1.27E-02
Fluorene			0.00E+00
Gamma-Chlordane			7.06E-03
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			5.43E+00
Manganese			1.09E+00
Mercury			3.80E-03
Methoxychlor			2.52E-03
Methylene chloride			5.44E-04
Naphthalene			0.00E+00
Nickel			2.57E-01
OCDD			1.09E+06
Phenanthrene			1.55E-01
Pyrene			7.77E-02
Selenium			6.99E-01
Silver			0.00E+00
TOTAL			1.09E+06

Shrew: Area A Landfill
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			1.51E-03
Thallium			0.00E+00
Toluene			1.63E-04
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			7.57E-04
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			1.38E+00
Zinc			1.85E+00
TOTAL			3.23E+00

Shrew: Area A Landfill
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

Shrew: Area A Landfill
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			4.31E-11
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			2.83E-02
4,4'-DDE			1.54E-02
4,4'-DDT			9.92E-02
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			4.48E-11
Aldrin			1.87E-05
Alpha-Chlordane			4.32E-04
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			1.33E-01
Aroclor-1260			1.19E+00
Arsenic			0.00E+00
Barium			1.11E-03
Benzene			0.00E+00
Benzo(a)anthracene			2.11E-03
Benzo(a)pyrene			4.71E-03
Benzo(b)fluoranthene			2.12E-02
Benzo(g,h,i)perylene			1.94E-02
Benzo(k)fluoranthene			3.77E-02
Benzoic acid			0.00E+00
Beryllium			3.56E-03
Bis(2-ethylexyl)phthalate			2.21E-04
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			1.79E-03
Carbazole			0.00E+00
TOTAL			1.55E+00

Shrew: Area A Landfill
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			2.97E-01
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			2.34E-01
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			6.41E-01
Cyanide			0.00E+00
Di-n-butylphthalate			2.73E-04
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			4.62E-01
Diethyl phthalate			0.00E+00
Endosulfan ii			3.28E-02
Endosulfan sulfate			0.00E+00
Endrin			3.21E-02
Endrin aldehyde			5.01E-02
Endrin ketone			6.62E-01
Ethylbenzene			3.03E-01
Fluoranthene			5.91E-02
Fluorene			0.00E+00
Gamma-Chlordane			3.28E-02
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			4.64E+00
Manganese			7.52E-01
Mercury			2.62E-03
Methoxychlor			1.17E-02
Methylene chloride			2.53E-03
Naphthalene			0.00E+00
Nickel			1.77E-01
OCDD			5.05E+06
Phenanthrene			7.20E-01
Pyrene			3.61E-01
Selenium			4.82E-01
Silver			0.00E+00
TOTAL			5.05E+06

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
Area A Landfill
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: SHORT-TAIL SHREW

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			7.04E-03
Thallium			0.00E+00
Toluene			7.58E-04
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			3.52E-03
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			6.41E+00
Zinc			2.93E+00
TOTAL			9.35E+00

Shrew: Area A Landfill
Average Concentration

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.03E-10			3.78E-11						1.00E+00	1.00E+00	3.78E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

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Shrew: Area A Landfill
Average Concentration

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.71E+01	0.00E+00	
Total					0.00E+00

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	8.76E-01	2.42E-04	
Water	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Food	1.03E-10	3.78E-11	8.76E-01	4.31E-11	
Inhalation					
Air	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.76E-01	0.00E+00	
Total					2.42E-04

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.48E-02							5.80E-03		1.00E+00	1.00E+00	5.80E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.24E-02			4.52E-03						1.00E+00	1.00E+00	4.52E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.98E-02							3.15E-03		1.00E+00	1.00E+00	3.15E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.72E-03			2.46E-03						1.00E+00	1.00E+00	2.46E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000017

Shrew: Area A Landfill
Average Concentration

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.48E-02	5.80E-03	1.60E-01	3.63E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	1.24E-02	4.52E-03	1.60E-01	2.83E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					6.45E-02

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.98E-02	3.15E-03	1.60E-01	1.97E-02	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	6.72E-03	2.46E-03	1.60E-01	1.54E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					3.51E-02

000018

Shrew: Area A Landfill
Average Concentration

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.92E-01							2.04E-02		1.00E+00	1.00E+00	2.04E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.34E-02			1.59E-02						1.00E+00	1.00E+00	1.59E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000019

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.92E-01	2.04E-02	1.60E-01	1.27E-01	
Water	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Food	4.34E-02	1.59E-02	1.60E-01	9.92E-02	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E-01	0.00E+00	
Total					2.26E-01

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.00E+00	0.00E+00	
Total					0.00E+00

Acetone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.50E-02							1.59E-03		1.00E+00	1.00E+00	1.59E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.45E-10			8.95E-11						1.00E+00	1.00E+00	8.95E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.60E-04							5.94E-05		1.00E+00	1.00E+00	5.94E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.05E-06			7.48E-07						1.00E+00	1.00E+00	7.48E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

Shrew: Area A Landfill
Average Concentration

Acetone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-02	1.59E-03	2.00E+00	7.95E-04	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	2.45E-10	8.95E-11	2.00E+00	4.48E-11	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					7.95E-04

Aldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.60E-04	5.94E-05	4.00E-02	1.48E-03	
Water	0.00E+00	0.00E+00	4.00E-02	0.00E+00	
Food	2.05E-06	7.48E-07	4.00E-02	1.87E-05	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-02	0.00E+00	
Total					1.50E-03

Shrew: Area A Landfill
Average [illegible]entration

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.90E-02							4.13E-03		1.00E+00	1.00E+00	4.13E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.08E-03			3.95E-04						1.00E+00	1.00E+00	3.95E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000023

Shrew: Area A Landfill
Average Concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-02	4.13E-03	9.16E-01	4.51E-03	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	1.08E-03	3.95E-04	9.16E-01	4.32E-04	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					4.94E-03

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+01	0.00E+00	
Total					0.00E+00

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.19E-01							2.32E-02		1.00E+00	1.00E+00	2.32E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.97E-02			7.19E-03						1.00E+00	1.00E+00	7.19E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000025

Shrew: Area A Landfill
Average Concentration

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.19E-01	2.32E-02	5.40E-02	4.30E-01	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	1.97E-02	7.19E-03	5.40E-02	1.33E-01	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					5.64E-01

000026

Shrew: Area A Landfill
Average Concentration

Aroclor-1260	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.79E-01							1.04E-01		1.00E+00	1.00E+00	1.04E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.75E-01			6.41E-02						1.00E+00	1.00E+00	6.41E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Arsenic	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000027

Shrew: Area A Landfill
Average Concentration

Aroclor-1260	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.79E-01	1.04E-01	5.40E-02	1.92E+00	
Water	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Food	1.75E-01	6.41E-02	5.40E-02	1.19E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.40E-02	0.00E+00	
Total					3.11E+00

Arsenic	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Water	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Food	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.04E-02	0.00E+00	
Total					0.00E+00

Barium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.04E+01							6.40E+00		1.00E+00	1.00E+00	6.40E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.06E-03			1.12E-03						1.00E+00	1.00E+00	1.12E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000029

Shrew: Area A Landfill
Average Concentration

Barium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.04E+01	6.40E+00	1.01E+00	6.33E+00	
Water	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Food	3.06E-03	1.12E-03	1.01E+00	1.11E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E+00	0.00E+00	
Total					6.33E+00

Benzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.05E+01	0.00E+00	
Total					0.00E+00

