APPENDIX A

ACRONYMS AND GLOSSARY OF TERMS

ACRONYMS

AAR/BOE	Association of American Railroads/Bureau of Explosives
ACGIH	American Conference of Governmental Industrial Hygienists
AIChE	American Institute of Chemical Engineers
AIHA	American Industrial Hygiene Association
ATSDR	Agency for Toxic Substances and Disease Registry
BLEVE	Boiling Liquid Expanding Vapor Explosion
CAER	Community Awareness and Emergency Response (a CMA program)
CAS	Chemical Abstract Service
CEPP	Chemical Emergency Preparedness Program (EPA)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("Superfund")
CHLOREP	Chlorine Emergency Plan (developed by the Chlorine Institute)
CHRIS	Chemical Hazard Response Information System
CMA	Chemical Manufacturers Association
DOD	Department of Defense
DOT	Department of Transportation
EEC	European Economic Community
EEG	Emergency Exposure Guideline (developed by Dow Chemical)
EEGL	Emergency Exposure Guidance Level (developed by the NRC)
EHS	Extremely Hazardous Substance
EOP	Emergency Operation Plan
EPA	Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMEA	Failure Modes and Effects Analysis
FMECA	Failure Modes, Effects, and Criticality Analysis
FTA	Fault Tree Analysis
HAZOP	Hazard and Operability Study

HMTA	Hazardous Materials Transportation Act
IDLH	Immediately Dangerous to Life or Health
LC50	Median Lethal Concentration
LCLO	Lethal Concentration Low
LD50	Median Lethal Dose
LDLO	Lethal Dose Low
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LFA	Liquid Factor Ambient
LFB	Liquid Factor Boiling
LFM	Liquid Factor Molten
LOC	Level of Concern
MSDS	Material Safety Data Sheet
NAS	National Academy of Sciences
NCP	National Oil and Hazardous Substances Contingency Plan
NFPA	National Fire Protection Association
NRC	National Response Center or National Research Council
NRT	National Response Team
NRT-1	Hazardous Materials Emergency Planning Guide, prepared by the National Response Team
NIOSH	National Institute for Occupational Safety and Health
OPP	Office of Pesticide Programs (EPA)
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSWER	Office of Solid Waste and Emergency Response (EPA)
PEL	Permissible Exposure Limit
PMN	Premanufacture Notice
PRA	Probabilistic Risk Assessment
QR	Rate of Release of EHS to Air
QS	Maximum Quantity of Chemical that Could Be Released
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limits
RQ	Reportable Quantity
RSPA	Research and Special Programs Administration (DOT)

RRT	Regional Response Team
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act of 1986
SERC	State Emergency Response Commission
SPCC	Spill Prevention Control and Countermeasures (Plan)
SPEGL	Short-term Public Exposure Guidance Level (developed by the NRC)
Title III	Emergency Planning and Community Right-to-Know Act of 1986 (Part of the Superfund Amendments and Reauthorization Act of 1986)
TLVs*	Threshold Limit Value
TWA	Time Weighted Average
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
USCG	United States Coast Guard
USGS	United States Geological Survey
VP	Vapor Pressure
VSD	Virtually Safe Dose
VZ	Vulnerable Zone
WB	World Bank

*TLVs is a registered trademark

GLOSSARY OF TERMS

Accident Site
The location of an unexpected occurrence, failure, or loss, either at a facility or along a transportation route, resulting in a release of hazardous materials; an incident site.

Acute
Severe but of short duration. Acute health effects are those that occur immediately after exposure to hazardous chemicals.

Acutely Toxic Chemicals
Chemicals that can cause severe short- and long-term health effects after a single, brief exposure (short duration). These chemicals (when ingested, inhaled, or absorbed through the skin) can cause damage to living tissue, impairment of the central nervous system, severe illness, or, in extreme cases, death.

Airborne Release
Release of any chemical into the air.

Ambient
Surrounding. Ambient temperatures are temperatures of the surrounding area (e.g., air or water).

By-Product
Material, other than the principal product, that is produced or generated as a consequence of an industrial process.

Chemical Process
A particular method of manufacturing or making a chemical, usually involving a number of steps or operations.

Chronic
Of long duration or having frequent recurrence. Chronic health effects are those that become apparent or continue for some time after exposure to hazardous chemicals.

Combustion Product
Material produced or generated during the burning or oxidation of a material.

Command Post
Facility located at a safe distance upwind from an accident site, where the on-scene coordinator, responders, and technical representatives can make response decisions, deploy manpower and equipment, maintain liaison with media, and handle communications.

Community Awareness and Emergency Response (CAER) Program
Program developed by the Chemical Manufacturers Association (CMA), to assist chemical plant managers in taking the initiative in cooperating with local communities to develop integrated (community/industry) plans for responding to releases of hazardous materials.

Contingency Plan
A document to identify and catalog the elements required to respond to an emergency, to define responsibilities and specific tasks, and to serve as a response guide.

Critical Facilities
Facilities essential to emergency response, such as fire stations, police stations, hospitals, and communication centers.

Decomposition Product
Material produced or generated as a result of the physical or chemical degradation of a parent material.

Dike

A barrier such as a low wall or embankment designed to prevent a spill from spreading or flooding.

Disposal

The removal of waste material to a site or facility that is specifically designed and permitted to receive such wastes.

Emergency

A situation created by an accidental release or spill of hazardous chemicals which poses a threat to the safety of workers, residents, the environment, or property.

Evacuation

Removal of residents and other persons from an area of danger.

Exercise

A simulated accident or release set up to test emergency response methods and for use as a training tool.

Extremely Hazardous Substances (EHSs)

A list of chemicals identified by EPA on the basis of toxicity, and listed under Title III of SARA. These chemicals are listed in Appendix C. The list is subject to revision.

Facility

Defined for Section 302 of Title III of SARA as all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by, or under common control with, such person). For purposes of emergency release notification, the term includes motor vehicles, rolling stock, and aircraft.

Facility Emergency Coordinator

Facility representative for each facility with an extremely hazardous substance (EHS) in a quantity exceeding its threshold planning quantity (TPQ), who participates in the emergency planning process.