Shrew: Area A Landfill
Average Concentration

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-01							2.12E-02		1.00E+00	1.00E+00	2.12E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.31E-03			8.45E-04						1.00E+00	1.00E+00	8.45E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-01							2.01E-02		1.00E+00	1.00E+00	2.01E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.15E-03			1.88E-03						1.00E+00	1.00E+00	1.88E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-01	2.12E-02	4.00E-01	5.30E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.31E-03	8.45E-04	4.00E-01	2.11E-03	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					5.51E-02

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	2.01E-02	4.00E-01	5.04E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	5.15E-03	1.88E-03	4.00E-01	4.71E-03	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					5.51E-02

000032

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.20E-01							2.33E-02		1.00E+00	1.00E+00	2.33E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.32E-02			8.48E-03						1.00E+00	1.00E+00	8.48E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.40E-02							4.66E-03		1.00E+00	1.00E+00	4.66E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.12E-02			7.75E-03						1.00E+00	1.00E+00	7.75E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	2.33E-02	4.00E-01	5.83E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.32E-02	8.48E-03	4.00E-01	2.12E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					7.95E-02

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.40E-02	4.66E-03	4.00E-01	1.17E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.12E-02	7.75E-03	4.00E-01	1.94E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					3.10E-02

000034

Shrew: Area A Landfill
Average centration

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.10E-01							2.23E-02		1.00E+00	1.00E+00	2.23E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.12E-02			1.51E-02						1.00E+00	1.00E+00	1.51E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000035

Shrew: Area A Landfill
Average Concentration

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E-01	2.23E-02	4.00E-01	5.57E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	4.12E-02	1.51E-02	4.00E-01	3.77E-02	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					9.33E-02

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+01	0.00E+00	
Total					0.00E+00

Beryllium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.60E-01							8.06E-02		1.00E+00	1.00E+00	8.06E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.57E-04			9.39E-05						1.00E+00	1.00E+00	9.39E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Bis(2-ethylexyl)phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.90E-01							4.13E-02		1.00E+00	1.00E+00	4.13E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.21E-03			8.07E-04						1.00E+00	1.00E+00	8.07E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000037

Shrew: Area A Landfill
Average Concentration

Beryllium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.60E-01	8.06E-02	2.64E-02	3.05E+00	
Water	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Food	2.57E-04	9.39E-05	2.64E-02	3.56E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E-02	0.00E+00	
Total					3.06E+00

Bis(2-ethylexyl)phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-01	4.13E-02	3.66E+00	1.13E-02	
Water	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Food	2.21E-03	8.07E-04	3.66E+00	2.21E-04	
Inhalation					
Air	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.66E+00	0.00E+00	
Total					1.15E-02

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.88E+00							1.99E-01		1.00E+00	1.00E+00	1.99E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.92E-04			1.80E-04						1.00E+00	1.00E+00	1.80E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000039

Shrew: Area A Landfill
Average Concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.88E+00	1.99E-01	1.01E-01	1.98E+00	
Water	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Food	4.92E-04	1.80E-04	1.01E-01	1.79E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.01E-01	0.00E+00	
Total					1.98E+00

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

000040

Shrew: Area A Landfill
Averagr centration

Carbon disulfide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.29E-01							3.49E-02		1.00E+00	1.00E+00	3.49E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.43E-01			1.62E-01						1.00E+00	1.00E+00	1.62E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Carbon disulfide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.20E+00	0.00E+00	
Total					0.00E+00

Chlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.29E-01	3.49E-02	5.45E-01	6.40E-02	
Water	0.00E+00	0.00E+00	5.45E-01	0.00E+00	
Food	4.43E-01	1.62E-01	5.45E-01	2.97E-01	
Inhalation					
Air	0.00E+00	0.00E+00	5.45E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.45E-01	0.00E+00	
Total					3.61E-01

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-01							2.01E-02		1.00E+00	1.00E+00	2.01E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.56E-01			9.36E-02						1.00E+00	1.00E+00	9.36E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000043

Shrew: Area A Landfill
Average Concentration

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Water	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Food	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.84E-01	0.00E+00	
Total					0.00E+00

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	2.01E-02	4.00E-01	5.04E-02	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.56E-01	9.36E-02	4.00E-01	2.34E-01	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					2.84E-01

Copper	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.24E+02							1.32E+01		1.00E+00	1.00E+00	1.32E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.31E+01			8.46E+00						1.00E+00	1.00E+00	8.46E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Cyanide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Average Concentration

Copper	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.24E+02	1.32E+01	1.32E+01	9.99E-01	
Water	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Food	2.31E+01	8.46E+00	1.32E+01	6.41E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.32E+01	0.00E+00	
Total					1.64E+00

Cyanide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.75E+00	0.00E+00	
Total					0.00E+00

000046

Shrew: Area A Landfill
Average Concentration

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.10E-02							6.47E-03		1.00E+00	1.00E+00	6.47E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.22E-02			3.00E-02						1.00E+00	1.00E+00	3.00E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000047

Shrew: Area A Landfill
Average Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	6.47E-03	1.10E+02	5.88E-05	
Water	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Food	8.22E-02	3.00E-02	1.10E+02	2.73E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.10E+02	0.00E+00	
Total					3.32E-04

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	7.50E-03							7.95E-04		1.00E+00	1.00E+00	7.95E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.01E-02			3.69E-03						1.00E+00	1.00E+00	3.69E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000049

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					0.00E+00

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.50E-03	7.95E-04	8.00E-03	9.94E-02	
Water	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Food	1.01E-02	3.69E-03	8.00E-03	4.62E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-03	0.00E+00	
Total					5.61E-01

000050

Shrew: Area A Landfill
Average Concentration

Diethyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endosulfan ii	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.69E-03			9.85E-04						1.00E+00	1.00E+00	9.85E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Average Concentration

Diethyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Water	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Food	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.17E+02	0.00E+00	
Total					0.00E+00

Endosulfan ii	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	3.00E-02	7.07E-03	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	2.69E-03	9.85E-04	3.00E-02	3.28E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					3.99E-02

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.40E-03							2.54E-04		1.00E+00	1.00E+00	2.54E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.23E-03			1.18E-03						1.00E+00	1.00E+00	1.18E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000053

Shrew: Area A Landfill
Average Concentration

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-03	2.54E-04	3.68E-02	6.91E-03	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	3.23E-03	1.18E-03	3.68E-02	3.21E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					3.90E-02

Endrin aldehyde	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.75E-03							3.97E-04		1.00E+00	1.00E+00	3.97E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.04E-03			1.84E-03						1.00E+00	1.00E+00	1.84E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Endrin ketone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.94E-02							5.24E-03		1.00E+00	1.00E+00	5.24E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.66E-02			2.44E-02						1.00E+00	1.00E+00	2.44E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Shrew: Area A Landfill
Average Concentration

Endrin aldehyde	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.75E-03	3.97E-04	3.68E-02	1.08E-02	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	5.04E-03	1.84E-03	3.68E-02	5.01E-02	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					6.09E-02

Endrin ketone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.94E-02	5.24E-03	3.68E-02	1.42E-01	
Water	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Food	6.66E-02	2.44E-02	3.68E-02	6.62E-01	
Inhalation					
Air	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.68E-02	0.00E+00	
Total					8.04E-01

000056

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.00E+00							1.06E-01		1.00E+00	1.00E+00	1.06E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.35E+00			4.95E-01						1.00E+00	1.00E+00	4.95E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	3.00E-01							3.18E-02		1.00E+00	1.00E+00	3.18E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.04E-01			1.48E-01						1.00E+00	1.00E+00	1.48E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E+00	1.06E-01	1.63E+00	6.52E-02	
Water	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Food	1.35E+00	4.95E-01	1.63E+00	3.03E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.63E+00	0.00E+00	
Total					3.68E-01

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.00E-01	3.18E-02	2.50E+00	1.27E-02	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	4.04E-01	1.48E-01	2.50E+00	5.91E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					7.18E-02

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.10E-02							6.47E-03		1.00E+00	1.00E+00	6.47E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.22E-02			3.00E-02						1.00E+00	1.00E+00	3.00E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					0.00E+00

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	6.47E-03	9.16E-01	7.06E-03	
Water	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Food	8.22E-02	3.00E-02	9.16E-01	3.28E-02	
Inhalation					
Air	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	9.16E-01	0.00E+00	
Total					3.99E-02

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	8.19E+01							8.68E+00		1.00E+00	1.00E+00	8.68E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.03E+01			7.43E+00						1.00E+00	1.00E+00	7.43E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.81E+02							1.92E+01		1.00E+00	1.00E+00	1.92E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.62E+01			1.32E+01						1.00E+00	1.00E+00	1.32E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	8.19E+01	8.68E+00	1.60E+00	5.43E+00	
Water	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Food	2.03E+01	7.43E+00	1.60E+00	4.64E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.60E+00	0.00E+00	
Total					1.01E+01

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.81E+02	1.92E+01	1.76E+01	1.09E+00	
Water	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Food	3.62E+01	1.32E+01	1.76E+01	7.52E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.76E+01	0.00E+00	
Total					1.84E+00

Shrew: Area A Landfill
Average [illegible]centration

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	9.46E-02							1.00E-02		1.00E+00	1.00E+00	1.00E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.89E-02			6.92E-03						1.00E+00	1.00E+00	6.92E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.90E-02							2.01E-03		1.00E+00	1.00E+00	2.01E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.56E-02			9.36E-03						1.00E+00	1.00E+00	9.36E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000063

Shrew: Area A Landfill
Average Concentration

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.46E-02	1.00E-02	2.64E+00	3.80E-03	
Water	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Food	1.89E-02	6.92E-03	2.64E+00	2.62E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.64E+00	0.00E+00	
Total					6.42E-03

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-02	2.01E-03	8.00E-01	2.52E-03	
Water	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Food	2.56E-02	9.36E-03	8.00E-01	1.17E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-01	0.00E+00	
Total					1.42E-02

000064

Shrew: Area A Landfill
Averagr centration

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	6.00E-03							6.36E-04		1.00E+00	1.00E+00	6.36E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.08E-03			2.96E-03						1.00E+00	1.00E+00	2.96E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.00E-03	6.36E-04	1.17E+00	5.44E-04	
Water	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Food	8.08E-03	2.96E-03	1.17E+00	2.53E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.17E+00	0.00E+00	
Total					3.07E-03

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					0.00E+00

000066

Shrew: Area A Landfill
Average centration

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.94E+01							2.06E+00		1.00E+00	1.00E+00	2.06E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.88E+00			1.42E+00						1.00E+00	1.00E+00	1.42E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.05E+00							2.17E-01		1.00E+00	1.00E+00	2.17E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.76E+00			1.01E+00						1.00E+00	1.00E+00	1.01E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000067

Shrew: Area A Landfill
Average Concentration

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.94E+01	2.06E+00	8.00E+00	2.57E-01	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	3.88E+00	1.42E+00	8.00E+00	1.77E-01	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					4.34E-01

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.05E+00	2.17E-01	2.00E-07	1.09E+06	
Water	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Food	2.76E+00	1.01E+00	2.00E-07	5.05E+06	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-07	0.00E+00	
Total					6.13E+06

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.50E-01							1.59E-02		1.00E+00	1.00E+00	1.59E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.02E-01			7.39E-02						1.00E+00	1.00E+00	7.39E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.10E+00							1.17E-01		1.00E+00	1.00E+00	1.17E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.48E+00			5.42E-01						1.00E+00	1.00E+00	5.42E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000069

Shrew: Area A Landfill
Average Concentration

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-01	1.59E-02	1.03E-01	1.55E-01	
Water	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Food	2.02E-01	7.39E-02	1.03E-01	7.20E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.03E-01	0.00E+00	
Total					8.74E-01

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E+00	1.17E-01	1.50E+00	7.77E-02	
Water	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Food	1.48E+00	5.42E-01	1.50E+00	3.61E-01	
Inhalation					
Air	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.50E+00	0.00E+00	
Total					4.39E-01

Selenium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.98E-01							2.10E-02		1.00E+00	1.00E+00	2.10E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.96E-02			1.45E-02						1.00E+00	1.00E+00	1.45E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Silver	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000071

Shrew: Area A Landfill
Average Concentration

Selenium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.98E-01	2.10E-02	3.00E-02	6.99E-01	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	3.96E-02	1.45E-02	3.00E-02	4.82E-01	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					1.18E+00

Silver	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Water	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Food	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E+01	0.00E+00	
Total					0.00E+00

000072

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	4.00E-03							4.24E-04		1.00E+00	1.00E+00	4.24E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.39E-03			1.97E-03						1.00E+00	1.00E+00	1.97E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000073

Shrew: Area A Landfill
Average Concentration

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.00E-03	4.24E-04	2.80E-01	1.51E-03	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	5.39E-03	1.97E-03	2.80E-01	7.04E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					8.55E-03

Thallium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Toluene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	1.60E-02							1.70E-03		1.00E+00	1.00E+00	1.70E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.15E-02			7.88E-03						1.00E+00	1.00E+00	7.88E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Shrew: Area A Landfill
Average Concentration

Thallium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Water	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Food	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.96E-03	0.00E+00	
Total					0.00E+00

Toluene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.60E-02	1.70E-03	1.04E+01	1.63E-04	
Water	0.00E+00	0.00E+00	1.04E+01	0.00E+00	
Food	2.15E-02	7.88E-03	1.04E+01	7.58E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.04E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.04E+01	0.00E+00	
Total					9.22E-04

000076

Shrew: Area A Landfill
Average Concentration

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	2.00E-03							2.12E-04		1.00E+00	1.00E+00	2.12E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.69E-03			9.85E-04						1.00E+00	1.00E+00	9.85E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000077

Shrew: Area A Landfill
Average Concentration

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	2.12E-04	2.80E-01	7.57E-04	
Water	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Food	2.69E-03	9.85E-04	2.80E-01	3.52E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-01	0.00E+00	
Total					4.28E-03

Shrew: Area A Landfill
Average Concentration

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.36E+00							5.68E-01		1.00E+00	1.00E+00	5.68E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.22E+00			2.64E+00						1.00E+00	1.00E+00	2.64E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.50E-02	7.95E+03									
Soil	5.58E+02							5.91E+01		1.00E+00	1.00E+00	5.91E+01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.57E+02			9.38E+01						1.00E+00	1.00E+00	9.38E+01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.36E+00	5.68E-01	4.12E-01	1.38E+00	
Water	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Food	7.22E+00	2.64E+00	4.12E-01	6.41E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.12E-01	0.00E+00	
Total					7.79E+00

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.58E+02	5.91E+01	3.20E+01	1.85E+00	
Water	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Food	2.57E+02	9.38E+01	3.20E+01	2.93E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.20E+01	0.00E+00	
Total					4.78E+00