Fenceline

Outermost perimeter of a facility property.

Hazard

Any situation that has the potential for causing damage to life, property, and/or the environment.

Hazardous Chemical

Any chemical which is a physical hazard or a health hazard as defined under OSHA 29 CFR 1910.1201.

Hazardous Material

Any substance or material in a quantity or form which may be harmful to humans, animals, crops, water systems, or other elements of the environment if accidentally released. Hazardous materials include: explosives, gases (compressed, liquefied, or dissolved), flammable and combustible liquids, flammable solids or substances, oxidizing substances, poisonous and infectious substances, radioactive materials, and corrosives.

Hazardous Substances (Superfund)

Substances designated as hazardous under CERCLA (also known as Superfund); CERCLA incorporates substances listed under the Clean Water Act, the Clean Air Act, RCRA, and TSCA Section 7.

Hazards Analysis

The procedure for identifying potential sources of a hazardous materials release, determining the vulnerability of an area to a hazardous materials release, and comparing hazards to determine risks to a community.

Hazards Identification

Provides information on which facilities have extremely hazardous substances (EHSs), what those chemicals are, and how much there is at each facility. Also provides information on how the chemicals are stored and whether they are used at high temperatures. Mandatory facility reporting under Title III will provide most of the information needed for a hazards identification.

Immediately Dangerous to Life and Health (IDLH)

The maximum level to which a healthy worker can be exposed for 30 minutes and escape without suffering irreversible health effects or escape-impairing symptoms.

Lethal

Causing or capable of causing death.

Lethal Concentration Low (LCLO)

The lowest concentration of a chemical at which some test animals died following inhalation exposure.

Lethal Dose Low (LDLO)

The lowest dose of chemical at which some test animals died following exposure.

Level of Concern (LOC)

The concentration of an extremely hazardous substance (EHS) in the air above which there may be serious irreversible health effects or death as a result of a single exposure for a relatively short period of time.

Local Emergency Planning Committee (LEPC)

A committee appointed by the State emergency response commission (SERC), as required by Title III of SARA, to formulate a comprehensive emergency plan for its district.

Material Safety Data Sheet (MSDS)

A compilation of information required under the OSHA Hazard Communication Standard on the identity of hazardous chemicals, health and physical hazards, exposure limits, and precautions. Section 311 of Title III of SARA requires facilities to submit MSDSs under certain conditions.

Median Lethal Concentration (LC50)

Concentration level at which 50 percent of the test animals died when exposed by inhalation for a specified time period.

Median Lethal Dose (LD50)

Dose at which 50 percent of test animals died following exposure. Dose is usually given in milligrams per kilogram of body weight of the test animal.

Morbidity

Ability to cause illness or disease.

National Response Center

A communications center for activities related to response actions; it is located at Coast Gaurd headquarters in Washington, DC. The National Response Center receives and relays notices of discharges or releases to the appropriate On-Scene Coordinator, disseminates On-Scene Coordinator and Regional Response Team (RRT) reports to the National Response Team (NRT) when appropriate, and provides facilities for the NRT to use in coordinating a national response action when required. The toll-free number (800-424-8802, or 202-426-2675 or 202-267-2675 in the Washington, DC area) can be reached 24 hours a day for reporting actual or potential pollution incidents.

On-Scene Coordinator

The pre-designated local, State, or Federal official responsible for the coordination of a hazardous materials response action, as outlined in the pertinent Emergency Response Plan.

Plume

Effluent cloud resulting from a continuous source release.

Radius of the Vulnerable Zone

The maximum distance from the point of release of a hazardous substance at which the airborne concentration could reach the level of concern (LOC) under specified weather conditions.

Reportable Quantity (RQ)

The quantity of a hazardous substance that triggers reporting under CERCLA; if a substance is released in a quantity that exceeds its RQ, the release must be reported to the National Response Center (NRC), as well as to the State emergency response commission (SERC) and the community emergency coordinator for areas likely to be affected by the release.

Response

The efforts to minimize the risks created in an emergency by protecting the people, the environment, and property, and the efforts to return the scene to normal pre-emergency conditions.

Risk

A measure of the probability that damage to life, property, and/or the environment will occur if a hazard manifests itself; this measure includes the severity of anticipated consequences to people.

Risk Analysis

Assessment of the probable damage that may be caused to the community by a hazardous substance release.

Special Populations

Groups of people that may be more susceptible than the general population (due to preexisting health conditions (e.g., asthmatics) or age (e.g., infants and the elderly)) to the toxic effects of an accidental release.

Spill Prevention Control and Countermeasures (SPCC) Plan

Plan covering the release of hazardous substances as defined under authority of the Clean Water Act.

Stability Classes, Atmospheric

Pasquill stability classes (ranging from "A" to "F") are meteorological categories of atmospheric conditions. Pasquill stability class A represents unstable conditions under which there are strong sunlight, clear skies, and high levels of turbulence in the atmosphere, conditions that promote rapid mixing and dispersal of airborne contaminants. At the other extreme, class F represents light, steady winds, fairly clear nighttime skies, and low levels of turbulence. Airborne contaminants mix and disperse far more slowly with air under these conditions, and may travel further downwind at hazardous concentrations than in other cases. Stability class D, midway between A and F, is used for neutral conditions, applicable to heavy overcast, daytime or nighttime.

State Emergency Response Commission (SERC)

Commission appointed by each State governor according to the requirements of Title III of SARA; duties of the commission include designating emergency planning districts, appointing local emergency planning committees (LEPCs), supervising and coordinating the activities of planning committees, reviewing emergency plans, receiving chemical release notifications, and establishing procedures for receiving and processing requests from the public for information.

Storage
Methods of keeping raw materials, finished goods, or products while awaiting use, shipment, or consumption.

Threshold Planning Quantity (TPQ)
A quantity designated for each chemical on the list of extremely hazardous substances (EHSs) that triggers notification by facilities of the State emergency response commission (SERC) that such facilities are subject to emergency planning under Title III of SARA.