AREA A LANDFILL

AVERAGE EXPOSURE PT. CONCENTRATIONS

RED-TAILED HAWK

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)

Area A Landfill

Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethene (total)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Butanone	2.00E-03	0.00E+00	1.03E-10	0.00E+00	0.00E+00	0.00E+00
2-Methylnaphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3,3'-Dichlorobenzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4,4'-DDD	5.48E-02	0.00E+00	1.24E-02	0.00E+00	0.00E+00	0.00E+00
4,4'-DDE	2.98E-02	0.00E+00	6.72E-03	0.00E+00	0.00E+00	0.00E+00
4,4'-DDT	1.92E-01	0.00E+00	4.34E-02	0.00E+00	0.00E+00	0.00E+00
4-Methyl-2-pentanone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acenaphthylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetone	1.50E-02	0.00E+00	2.45E-10	0.00E+00	0.00E+00	0.00E+00
Aldrin	5.60E-04	0.00E+00	2.05E-06	0.00E+00	0.00E+00	0.00E+00
Alpha-Chlordane	3.90E-02	0.00E+00	1.08E-03	0.00E+00	0.00E+00	0.00E+00
Aluminum	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1248	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aroclor-1254	2.19E-01	0.00E+00	1.97E-02	0.00E+00	0.00E+00	0.00E+00
Aroclor-1260	9.79E-01	0.00E+00	1.75E-01	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	6.04E+01	0.00E+00	3.06E-03	0.00E+00	0.00E+00	0.00E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(a)anthracene	2.00E-01	0.00E+00	2.31E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(a)pyrene	1.90E-01	0.00E+00	5.15E-03	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	2.20E-01	0.00E+00	2.32E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(g,h,i)perylene	4.40E-02	0.00E+00	2.12E-02	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	2.10E-01	0.00E+00	4.12E-02	0.00E+00	0.00E+00	0.00E+00
Benzoic acid	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Beryllium	7.60E-01	0.00E+00	2.57E-04	0.00E+00	0.00E+00	0.00E+00
Bis(2-ethylexyl)phthalate	3.90E-01	0.00E+00	2.21E-03	0.00E+00	0.00E+00	0.00E+00
Boron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromodichloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyl benzyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium	1.88E+00	0.00E+00	4.92E-04	0.00E+00	0.00E+00	0.00E+00
Carbazole	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L)

Area A Landfill

Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Carbon disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	3.29E-01	0.00E+00	6.45E-06	0.00E+00	0.00E+00	0.00E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	1.90E-01	0.00E+00	2.20E-03	0.00E+00	0.00E+00	0.00E+00
Cis-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	1.24E+02	0.00E+00	4.08E-01	0.00E+00	0.00E+00	0.00E+00
Cyanide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Di-n-butylphthalate	6.10E-02	0.00E+00	2.74E-04	0.00E+00	0.00E+00	0.00E+00
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dibenzofuran	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dieldrin	7.50E-03	0.00E+00	2.62E-06	0.00E+00	0.00E+00	0.00E+00
Diethyl phthalate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endosulfan ii	2.00E-03	0.00E+00	2.37E-07	0.00E+00	0.00E+00	0.00E+00
Endosulfan sulfate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Endrin	2.40E-03	0.00E+00	2.71E-05	0.00E+00	0.00E+00	0.00E+00
Endrin aldehyde	3.75E-03	0.00E+00	4.23E-05	0.00E+00	0.00E+00	0.00E+00
Endrin ketone	4.94E-02	0.00E+00	5.58E-04	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	1.00E+00	0.00E+00	4.02E-05	0.00E+00	0.00E+00	0.00E+00
Fluoranthene	3.00E-01	0.00E+00	1.82E-03	0.00E+00	0.00E+00	0.00E+00
Fluorene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gamma-Chlordane	6.10E-02	0.00E+00	1.04E-06	0.00E+00	0.00E+00	0.00E+00
Heptachlor	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Heptachlor epoxide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Indeno(1,2,3-Cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Iron	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	8.19E+01	0.00E+00	1.22E-02	0.00E+00	0.00E+00	0.00E+00
Manganese	1.81E+02	0.00E+00	1.65E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	9.46E-02	0.00E+00	8.03E-10	0.00E+00	0.00E+00	0.00E+00
Methoxychlor	1.90E-02	0.00E+00	2.58E-05	0.00E+00	0.00E+00	0.00E+00
Methylene chloride	6.00E-03	0.00E+00	3.03E-09	0.00E+00	0.00E+00	0.00E+00
Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	1.94E+01	0.00E+00	3.93E-02	0.00E+00	0.00E+00	0.00E+00
OCDD	2.05E+00	0.00E+00	7.32E-02	0.00E+00	0.00E+00	0.00E+00
Phenanthrene	1.50E-01	0.00E+00	1.23E-04	0.00E+00	0.00E+00	0.00E+00
Pyrene	1.10E+00	0.00E+00	4.72E-03	0.00E+00	0.00E+00	0.00E+00
Selenium	1.98E-01	0.00E+00	1.00E-03	0.00E+00	0.00E+00	0.00E+00
Silver	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Predicted Chemical Concentration by Media (mg/kg) except air (ng/m3) and water (mg/L) Landfill Area A						
Chemical	Ingestion				Inhalation	Dermal
	Soil	Water	Food-Animal	Food-Veget.	Air	Soil
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tetrachloroethene	4.00E-03	0.00E+00	3.84E-08	0.00E+00	0.00E+00	0.00E+00
Thallium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	1.60E-02	0.00E+00	2.22E-07	0.00E+00	0.00E+00	0.00E+00
Trans-1,3-dichloropropene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichloroethene	2.00E-03	0.00E+00	1.92E-08	0.00E+00	0.00E+00	0.00E+00
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes, total	5.36E+00	0.00E+00	3.25E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	5.58E+02	0.00E+00	2.89E+01	0.00E+00	0.00E+00	0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			9.13E-06
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			9.78E-01
4,4'-DDE			5.31E-01
4,4'-DDT			3.43E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			3.00E-05
Aldrin			5.60E-05
Alpha-Chlordane			9.11E-04
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			6.09E-03
Aroclor-1260			2.72E-02
Arsenic			0.00E+00
Barium			1.45E-01
Benzene			0.00E+00
Benzo(a)anthracene			2.00E-03
Benzo(a)pyrene			1.90E-03
Benzo(b)fluoranthene			2.20E-03
Benzo(g,h,i)perylene			4.40E-04
Benzo(k)fluoranthene			2.10E-03
Benzoic acid			0.00E+00
Beryllium			1.15E-01
Bis(2-ethylexyl)phthalate			3.51E-03
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			1.30E-02
Carbazole			0.00E+00
TOTAL			5.26E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			2.41E-03
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			1.90E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			3.75E-02
Cyanide			0.00E+00
Di-n-butylphthalate			2.75E-03
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			9.74E-04
Diethyl phthalate			0.00E+00
Endosulfan ii			2.00E-06
Endosulfan sulfate			0.00E+00
Endrin			8.00E-05
Endrin aldehyde			1.25E-04
Endrin ketone			1.65E-03
Ethylbenzene			2.46E-03
Fluoranthene			4.80E-05
Fluorene			0.00E+00
Gamma-Chlordane			1.43E-03
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			4.25E-02
Manganese			4.11E-02
Mercury			1.48E-02
Methoxychlor			9.50E-05
Methylene chloride			2.05E-05
Naphthalene			0.00E+00
Nickel			2.51E-03
OCDD			1.46E+03
Phenanthrene			5.84E-03
Pyrene			2.93E-03
Selenium			4.95E-03
Silver			0.00E+00
TOTAL			1.46E+03