Toxic Chemical Release Form
Information form required to be submitted by facilities that manufacture, process, or use (in quantities above a specified amount) chemicals listed in Section 313 of Title III of SARA.

Toxic Cloud
Airborne mass of gases, vapors, fumes, or aerosols of toxic materials.

Toxicity
The ability of a substance to cause damage to living tissue, impairment of the central nervous system, severe illness, or death when ingested, inhaled, or absorbed by the skin.

Toxicology
The study of the adverse effects of chemical agents on biological systems.

Transfer
Loading and unloading of chemicals between transport vehicles and storage vessels, and sending chemicals via pipes between storage vessels and process reactors.

Transport Mode
Method of transportation: highway; rail (trains); water (ships/barges); pipelines; air (planes).

Vapor Dispersion
The movement of vapor clouds or plumes in air due to wind, gravity spreading, and mixing.

Vulnerability Analysis
Assessment of elements in the community that are subject to damage should a hazardous materials release occur; includes gathering information on the extent of the vulnerable zone, conditions that influence the zone, size and type of the population within the zone, private and public property that might be damaged, and the environment that might be affected.

Vulnerable Zone
An area over which the airborne concentration of a chemical involved in an accidental release could reach the level of concern (LOC).

APPENDIX B

THE CRITERIA USED TO IDENTIFY EXTREMELY HAZARDOUS SUBSTANCES

B.1 BASIS FOR THE CRITERIA

Introduction. In an effort to direct community planning efforts to those chemicals that, because of their inherent toxicity, are most likely to cause severe toxic effects in humans who are exposed to them due to an accidental release, EPA has specified toxicity criteria that can be used to screen chemical information sources and to identify acutely toxic chemicals. These criteria were used to identify the chemicals on the list of extremely hazardous substances (EHSs) required by Title III. While the criteria focus on animal lethality data, EPA is also concerned about a wide array of human toxic or clinical effects other than death (e.g., lung edema, liver or kidney damage, reproductive and developmental toxicity, neurological disorders, cardiac effects, dermal irritation and corrosion, and ocular damage). Such effects may be considered if suitable data are available when the list of EHSs is revised.

Use of Animal Data. In defining criteria, EPA had to identify the health effects of concern and the data to be used. EPA elected to use animal acute toxicity data derived from controlled experiments to infer potential for acute toxic effects in humans. EPA has assumed that humans and animals (mammals) are similar, on the average, in intrinsic susceptibility to toxic chemicals and that animal data can be used as surrogates for human data. This assumption is one of the basic premises of modern toxicology and is an important component in the regulation of toxic chemicals. An additional benefit of using animal data is that there exists a large data base that is accessible to the public and government agencies such as EPA. Because human populations are diverse (e.g., individuals differ in age, health, and genetic background) and individuals are expected to vary considerably in their sensitivity to chemical substances, EPA assumed that humans are at least as sensitive to each toxic chemical as the most sensitive animal species tested.

Type of Toxicity Data Used. Complete toxicological information on all potential concerns about the consequences of an acute chemical exposure is not available on all chemicals. EPA initially focused on lethality, not only because EPA wishes to avoid accidents resulting in human death, but also because lethality data are the most available and commonly reported information provided from animal toxicity testing. EPA determined that the most appropriate animal test data to use as surrogates for human acute toxicity are those data from animal acute toxicity tests expressed as the median lethal concentration (LC50) when the substance has been administered by inhalation (via the lungs), or the median lethal dose (LD50) when the substance has been administered orally (via the mouth) or dermally (via the skin). These data represent dose levels or concentrations of a chemical that are expected to result in the death of 50 percent of the test animals. Exposure to EHSs released during an accident is expected primarily to involve chemicals that are airborne. Thus, the inhalation route of human exposure is of primary concern during or following an accident. However, it should be borne in mind that humans could be exposed to an EHS by any or all of these routes after its accidental release. In using data on oral and dermal acute lethality, EPA was not specifically concerned with these routes of exposure in humans, but rather with identifying compounds with inherent high potential for acute toxicity.

Use of LDLO and LCLO Data. Even with the amount of animal data that is available, there exist chemicals for which there are no standard acute toxicity test data. In those cases where toxicity testing has not determined an LD50 or LC50 value, EPA selected an alternative measure of acute toxicity: the lowest dose or concentration at which some animals died following exposure (LDLO or LCLO). EPA used LDLO or LCLO values in those instances where there are no median toxicity values available for a chemical. Data from these tests may be more variable than those provided from median lethality tests, but for the purposes of screening large

numbers of chemicals it was deemed necessary to provide a second level screening tool in preference to missing potentially toxic chemicals not adequately tested. However, it is expected that there are chemicals that may be acutely toxic, but for which there are no toxicity test data available in the public literature. It is expected that planners may obtain data that are not available in the open literature from firms manufacturing chemicals. By knowing whether chemical firms and other facilities have any chemicals that are on the list of EHSs or that meet the criteria, planners should be able to identify all potentially acute toxicants used in their community.

B.2 THE CRITERIA

Criteria Values Adopted. EPA adopted the criteria shown in Exhibit B-1 to identify EHSs that may present severe health hazards to humans exposed to them during an accident or other emergency. The specific values chosen are consistent with toxicity values judged by the scientific community as indicative of potential for acute toxicity. The values shown in Exhibit B-1 are lower than those for highly toxic chemicals in the health hazard definitions mandated by OSHA in its Hazard Communication Standard (FR Vol. 48, No. 248, p. 53346).

A chemical was identified as an EHS if animal test data with a value less than or equal to that stated for the LD50 or LC50 criteria for any one of three exposure routes were found. A chemical without LD50 or LC50 test data was evaluated using the alternate LDLO or LCLO criteria. EPA has prepared a list of chemicals that meet these criteria; these chemicals are included on the list of EHSs under Title III of SARA.

EPA Criteria Compared with European Economic Community/World Bank Criteria. The screening criteria selected by EPA were consistent with internationally accepted criteria used by both the European Economic Community (EEC) and the World Bank (WB). EPA's criteria recognized precedents set by these two organizations; however, in a conservative effort to avoid missing or excluding any potentially toxic chemicals, EPA modified the basic toxic substances criteria used by these organizations in three ways:

1. Lethality data are not limited to data on rats, but include data on the most sensitive mammalian species tested;
2. Data from tests with inhalation exposure time up to 8 hours is accepted instead of data from 4-hour exposure tests only; and
3. LDLO and LCLO data are used when LD50 or LC50 data are not available.

The criteria were designed to take maximum advantage of the kinds of animal data available for screening and to limit the potential for overlooking chemicals that may be potentially acutely toxic. The criteria should maximize the potential for planners to identify toxic chemicals.

B.3 APPLICATION OF THE CRITERIA

RTECS Data Base. The screening criteria can be applied to any experimental data or data base on chemical substances that includes acute animal toxicity data. EPA applied the criteria to a specific toxicity data repository, Registry of Toxic Effects of Chemical Substances (RTECS), maintained by the National Institute for Occupational Safety and Health (NIOSH). The RTECS data base was used as the source of toxicity data for identifying acutely toxic chemicals because it has the largest computerized set of acute toxicity information available, with information on more than 79,000 chemicals. RTECS is designed to be a single-source document for basic toxicity information and other data. It is widely accepted and used as a toxicity data source, as indicated by the fact that some organizations (e.g., health agencies and chemical companies) include RTECS numbers as a toxicity reference on the lists of chemicals in their files. While RTECS is not formally peer reviewed, the data presented are from scientific literature that has been edited by the scientific community before publication. In addition, the RTECS Editorial Review Board is responsible for reviewing a limited number of citations to remove ambiguities or errors. There are limitations associated with the use of the RTECS data base, but for the purposes of screening acute

Exhibit B–1

Criteria to Identify Extremely Hazardous Substances that May Present Severe Health Hazards to Humans Exposed During a Chemical Accident or Other Emergency

Route of Exposure [a]	Acute Toxicity Measure [b]	Value
Inhalation	Median Lethal Concentration in Air (LC50)	Less than or equal to 0 5 milligrams per liter of air for exposure time of 8 hours or less
Dermal	Median Lethal Dose (LD50)	Less than or equal to 50 milligrams per kilogram of body weight
Oral	Median Lethal Dose (LD50)	Less than or equal to 25 milligrams per kilogram of body weight

[a] The route by which the test animals absorbed the chemical, i.e., by breathing it in air (inhalation), by absorbing it through the skin (dermal), or by ingestion (oral).

[b] LC50: The concentration of the chemical in air at which 50 percent of the test animals died. LD50: The dose that killed 50 percent of the test animals. In the absence of LC50 or LD50 data, LCLO or LDLO data should be used. LCLO: Lethal Concentration Low, the lowest concentration in air at which any test animals died. LDLO: Lethal Dose Low, the lowest dose at which any test animals died.

toxicity data, RTECS provides a large and easily searchable data file. It is important to emphasize that the purpose of the criteria was to provide a screening tool for the initial identification of chemicals that may be acutely toxic to humans. Additional information on the toxicity of specific chemicals may be available from the facility emergency coordinator.

TSCA Inventory, Active Pesticide Ingredients, and PMN Chemicals. EPA selected only those chemical substances in current production by referring to the 1977 Toxic Substances Control Act (TSCA) Inventory and the current EPA list of active pesticide ingredients The TSCA Inventory is a list of chemical substances in production at the time the Inventory was compiled. Chemical substances entering commerce since 1977 through the Premanufacturing Notice (PMN) review process under Section 5 of TSCA were screened for acute toxicity data and compared to the criteria for possible inclusion on the list.

Radioactive materials, chemical substances in research and development stages, and those manufactured, processed, or distributed in commerce for use as food, food additives, drugs, or cosmetics are not listed in the TSCA Inventory and, hence, were not considered. If research chemicals that meet the criteria are produced for commercial use under TSCA or for pesticide use under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA will identify such chemicals through its PMN review program and pesticide registration program and list them under future rulemakings.

B.4 OTHER EXTREMELY HAZARDOUS SUBSTANCES

Chemicals that do not meet the criteria for acute toxicity discussed in the previous section are not necessarily safe. In fact, some are toxic to humans and may pose threats to the community if accidents occur. EPA identified and included on the list of EHSs some of these chemicals using criteria based on the following factors: large volume production, acute lethality values, and known risk, as indicated by the fact that some of the chemicals have caused death and injury in accidents

Candidates for listing were identified from the high-production capacity chemicals listed in the SRI International publication, 1985 Directory of Chemical Producers, United States of America, pp. 388-389, or from the World Bank List Group B: Other Toxic Substances. The toxicity criteria shown in Exhibit B-2 were used to aid in deciding which chemicals to list. In addition to high-production chemicals meeting these criteria, several other slightly less toxic chemicals were listed because of their known hazards; for example, several of them have caused death or injury in accidents. Exhibit B-3 lists these other chemicals included on the list of EHSs.

Exhibit B–2

Criteria to Identify Other Hazardous Substances Produced in Large Quantities that May Present Severe Health Hazards to Humans Exposed During a Chemical Accident or Other Emergency

Route of Exposure [a]	Acute Toxicity Measure [b]	Value
Inhalation	Median Lethal Concentration in Air (LC50)	Less than or equal to 2 milligrams per liter of air for exposure time of 8 hours or less
Dermal	Median Lethal Dose (LD50)	Less than or equal to 400 milligrams per kilogram of body weight
Oral	Median Lethal Dose (LD50)	Less than or equal to 200 milligrams per kilogram of body weight

[a] The route by which the test animals absorbed the chemical, i.e., by breathing it in air (inhalation), by absorbing it through the skin (dermal), or by ingestion (oral).

[b] LC50: The concentration of the chemical in air at which 50 percent of the test animals died. LD50: The dose that killed 50 percent of the test animals. In the absence of LC50 or LD50 data, LCLO or LDLO data should be used. LCLO: Lethal Concentration Low, the lowest concentration in air at which any test animals died. LDLO: Lethal Dose Low, the lowest dose at which any test animals died.