RISK ASSESSMENT SPREADSHEET - INGESTION OF SOIL
AREA A lANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			5.71E-05
Thallium			0.00E+00
Toluene			6.16E-06
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			2.86E-05
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			5.21E-02
Zinc			9.29E-01
TOTAL			9.82E-01

RTHawk: Landfill
Average Concentration

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			0.00E+00
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			0.00E+00
4,4'-DDE			0.00E+00
4,4'-DDT			0.00E+00
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			0.00E+00
Aldrin			0.00E+00
Alpha-Chlordane			0.00E+00
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			0.00E+00
Aroclor-1260			0.00E+00
Arsenic			0.00E+00
Barium			0.00E+00
Benzene			0.00E+00
Benzo(a)anthracene			0.00E+00
Benzo(a)pyrene			0.00E+00
Benzo(b)fluoranthene			0.00E+00
Benzo(g,h,i)perylene			0.00E+00
Benzo(k)fluoranthene			0.00E+00
Benzoic acid			0.00E+00
Beryllium			0.00E+00
Bis(2-ethylexyl)phthalate			0.00E+00
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			0.00E+00
Carbazole			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			0.00E+00
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			0.00E+00
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			0.00E+00
Cyanide			0.00E+00
Di-n-butylphthalate			0.00E+00
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			0.00E+00
Diethyl phthalate			0.00E+00
Endosulfan ii			0.00E+00
Endosulfan sulfate			0.00E+00
Endrin			0.00E+00
Endrin aldehyde			0.00E+00
Endrin ketone			0.00E+00
Ethylbenzene			0.00E+00
Fluoranthene			0.00E+00
Fluorene			0.00E+00
Gamma-Chlordane			0.00E+00
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			0.00E+00
Manganese			0.00E+00
Mercury			0.00E+00
Methoxychlor			0.00E+00
Methylene chloride			0.00E+00
Naphthalene			0.00E+00
Nickel			0.00E+00
OCDD			0.00E+00
Phenanthrene			0.00E+00
Pyrene			0.00E+00
Selenium			0.00E+00
Silver			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF WATER
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			0.00E+00
Thallium			0.00E+00
Toluene			0.00E+00
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			0.00E+00
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			0.00E+00
Zinc			0.00E+00
TOTAL			0.00E+00

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
1,1,2,2-Tetrachloroethane			0.00E+00
1,1,2-Trichloroethane			0.00E+00
1,1-Dichloroethene			0.00E+00
1,2-Dichloroethene (total)			0.00E+00
1,4-Dichlorobenzene			0.00E+00
2-Butanone			2.31E-11
2-Methylnaphthalene			0.00E+00
3,3'-Dichlorobenzidine			0.00E+00
4,4'-DDD			1.08E+01
4,4'-DDE			5.88E+00
4,4'-DDT			3.80E+01
4-Methyl-2-pentanone			0.00E+00
Acenaphthene			0.00E+00
Acenaphthylene			0.00E+00
Acetone			2.40E-11
Aldrin			1.00E-05
Alpha-Chlordane			1.24E-03
Aluminum			0.00E+00
Anthracene			0.00E+00
Antimony			0.00E+00
Aroclor-1248			0.00E+00
Aroclor-1254			2.68E-02
Aroclor-1260			2.38E-01
Arsenic			0.00E+00
Barium			3.60E-04
Benzene			0.00E+00
Benzo(a)anthracene			1.13E-03
Benzo(a)pyrene			2.52E-03
Benzo(b)fluoranthene			1.14E-02
Benzo(g,h,i)perylene			1.04E-02
Benzo(k)fluoranthene			2.02E-02
Benzoic acid			0.00E+00
Beryllium			1.91E-03
Bis(2-ethylexyl)phthalate			9.74E-04
Boron			0.00E+00
Bromodichloromethane			0.00E+00
Bromomethane			0.00E+00
Butyl benzyl phthalate			0.00E+00
Cadmium			1.66E-04
Carbazole			0.00E+00
TOTAL			5.50E+01

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Carbon disulfide			0.00E+00
Chlorobenzene			2.32E-06
Chloroform			0.00E+00
Chloromethane			0.00E+00
Chromium			0.00E+00
Chrysene			1.08E-03
Cis-1,3-dichloropropene			0.00E+00
Cobalt			0.00E+00
Copper			6.03E-03
Cyanide			0.00E+00
Di-n-butylphthalate			6.05E-04
Dibenzo(a,h)anthracene			0.00E+00
Dibenzofuran			0.00E+00
Dieldrin			1.67E-05
Diethyl phthalate			0.00E+00
Endosulfan ii			1.16E-08
Endosulfan sulfate			0.00E+00
Endrin			4.43E-05
Endrin aldehyde			6.91E-05
Endrin ketone			9.12E-04
Ethylbenzene			4.83E-06
Fluoranthene			1.43E-05
Fluorene			0.00E+00
Gamma-Chlordane			1.19E-06
Heptachlor			0.00E+00
Heptachlor epoxide			0.00E+00
Indeno(1,2,3-Cd)pyrene			0.00E+00
Iron			N/A
Lead			3.09E-04
Manganese			1.84E-02
Mercury			6.15E-09
Methoxychlor			6.32E-06
Methylene chloride			5.07E-10
Naphthalene			0.00E+00
Nickel			2.49E-04
OCDD			2.56E+03
Phenanthrene			2.34E-04
Pyrene			6.17E-04
Selenium			1.23E-03
Silver			0.00E+00
TOTAL			2.56E+03

RISK ASSESSMENT SPREADSHEET - INGESTION OF FOOD
AREA A LANDFILL
EXPOSURE SCENARIO: THIS ASSUMES THE WORST CASE FOR EACH CHEMICAL
RECEPTOR: RED-TAILED HAWK

CHEMICAL			HAZARD QUOTIENT
Styrene			0.00E+00
Tetrachloroethene			2.69E-08
Thallium			0.00E+00
Toluene			4.19E-09
Trans-1,3-dichloropropene			0.00E+00
Trichloroethene			1.35E-08
Vanadium			0.00E+00
Vinyl acetate			0.00E+00
Xylenes, total			1.55E+00
Zinc			2.36E+00
TOTAL			3.90E+00

1,4-Dichlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

2-Butanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.03E-10			1.01E-11						1.00E+00	1.00E+00	1.01E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000015

1,4-Dichlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.57E+00	0.00E+00	
Total					0.00E+00

2-Butanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	4.38E-01	9.13E-06	
Water	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Food	1.03E-10	1.01E-11	4.38E-01	2.31E-11	
Inhalation					
Air	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.38E-01	0.00E+00	
Total					9.13E-06

000016

4,4'-DDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.48E-02							1.10E-04		1.00E+00	1.00E+00	1.10E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.24E-02			1.21E-03						1.00E+00	1.00E+00	1.21E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

4,4'-DDE	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.98E-02							5.95E-05		1.00E+00	1.00E+00	5.95E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.72E-03			6.59E-04						1.00E+00	1.00E+00	6.59E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000017

4,4'-DDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.48E-02	1.10E-04	1.12E-04	9.78E-01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	1.24E-02	1.21E-03	1.12E-04	1.08E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					1.18E+01