Exhibit B-3

Other Extremely Hazardous Substances

Chemicals on the following list were judged to be extremely hazardous substances (EHSs) on the basis of high production capacity and the criteria summarized in Exhibit B-2 or known hazards (see Section B.4).

Name	CAS Number
Acrylamide	79-06-1
Acrylonitrile	107-13-1
Adiponitrile	111-69-3
Ammonia	7664-41-7
Aniline	62-53-3
Bromine	7726-95-6
Carbon disulfide	75-15-0
Chloroform	67-66-3
Cyclohexylamine	108-91-8
Epichlorohydrin	106-89-8
Ethylene oxide	75-21-8
Formaldehyde	50-00-0
Hydrogen chloride (gas only)	7647-01-0
* Hydrogen peroxide	7722-84-1
Hydrogen sulfide	7783-06-4
Hydroquinone	123-31-9
Methyl bromide	74-83-9
Nitrobenzene	98-95-3
Phosgene	75-44-5
Propylene oxide	75-56-9
Sulfur dioxide	7446-09-5
Tetramethyl lead	75-74-1
Vinyl acetate monomer	108-05-4

* *Concentration greater than 52 percent.*

APPENDIX C

THE LIST OF EXTREMELY HAZARDOUS SUBSTANCES

EPA identified chemicals that meet the criteria for extremely hazardous substances (EHSs) discussed in Section B.2. In addition, other chemicals were identified as EHSs as described in Section B.4. The chemicals are listed by their common names and also by their Chemical Abstract Service (CAS) numbers. While a chemical may be known by several different names, the CAS number provides a unique and unambiguous identification. The list of EHSs is presented in the following forms:

- Exhibit C-1: List of common names, in alphabetical order, with CAS number, ambient physical state, molecular weight, boiling point, vapor pressure, level of concern (LOC), and liquid factors.

- Exhibit C-2: Same list as that in Exhibit C-1, in CAS number order.

Note that the value for the LOC given in these Exhibits is one tenth the Immediately Dangerous to Life and Health (IDLH) level or an estimation of that level for chemicals which do not have a specific IDLH assigned to them. Refer to Appendix D for a more detailed discussion of the LOC and other values that planners may wish to use.

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
75-86-5	Acetone Cyanohydrin	Liquid	85	200	0.50	0.012	0.00002	0.02	
1752-30-3	Acetone Thiosemicarbazide	Solid	131		0.00001	0.1			
107-02-8	Acrolein	Liquid	56	52.5	220.0	0.0011	0.007	0.02	
79-06-1	Acrylamide	Solid	71	250	0.007	0.11			0.00004
107-13-1	Acrylonitrile	Liquid	54	77.3	115.0	0.11	0.004	0.02	
814-68-6	Acrylyl Chloride	Liquid	91	75	300.0	0.0009	0.01	0.03	
111-69-3	Adiponitrile	Liquid	108	295	0.001	0.017	0.00000005	0.02	
116-06-3	Aldicarb	Solid	190	287	0.50	0.0003			0.00004
309-00-2	Aldrin	Solid	365	145	0.000006	0.01			0.02
107-18-6	Allyl Alcohol	Liquid	58	97	23.8	0.036	0.0008	0.02	
107-11-9	Allylamine	Liquid	57	55	500.0	0.0032	0.02	0.02	
20859-73-8	Aluminum Phosphide	Solid	58	320	0.00001	0.02			
54-62-6	Aminopterin	Solid	440		0.00001	0.025			
78-53-5	Amiton	Liquid	269	330	0.000001	0.0033	0.000000000009	0.03	
3734-97-2	Amiton Oxalate	Solid	359		0.00001	0.003			
7664-41-7	Ammonia	Gas	17	-33.4		0.035			
*16919-58-7	Ammonium Chloroplatinate	Solid	444		0.00001	0.00044			
300-62-9	Amphetamine	Liquid	135	200	0.90	0.02	0.00005	0.03	
62-53-3	Aniline	Liquid	93	184	0.67	0.038	0.00003	0.02	
88-05-1	Aniline, 2,4,6-Trimethyl-	Liquid	135	232	0.10	0.0029	0.000006	0.03	
7783-70-2	Antimony Pentafluoride	Liquid	217	141	7.0	0.0027	0.0006	0.04	
1397-94-0	Antimycin A	Solid	549		0.00001	0.0018			
86-88-4	ANTU	Solid	202	400	0.000001	0.01			0.00009
1303-28-2	Arsenic Pentoxide	Solid	230		0.00001	0.008			
1327-53-3	Arsenous Oxide	Solid	198	465	0.0000001	0.0014			0.001
7784-34-1	Arsenous Trichloride	Liquid	181	130.21	10.0	0.01	0.0007	0.04	
7784-42-1	Arsine	Gas	78	-62		0.0019			
2642-71-9	Azinphos-Ethyl	Solid	345	400	0.0000002	0.0039			0.00000000003
86-50-0	Azinphos-Methyl	Solid	317	400	0.0000001	0.0007			0.000000003
98-87-3	Benzal Chloride	Liquid	161	205	1.0	0.0023	0.00007	0.03	
98-16-8	Benzenamine, 3-(Trifluoromethyl)-	Liquid	161	187.5	1.0	0.0044	0.00007	0.03	
100-14-1	Benzene, 1-(Chloromethyl)-4-Nitro-	Solid	172	230	0.05	0.028			0.00008
98-05-5	Benzenearsonic Acid	Solid	202		0.00001	0.00027			
*98-09-9	Benzenesulfonyl Chloride	Liquid	177	251	0.03	0.2	0.000002	0.03	
3615-21-2	Benzimidazole, 4,5-Dichloro-2-(Trifluoromethyl)-	Solid	255			0.013			
98-07-7	Benzotrichloride	Liquid	195	220.8	1.0	0.0007	0.00007	0.03	
100-44-7	Benzyl Chloride	Liquid	127	179	1.0	0.0052	0.00006	0.03	
140-29-4	Benzyl Cyanide	Liquid	117	233.5	1.0	0.0043	0.00005	0.02	
15271-41-7	Bicyclo[2.2.1]Heptane-2-Carbonitrile, 5-Chloro-6-((((Methylamino)Carbonyl) Oxy)Imino)-, (1S-(1-alpha,2-beta, 4-alpha,5-alpha,6E))-	Solid	242		0.00001	0.019			
534-07-6	Bis(Chloromethyl) Ketone	Solid	127	173	1.0	0.00027			0.0002
4044-65-9	Bitoscanate	Solid	192	290	0.0001	0.02			0.0002
10294-34-5	Boron Trichloride	Gas	117	13		0.01			
7637-07-2	Boron Trifluoride	Gas	68	-127		0.028			
353-42-4	Boron Trifluoride Compound with Methyl Ether (1:1)	Liquid	114	126	20.0	0.023	0.001	0.03	
28772-56-7	Bromadiolone	Solid	527		0.00001	0.001			
7726-95-6	Bromine	Liquid	160	60	172.0	0.0065	0.01	0.04	
*106-99-0	Butadiene	Gas	54	-4.4		4.43			

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*109-19-3	Butyl Isovalerate	Liquid	158	175.5	0.45	8.2	0.00003	0.03	
*111-34-2	Butyl Vinyl Ether	Liquid	100	94	50	0.62	0.002	0.03	
1306-19-0	Cadmium Oxide	Solid	128	1559 S	0.00001	0.004			0.000004
2223-93-0	Cadmium Stearate	Solid	681		0.00001	0.0013			
7778-44-1	Calcium Arsenate	Solid	398		0.00001	0.01			
8001-35-2	Camphechlor	Solid	414	D	0.4	0.02			0.003
56-25-7	Cantharidin	Solid	196	110 S	0.02	0.0043			0.02
51-83-2	Carbachol Chloride	Solid	183		0.00001	0.015			
26419-73-8	Carbamic Acid, Methyl-, O-(((2,4-Dimethyl-1,3-Dithiolan-2-Yl) Methylene)Amino)-	Solid	234	400	0.0000006	0.001			0.000004
1563-66-2	Carbofuran	Solid	221	360	0.00001	0.00043			0.00005
75-15-0	Carbon Disulfide	Liquid	76	46.5	360.0	0.16	0.01	0.03	
786-19-6	Carbophenothion	Liquid	343	350	0.0000003	0.0068	0.00000000003	0.04	
*2244-16-8	Carvone	Liquid	150	230	0.04	0.0037	0.000002	0.03	
57-74-9	Chlordane	Liquid	410	400	0.00001	0.05	0.000000001	0.04	
470-90-6	Chlorfenvinfos	Liquid	360	390	0.000004	0.01	0.0000000004	0.04	
7782-50-5	Chlorine	Gas	71	-34.6		0.0073			
24934-91-6	Chlormephos	Liquid	235	295	0.0056	0.007	0.0000005	0.03	
999-81-5	Chlormequat Chloride	Solid	158		0.00001	0.007			
*107-20-0	Chloroacetaldehyde	Liquid	78.5	85	100	0.069	0.004	0.03	
79-11-8	Chloroacetic Acid	Solid	95	189	0.5	0.0018			0.0002
107-07-3	Chloroethanol	Liquid	81	128	5.0	0.0033	0.0002	0.02	
627-11-2	Chloroethyl Chloroformate	Liquid	143	155.7	9.0	0.02	0.0005	0.03	
67-66-3	Chloroform	Liquid	119	61.7	160.0	0.49	0.009	0.04	
542-88-1	Chloromethyl Ether	Liquid	115	106	30.0	0.00025	0.002	0.03	
107-30-2	Chloromethyl Methyl Ether	Liquid	81	59	224	0.0018	0.009	0.03	
3691-35-8	Chlorophacinone	Solid	375		0.00001	0.001			
1982-47-4	Chloroxuron	Solid	291		0.0000001	0.01			
21923-23-9	Chlorthiophos	Liquid	361	400	0.0004	0.0078	0.00000004	0.04	
10025-73-7	Chromic Chloride	Solid	158	1300 S	0.00001	0.00005			0.003
*7440-48-4	Cobalt	Solid	59	2870	0.00001	0.002			0.000000001
10210-68-1	Cobalt Carbonyl	Solid	342	52 D	0.1	0.00027			0.07
62207-76-5	Cobalt,((2,2'-(1,2-Ethanediylbis (Nitrilomethylidine))Bis(6-Fluoro Phenolato))(2-)-N,N',O,O')-	Solid	361		0.00001	0.003			
64-86-8	Colchicine	Solid	399	407	0.00001	0.0009			0.00001
*117-52-2	Coumafuryl	Solid	298		0.00001	4			
56-72-4	Coumaphos	Solid	363		0.0000001	0.003			
5836-29-3	Coumatetralyl	Solid	292		0.00001	0.0165			
95-48-7	Cresol, o-	Solid	108	191	0.5	0.11			0.00003
535-89-7	Crimidine	Solid	172	300	0.00001	0.0012			0.00001
4170-30-3	Crotonaldehyde	Liquid	70	104	36	0.04	0.001	0.02	
123-73-9	Crotonaldehyde, (E)-	Liquid	70	104	36	0.04	0.001	0.02	
506-68-3	Cyanogen Bromide	Solid	106	61.4	92	0.044			0.02
506-78-5	Cyanogen Iodide	Solid	153	45 S	1	0.18			0.02
2636-26-2	Cyanophos	Liquid	243	350	0.0008	0.025	0.00000007	0.03	
675-14-9	Cyanuric Fluoride	Liquid	135	73	120	0.00017	0.007	0.04	
66-81-9	Cycloheximide	Solid	281	245	0.006	0.002			0.0008
108-91-8	Cyclohexylamine	Liquid	99	134.5	10	0.16	0.0005	0.03	
*287-92-3	Cyclopentane	Liquid	70	49	317	11	0.01	0.03	
*633-03-4	C. I. Basic Green 1	Solid	483		0.00001	0.25			