4,4'-DDE	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.98E-02	5.95E-05	1.12E-04	5.31E-01	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	6.72E-03	6.59E-04	1.12E-04	5.88E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					6.41E+00

4,4'-DDT	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.92E-01							3.84E-04		1.00E+00	1.00E+00	3.84E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.34E-02			4.25E-03						1.00E+00	1.00E+00	4.25E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

4-Methyl-2-pentanone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000019

RTHawk: Landfill
Average Concentration

4,4'-DDT	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.92E-01	3.84E-04	1.12E-04	3.43E+00	
Water	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Food	4.34E-02	4.25E-03	1.12E-04	3.80E+01	
Inhalation					
Air	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.12E-04	0.00E+00	
Total					4.14E+01

4-Methyl-2-pentanone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.50E+00	0.00E+00	
Total					0.00E+00

000020

Acetone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.50E-02							3.00E-05		1.00E+00	1.00E+00	3.00E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.45E-10			2.40E-11						1.00E+00	1.00E+00	2.40E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.60E-04							1.12E-06		1.00E+00	1.00E+00	1.12E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.05E-06			2.01E-07						1.00E+00	1.00E+00	2.01E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000021

Acetone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-02	3.00E-05	1.00E+00	3.00E-05	
Water	0.00E+00	0.00E+00	1.00E+00	0.00E+00	
Food	2.45E-10	2.40E-11	1.00E+00	2.40E-11	
Inhalation					
Air	0.00E+00	0.00E+00	1.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.00E+00	0.00E+00	
Total					3.00E-05

Aldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.60E-04	1.12E-06	2.00E-02	5.60E-05	
Water	0.00E+00	0.00E+00	2.00E-02	0.00E+00	
Food	2.05E-06	2.01E-07	2.00E-02	1.00E-05	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-02	0.00E+00	
Total					6.60E-05

000022

Alpha-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.90E-02							7.80E-05		1.00E+00	1.00E+00	7.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.08E-03			1.06E-04						1.00E+00	1.00E+00	1.06E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aluminum	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000023

RTHawk: Landfill
Average Concentration

Alpha-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-02	7.80E-05	8.56E-02	9.11E-04	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	1.08E-03	1.06E-04	8.56E-02	1.24E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					2.15E-03

Aluminum	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Water	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Food	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.23E+01	0.00E+00	
Total					0.00E+00

000024

Aroclor-1248	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1254	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.19E-01							4.39E-04		1.00E+00	1.00E+00	4.39E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.97E-02			1.93E-03						1.00E+00	1.00E+00	1.93E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Aroclor-1248	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-03	0.00E+00	
Total					0.00E+00

Aroclor-1254	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.19E-01	4.39E-04	7.20E-02	6.09E-03	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	1.97E-02	1.93E-03	7.20E-02	2.68E-02	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					3.28E-02

000026

Aroclor-1260	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.79E-01							1.96E-03		1.00E+00	1.00E+00	1.96E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.75E-01			1.72E-02						1.00E+00	1.00E+00	1.72E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Arsenic	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000027

RTHawk: Landfill
Average Concentration

Aroclor-1260	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.79E-01	1.96E-03	7.20E-02	2.72E-02	
Water	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Food	1.75E-01	1.72E-02	7.20E-02	2.38E-01	
Inhalation					
Air	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.20E-02	0.00E+00	
Total					2.66E-01

Arsenic	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.05E+00	0.00E+00	
Total					0.00E+00

Barium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.04E+01							1.21E-01		1.00E+00	1.00E+00	1.21E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.06E-03			3.00E-04						1.00E+00	1.00E+00	3.00E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000029

RTHawk: Landfill
Average Concentration

Barium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.04E+01	1.21E-01	8.33E-01	1.45E-01	
Water	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Food	3.06E-03	3.00E-04	8.33E-01	3.60E-04	
Inhalation					
Air	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.33E-01	0.00E+00	
Total					1.45E-01

Benzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Water	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Food	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.27E+00	0.00E+00	
Total					0.00E+00

Benzo(a)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-01							4.00E-04		1.00E+00	1.00E+00	4.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.31E-03			2.26E-04						1.00E+00	1.00E+00	2.26E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzo(a)pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-01							3.80E-04		1.00E+00	1.00E+00	3.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.15E-03			5.04E-04						1.00E+00	1.00E+00	5.04E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000031

Benzo(a)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-01	4.00E-04	2.00E-01	2.00E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.31E-03	2.26E-04	2.00E-01	1.13E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					3.13E-03

Benzo(a)pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	3.80E-04	2.00E-01	1.90E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	5.15E-03	5.04E-04	2.00E-01	2.52E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					4.42E-03

Benzo(b)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.20E-01							4.40E-04		1.00E+00	1.00E+00	4.40E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.32E-02			2.27E-03						1.00E+00	1.00E+00	2.27E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Benzo(g,h,i)perylene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.40E-02							8.80E-05		1.00E+00	1.00E+00	8.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.12E-02			2.08E-03						1.00E+00	1.00E+00	2.08E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Benzo(b)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.20E-01	4.40E-04	2.00E-01	2.20E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.32E-02	2.27E-03	2.00E-01	1.14E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					1.36E-02

Benzo(g,h,i)perylene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.40E-02	8.80E-05	2.00E-01	4.40E-04	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.12E-02	2.08E-03	2.00E-01	1.04E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					1.08E-02

000034

Benzo(k)fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.10E-01							4.20E-04		1.00E+00	1.00E+00	4.20E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.12E-02			4.04E-03						1.00E+00	1.00E+00	4.04E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Benzoic acid	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000035

Benzo(k)fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.10E-01	4.20E-04	2.00E-01	2.10E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	4.12E-02	4.04E-03	2.00E-01	2.02E-02	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.23E-02

Benzoic acid	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E+00	0.00E+00	
Total					0.00E+00

000036

Beryllium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.60E-01							1.52E-03		1.00E+00	1.00E+00	1.52E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.57E-04			2.52E-05						1.00E+00	1.00E+00	2.52E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Bis(2-ethylexyl)phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.90E-01							7.80E-04		1.00E+00	1.00E+00	7.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.21E-03			2.16E-04						1.00E+00	1.00E+00	2.16E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000037

Beryllium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.60E-01	1.52E-03	1.32E-02	1.15E-01	
Water	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Food	2.57E-04	2.52E-05	1.32E-02	1.91E-03	
Inhalation					
Air	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.32E-02	0.00E+00	
Total					1.17E-01

Bis(2-ethylexyl)phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.90E-01	7.80E-04	2.22E-01	3.51E-03	
Water	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Food	2.21E-03	2.16E-04	2.22E-01	9.74E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.22E-01	0.00E+00	
Total					4.49E-03

Cadmium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.88E+00							3.76E-03		1.00E+00	1.00E+00	3.76E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.92E-04			4.82E-05						1.00E+00	1.00E+00	4.82E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Carbazole	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000039

RTHawk: Landfill
Average Concentration

Cadmium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.88E+00	3.76E-03	2.90E-01	1.30E-02	
Water	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Food	4.92E-04	4.82E-05	2.90E-01	1.66E-04	
Inhalation					
Air	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.90E-01	0.00E+00	
Total					1.31E-02

Carbazole	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

000040

Carbon disulfide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chlorobenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.29E-01							6.58E-04		1.00E+00	1.00E+00	6.58E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	6.45E-06			6.32E-07						1.00E+00	1.00E+00	6.32E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000041