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17702-41-9	Decaborane(14)	Solid	122	213	0.1	0.01			0.0006
8065-48-3	Demeton	Liquid	258	300	0.00026	0.002	0.00000002	0.03	
919-86-8	Demeton-S-Methyl	Liquid	230	305	0.0001	0.005	0.000000008	0.03	
10311-84-9	Dialifor	Solid	394	300	0.0005	0.005			0.000001
19287-45-7	Diborane	Gas	28	-92		0.005			
8023-53-8	Dichlorobenzalkonium Chloride	Solid	423		0.00001	0.32			
111-44-4	Dichloroethyl Ether	Liquid	143	178	0.7	0.15	0.00004	0.03	
149-74-6	Dichloromethylphenylsilane	Liquid	191	205	0.4	0.02	0.00003	0.03	
62-73-7	Dichlorvos	Liquid	221	400	0.01	0.02	0.0000008	0.03	
141-66-2	Dicrotophos	Liquid	237	400	0.00001	0.0009	0.0000000008	0.03	
1464-53-5	Diepoxybutane	Liquid	86	138	16	0.0035	0.0007	0.02	
814-49-3	Diethyl Chlorophosphate	Liquid	173	210	0.2	0.008	0.00001	0.03	
1642-54-2	Diethylcarbamazine Citrate	Solid	391		0.00001	0.003			
*93-05-0	Diethyl-p-Phenylenediamine	Liquid	164	260	0.02	1.25	0.000001	0.03	
71-63-6	Digitoxin	Solid	765		0.00001	0.00018			
2238-07-5	Diglycidyl Ether	Liquid	130	260	0.09	0.045	0.000005	0.02	
20830-75-5	Digoxin	Solid	781		0.00001	0.0002			
115-26-4	Dimefox	Liquid	154	210	0.36	0.001	0.00002	0.03	
60-51-5	Dimethoate	Solid	229		0.0000085	0.03			
2524-03-0	Dimethyl Phosphorochloridothioate	Liquid	161	180	1	0.0032	0.00006	0.03	
77-78-1	Dimethyl Sulfate	Liquid	126	188	0.1	0.005	0.000006	0.03	
75-18-3	Dimethyl Sulfide	Liquid	62	37.3	520	0.0003	0.02	0.02	
75-78-5	Dimethyldichlorosilane	Liquid	129	70	139	0.003	0.008	0.04	
57-14-7	Dimethylhydrazine	Liquid	60	63.9	157	0.012	0.005	0.02	
99-98-9	Dimethyl-p-Phenylenediamine	Solid	136	262	0.0001	0.00013			0.000005
644-64-4	Dimetilan	Solid	240	350	0.0001	0.025			0.00000004
534-52-1	Dinitrocresol	Solid	198	312	0.00005	0.0005			0.000007
88-85-7	Dinoseb	Solid	240	345	0.0001	0.0045			0.000000002
1420-07-1	Dinoterb	Solid	240	350	0.00001	0.025			
78-34-2	Dioxathion	Liquid	457	250	0.01	0.0034	0.000001	0.06	
*646-06-0	Dioxolane	Liquid	74	74	70	0.21	0.003	0.02	
82-66-6	Diphacinone	Solid	340		0.00001	0.0009			
152-16-9	Diphosphoramide, Octamethyl-	Liquid	286	330	0.001	0.0008	0.0000001	0.04	
298-04-4	Disulfoton	Liquid	274	400	0.00018	0.002	0.00000002	0.03	
514-73-8	Dithiazanine Iodide	Solid	520		0.00001	0.02			
541-53-7	Dithiobiuret	Solid	135		0.00001	0.005			
316-42-7	Emetine, Dihydrochloride	Solid	554		0.00001	0.00001			
115-29-7	Endosulfan	Solid	407		0.00001	0.0008			
2778-04-3	Endothion	Solid	280		0.00001	0.017			
72-20-8	Endrin	Solid	381		0.000002	0.02			
106-89-8	Epichlorohydrin	Liquid	93	116.5	16	0.038	0.0007	0.03	
2104-64-5	EPN	Solid	323	380	0.000002	0.005			0.000000000007
50-14-6	Ergocalciferol	Solid	397		0.00001	0.04			
379-79-3	Ergotamine Tartrate	Solid	1314		0.00001	0.01			
1622-32-8	Ethanesulfonyl Chloride, 2-Chloro-	Liquid	163	200	0.6	0.0025	0.00004	0.03	
10140-87-1	Ethanol, 1,2-Dichloro-, Acetate	Liquid	157	280	0.001	0.011	0.00000006	0.03	
563-12-2	Ethion	Liquid	384	150 D	0.0000015	0.013	0.0000000002	0.09	
13194-48-4	Ethoprophos	Liquid	242	300	0.00035	0.026	0.00000003	0.03	
538-07-8	Ethylbis(2-Chloroethyl)Amine	Liquid	170	200	0.24	0.0075	0.00002	0.03	
371-62-0	Ethylene Fluorohydrin	Liquid	64	103.5	50	0.00007	0.002	0.02	
75-21-8	Ethylene Oxide	Gas	44	10.7		0.14			
107-15-3	Ethylenediamine	Liquid	60	116	15	0.49	0.0005	0.02	