Carbon disulfide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.10E+00	0.00E+00	
Total					0.00E+00

Chlorobenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.29E-01	6.58E-04	2.73E-01	2.41E-03	
Water	0.00E+00	0.00E+00	2.73E-01	0.00E+00	
Food	6.45E-06	6.32E-07	2.73E-01	2.32E-06	
Inhalation					
Air	0.00E+00	0.00E+00	2.73E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.73E-01	0.00E+00	
Total					2.42E-03

000042

Chromium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Chrysene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-01							3.80E-04		1.00E+00	1.00E+00	3.80E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.20E-03			2.15E-04						1.00E+00	1.00E+00	2.15E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000043

Chromium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Chrysene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-01	3.80E-04	2.00E-01	1.90E-03	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	2.20E-03	2.15E-04	2.00E-01	1.08E-03	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					2.98E-03

Copper	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.24E+02							2.49E-01		1.00E+00	1.00E+00	2.49E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.08E-01			4.00E-02						1.00E+00	1.00E+00	4.00E-02
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Cyanide	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000045

RTHawk: Landfill
Average Concentration

Copper	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.24E+02	2.49E-01	6.64E+00	3.75E-02	
Water	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Food	4.08E-01	4.00E-02	6.64E+00	6.03E-03	
Inhalation					
Air	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.64E+00	0.00E+00	
Total					4.35E-02

Cyanide	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.37E+00	0.00E+00	
Total					0.00E+00

000046

Di-n-butylphthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptakc from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.10E-02							1.22E-04		1.00E+00	1.00E+00	1.22E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.74E-04			2.69E-05						1.00E+00	1.00E+00	2.69E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	3.00E-02	0.00E+00

Dibenzo(a,h)anthracene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000047

RTHawk: Landfill
Average Concentration

Di-n-butylphthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	1.22E-04	4.44E-02	2.75E-03	
Water	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Food	2.74E-04	2.69E-05	4.44E-02	6.05E-04	
Inhalation					
Air	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.44E-02	0.00E+00	
Total					3.35E-03

Dibenzo(a,h)anthracene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

000048

Dibenzofuran	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Dieldrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	7.50E-03							1.50E-05		1.00E+00	1.00E+00	1.50E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.62E-06			2.57E-07						1.00E+00	1.00E+00	2.57E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000049

Dibenzofuran	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E-01	0.00E+00	
Total					0.00E+00

Dieldrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	7.50E-03	1.50E-05	1.54E-02	9.74E-04	
Water	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Food	2.62E-06	2.57E-07	1.54E-02	1.67E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.54E-02	0.00E+00	
Total					9.91E-04

000050

Diethyl phthalate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endosulfan ii	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.37E-07			2.32E-08						1.00E+00	1.00E+00	2.32E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000051

RTHawk: Landfill
Average Concentration

Diethyl phthalate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Water	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Food	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.58E+02	0.00E+00	
Total					0.00E+00

Endosulfan ii	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	2.00E+00	2.00E-06	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	2.37E-07	2.32E-08	2.00E+00	1.16E-08	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					2.01E-06

000052

Endosulfan sulfate	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Endrin	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.40E-03							4.80E-06		1.00E+00	1.00E+00	4.80E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.71E-05			2.66E-06						1.00E+00	1.00E+00	2.66E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-03	0.00E+00

000053

Endosulfan sulfate	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Endrin	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.40E-03	4.80E-06	6.00E-02	8.00E-05	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	2.71E-05	2.66E-06	6.00E-02	4.43E-05	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					1.24E-04

000054

Endrin aldehyde	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.75E-03							7.49E-06		1.00E+00	1.00E+00	7.49E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.23E-05			4.14E-06						1.00E+00	1.00E+00	4.14E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	0.00E+00	0.00E+00

Endrin ketone	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.94E-02							9.89E-05		1.00E+00	1.00E+00	9.89E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	5.58E-04			5.47E-05						1.00E+00	1.00E+00	5.47E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000055

Endrin aldehyde	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.75E-03	7.49E-06	6.00E-02	1.25E-04	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	4.23E-05	4.14E-06	6.00E-02	6.91E-05	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					1.94E-04

Endrin ketone	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.94E-02	9.89E-05	6.00E-02	1.65E-03	
Water	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Food	5.58E-04	5.47E-05	6.00E-02	9.12E-04	
Inhalation					
Air	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	6.00E-02	0.00E+00	
Total					2.56E-03

Ethylbenzene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.00E+00							2.01E-03		1.00E+00	1.00E+00	2.01E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.02E-05			3.94E-06						1.00E+00	1.00E+00	3.94E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Fluoranthene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	3.00E-01							6.00E-04		1.00E+00	1.00E+00	6.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.82E-03			1.78E-04						1.00E+00	1.00E+00	1.78E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000057

Ethylbenzene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.00E+00	2.01E-03	8.16E-01	2.46E-03	
Water	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Food	4.02E-05	3.94E-06	8.16E-01	4.83E-06	
Inhalation					
Air	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.16E-01	0.00E+00	
Total					2.47E-03

Fluoranthene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	3.00E-01	6.00E-04	1.25E+01	4.80E-05	
Water	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Food	1.82E-03	1.78E-04	1.25E+01	1.43E-05	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+01	0.00E+00	
Total					6.23E-05

Fluorene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

Gamma-Chlordane	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.10E-02							1.22E-04		1.00E+00	1.00E+00	1.22E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.04E-06			1.02E-07						1.00E+00	1.00E+00	1.02E-07
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000059

Fluorene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Water	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Food	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.25E+00	0.00E+00	
Total					0.00E+00

Gamma-Chlordane	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.10E-02	1.22E-04	8.56E-02	1.43E-03	
Water	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Food	1.04E-06	1.02E-07	8.56E-02	1.19E-06	
Inhalation					
Air	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.56E-02	0.00E+00	
Total					1.43E-03

Lead	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	8.19E+01							1.64E-01		1.00E+00	1.00E+00	1.64E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.22E-02			1.19E-03						1.00E+00	1.00E+00	1.19E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Manganese	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.81E+02							3.62E-01		1.00E+00	1.00E+00	3.62E-01
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.65E+00			1.62E-01						1.00E+00	1.00E+00	1.62E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000061

RTHawk: Landfill
Average Concentration

Lead	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	8.19E+01	1.64E-01	3.85E+00	4.25E-02	
Water	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Food	1.22E-02	1.19E-03	3.85E+00	3.09E-04	
Inhalation					
Air	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.85E+00	0.00E+00	
Total					4.29E-02

Manganese	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.81E+02	3.62E-01	8.80E+00	4.11E-02	
Water	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Food	1.65E+00	1.62E-01	8.80E+00	1.84E-02	
Inhalation					
Air	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.80E+00	0.00E+00	
Total					5.95E-02

000062

Mercury	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	9.46E-02							1.89E-04		1.00E+00	1.00E+00	1.89E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	8.03E-10			7.87E-11						1.00E+00	1.00E+00	7.87E-11
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Methoxychlor	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.90E-02							3.80E-05		1.00E+00	1.00E+00	3.80E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.58E-05			2.53E-06						1.00E+00	1.00E+00	2.53E-06
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000063

Mercury	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	9.46E-02	1.89E-04	1.28E-02	1.48E-02	
Water	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Food	8.03E-10	7.87E-11	1.28E-02	6.15E-09	
Inhalation					
Air	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.28E-02	0.00E+00	
Total					1.48E-02

Methoxychlor	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.90E-02	3.80E-05	4.00E-01	9.50E-05	
Water	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Food	2.58E-05	2.53E-06	4.00E-01	6.32E-06	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E-01	0.00E+00	
Total					1.01E-04

Methylene chloride	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	6.00E-03							1.20E-05		1.00E+00	1.00E+00	1.20E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.03E-09			2.97E-10						1.00E+00	1.00E+00	2.97E-10
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Naphthalene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

000065

RTHawk: Landfill
Average Concentration

Methylene chloride	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	6.00E-03	1.20E-05	5.85E-01	2.05E-05	
Water	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Food	3.03E-09	2.97E-10	5.85E-01	5.07E-10	
Inhalation					
Air	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.85E-01	0.00E+00	
Total					2.05E-05

Naphthalene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	4.00E+00	0.00E+00	
Total					0.00E+00

Nickel	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.94E+01							3.88E-02		1.00E+00	1.00E+00	3.88E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.93E-02			3.86E-03						1.00E+00	1.00E+00	3.86E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.50E-01	0.00E+00

OCDD	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.05E+00							4.10E-03		1.00E+00	1.00E+00	4.10E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	7.32E-02			7.17E-03						1.00E+00	1.00E+00	7.17E-03
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000067

Nickel	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.94E+01	3.88E-02	1.55E+01	2.51E-03	
Water	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Food	3.93E-02	3.86E-03	1.55E+01	2.49E-04	
Inhalation					
Air	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.55E+01	0.00E+00	
Total					2.76E-03

OCDD	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.05E+00	4.10E-03	2.80E-06	1.46E+03	
Water	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Food	7.32E-02	7.17E-03	2.80E-06	2.56E+03	
Inhalation					
Air	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.80E-06	0.00E+00	
Total					4.03E+03

Phenanthrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.50E-01							3.00E-04		1.00E+00	1.00E+00	3.00E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.23E-04			1.20E-05						1.00E+00	1.00E+00	1.20E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Pyrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.10E+00							2.20E-03		1.00E+00	1.00E+00	2.20E-03
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	4.72E-03			4.63E-04						1.00E+00	1.00E+00	4.63E-04
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

000069

Phenanthrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.50E-01	3.00E-04	5.13E-02	5.84E-03	
Water	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Food	1.23E-04	1.20E-05	5.13E-02	2.34E-04	
Inhalation					
Air	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.13E-02	0.00E+00	
Total					6.08E-03

Pyrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.10E+00	2.20E-03	7.50E-01	2.93E-03	
Water	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Food	4.72E-03	4.63E-04	7.50E-01	6.17E-04	
Inhalation					
Air	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	7.50E-01	0.00E+00	
Total					3.55E-03

000070

Selenium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.98E-01							3.96E-04		1.00E+00	1.00E+00	3.96E-04
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.00E-03			9.83E-05						1.00E+00	1.00E+00	9.83E-05
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Silver	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000071

RTHawk: Landfill
Average Concentration

Selenium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.98E-01	3.96E-04	8.00E-02	4.95E-03	
Water	0.00E+00	0.00E+00	8.00E-02	0.00E+00	
Food	1.00E-03	9.83E-05	8.00E-02	1.23E-03	
Inhalation					
Air	0.00E+00	0.00E+00	8.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	8.00E-02	0.00E+00	
Total					6.18E-03

Silver	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Water	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Food	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E+01	0.00E+00	
Total					0.00E+00

Styrene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Tetrachloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	4.00E-03							8.00E-06		1.00E+00	1.00E+00	8.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.84E-08			3.77E-09						1.00E+00	1.00E+00	3.77E-09
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000073

Styrene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Water	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Food	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.00E+00	0.00E+00	
Total					0.00E+00

Tetrachloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	4.00E-03	8.00E-06	1.40E-01	5.71E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	3.84E-08	3.77E-09	1.40E-01	2.69E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					5.72E-05

000074

Thallium	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Toluene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	1.60E-02							3.20E-05		1.00E+00	1.00E+00	3.20E-05
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.22E-07			2.18E-08						1.00E+00	1.00E+00	2.18E-08
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000075

Thallium	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Water	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Food	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.48E-03	0.00E+00	
Total					0.00E+00

Toluene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	1.60E-02	3.20E-05	5.20E+00	6.16E-06	
Water	0.00E+00	0.00E+00	5.20E+00	0.00E+00	
Food	2.22E-07	2.18E-08	5.20E+00	4.19E-09	
Inhalation					
Air	0.00E+00	0.00E+00	5.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	5.20E+00	0.00E+00	
Total					6.16E-06

Trans-1,3-dichloropropene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	0.00E+00							0.00E+00		1.00E+00	1.00E+00	0.00E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	0.00E+00			0.00E+00						1.00E+00	1.00E+00	0.00E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

Trichloroethene	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	2.00E-03							4.00E-06		1.00E+00	1.00E+00	4.00E-06
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	1.92E-08			1.88E-09						1.00E+00	1.00E+00	1.88E-09
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-01	0.00E+00

000077

Trans-1,3-dichloropropene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Water	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Food	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Inhalation					
Air	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	3.00E-02	0.00E+00	
Total					0.00E+00

Trichloroethene	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	2.00E-03	4.00E-06	1.40E-01	2.86E-05	
Water	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Food	1.92E-08	1.88E-09	1.40E-01	1.35E-08	
Inhalation					
Air	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.40E-01	0.00E+00	
Total					2.86E-05

000078

Xylenes, total	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.36E+00							1.07E-02		1.00E+00	1.00E+00	1.07E-02
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	3.25E+00			3.19E-01						1.00E+00	1.00E+00	3.19E-01
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Zinc	Predicted Concent.	Weight kg	From Food mg/day	Intake from Meat mg/kg/day	Intake from Vegetation mg/kg/day	Intake from Water mg/kg/day	Dermal Uptake from Soil mg/kg/day	Dietary Intake Soil mg/kg/day	Uptake from Air mg/kg/day	Fractional Intake	Absorption Fraction	Predicted Dose mg/kg-day
Ingestion		1.03E+00	1.03E+05									
Soil	5.58E+02							1.12E+00		1.00E+00	1.00E+00	1.12E+00
Water	0.00E+00					0.00E+00				1.00E+00	1.00E+00	0.00E+00
Food-an.	2.89E+01			2.83E+00						1.00E+00	1.00E+00	2.83E+00
Food-veg.	0.00E+00				0.00E+00					1.00E+00	1.00E+00	0.00E+00
Inhalation												
Air	0.00E+00								0.00E+00	1.00E+00	1.00E+00	0.00E+00
Dermal												
Soil	0.00E+00						0.00E+00			1.00E+00	1.00E-02	0.00E+00

Xylenes, total	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.36E+00	1.07E-02	2.06E-01	5.21E-02	
Water	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Food	3.25E+00	3.19E-01	2.06E-01	1.55E+00	
Inhalation					
Air	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	2.06E-01	0.00E+00	
Total					1.60E+00

Zinc	Concentration mg/kg	Dose mg/kg-day	NOAEL	Hazard Quotient	Hazard Index
Ingestion					
Soil	5.58E+02	1.12E+00	1.20E+00	9.29E-01	
Water	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Food	2.89E+01	2.83E+00	1.20E+00	2.36E+00	
Inhalation					
Air	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Dermal					
Soil	0.00E+00	0.00E+00	1.20E+00	0.00E+00	
Total					3.29E+00

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