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151-56-4	Ethyleneimine	Liquid	43	55	207	0.004	0.006	0.02	
*2235-25-8	Ethylmercuric Phosphate	Solid	327		0.00001	0.001			
542-90-5	Ethylthiocyanate	Liquid	87	146	4	0.1	0.0002	0.02	
22224-92-6	Fenamiphos	Solid	303	450	0.0000001	0.0009			0.0000000000001
122-14-5	Fenitrothion	Liquid	277	370	0.000006	0.0038	0.0000000006	0.03	
115-90-2	Fensulfothion	Liquid	308	440	0.00000001	0.002	0.000000000001	0.03	
4301-50-2	Fluenetil	Solid	258		0.0000025	0.006			0.0000007
7782-41-4	Fluorine	Gas	38	-188		0.039			
640-19-7	Fluoroacetamide	Solid	77	250	0.001	0.0058			0.0002
144-49-0	Fluoroacetic Acid	Solid	78	165	2	0.00047			0.0001
359-06-8	Fluoroacetyl Chloride	Liquid	96	73	80	0.01	0.004	0.03	
51-21-8	Fluorouracil	Solid	130	361	0.00001	0.019			0.004
944-22-9	Fonofos	Liquid	246	380	0.00021	0.0013	0.00000002	0.03	
50-00-0	Formaldehyde	Gas	30	-19		0.012			
107-16-4	Formaldehyde Cyanohydrin	Liquid	57	183	1.8	0.006	0.00006	0.02	
23422-53-9	Formetanate Hydrochloride	Solid	258	440	0.0000001	0.018			0.00003
2540-82-1	Formothion	Liquid	257	250	0.0000085	0.00027	0.0000000008	0.04	
17702-57-7	Formparanate	Solid	235	385	0.0000025	0.0072			0.0000003
21548-32-3	Fosthietan	Liquid	241	250	0.0000065	0.0047	0.0000000006	0.04	
3878-19-1	Fuberidazole	Solid	184		0.00001	0.0033			
110-00-9	Furan	Liquid	68	32	700	0.0012	0.03	0.03	
13450-90-3	Gallium Trichloride	Solid	176	201.3	0.2	0.032			0.0004
77-47-4	Hexachlorocyclopentadiene	Liquid	273	239	0.08	0.0002	0.000007	0.04	
*1335-87-1	Hexachloronaphthalene	Solid	335	270	0.003	0.0002			
4835-11-4	Hexamethylenediamine, N,N'-Dibutyl-	Liquid	228	205	0.0004	0.0022	0.00000003	0.04	
302-01-2	Hydrazine	Liquid	32	113.5	14.4	0.01	0.0003	0.01	
74-90-8	Hydrocyanic Acid	Gas	27	25.7		0.0055			
7647-01-0	Hydrogen Chloride (Gas Only)	Gas	36	-85		0.015			
7664-39-3	Hydrogen Fluoride	Gas	20	19.4		0.0016			
7722-84-1	Hydrogen Peroxide (Conc > 52%)	Liquid	34	152	5	0.01	0.0001	0.01	
7783-07-5	Hydrogen Selenide	Gas	81	-41		0.00066			
7783-06-4	Hydrogen Sulfide	Gas	34	-60		0.042			
123-31-9	Hydroquinone	Solid	110	285	0.001	0.02			0.0008
*53-86-1	Indomethacin	Solid	358		0.00001	0.0024			
*10025-97-5	Iridium Tetrachloride	Solid	334		0.00001	0.0047			
13463-40-6	Iron, Pentacarbonyl-	Liquid	196	103	40	0.0008 a	0.003	0.04	
297-78-9	Isobenzan	Solid	412		0.00001	0.001			
78-82-0	Isobutyronitrile	Liquid	69	103.8	50	0.025	0.002	0.02	
102-36-3	Isocyanic Acid,3,4-Dichlorophenyl Ester	Solid	188	240	0.02	0.014			0.000009
465-73-6	Isodrin	Solid	365	344	0.00001	0.007			0.004
55-91-4	Isofluorphate	Liquid	184	185	0.58	0.0036	0.00004	0.03	
4098-71-9	Isophorone Diisocyanate	Solid	222	360	0.00001	0.00123			0.000000006
108-23-6	Isopropyl Chloroformate	Liquid	123	104.6	50	0.1	0.003	0.03	
625-55-8	Isopropyl Formate	Liquid	88	68.2	100	0.0014	0.004	0.03	
119-38-0	Isopropylmethylpyrazolyl Dimethylcarbamate	Liquid	211	295	0.001	0.0056	0.00000008	0.03	
78-97-7	Lactonitrile	Liquid	71	182	1.7	0.018	0.00006	0.02	
21609-90-5	Leptophos	Solid	412	380	0.000002	0.03			0.000000009
541-25-3	Lewisite	Liquid	207	190	0.395	0.0047	0.00003	0.04	
58-89-9	Lindane	Solid	291	323.4 D	0.0000094	0.1			0.00004
7580-67-8	Lithium Hydride	Solid	8		0.00001	0.005			
109-77-3	Malononitrile	Solid	66	218	0.08	0.019			0.000005

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12108-13-3	Manganese, Tricarbonyl Methylcyclopentadienyl	Liquid	218	232	0.1	0.0006	0.000008	0.04	
51-75-2	Mechlorethamine	Liquid	156	200	0.6	0.029	0.00004	0.03	
950-10-7	Mephosfolan	Liquid	269	410	1.0000000E-10	0.009	0.000000000000009	0.03	
1600-27-7	Mercuric Acetate	Solid	319		0.00001	0.024			
7487-94-7	Mercuric Chloride	Solid	272	302	0.0004	0.03			0.02
21908-53-2	Mercuric Oxide	Solid	217		0.00001	0.016			
*108-67-8	Mesitylene	Liquid	120	165	1.8	0.24	0.0001	0.03	
10476-95-6	Methacrolein Diacetate	Liquid	172	191	0.35	0.044	0.00002	0.03	
760-93-0	Methacrylic Anhydride	Liquid	154	240	0.01	0.0045	0.0000006	0.03	
126-98-7	Methacrylonitrile	Liquid	67	90.3	90	0.003 a	0.003	0.02	
920-46-7	Methacryloyl Chloride	Liquid	105	96	40	0.0006	0.002	0.03	
30674-80-7	Methacryloyloxyethyl Isocyanate	Liquid	155	74	80	0.00027	0.005	0.04	
10265-92-6	Methamidophos	Solid	141	D	0.0003	0.0075			0.00000006
558-25-8	Methanesulfonyl Fluoride	Liquid	98	124	10	0.014	0.0005	0.03	
950-37-8	Methidathion	Solid	302		0.000001	0.02			0.0000000003
2032-65-7	Methiocarb	Solid	225	325	0.0001	0.015			0.00003
16752-77-5	Methomyl	Solid	162	335	0.00005	0.01			0.0000002
151-38-2	Methoxyethylmercuric Acetate	Solid	319		0.00001	0.025			
80-63-7	Methyl 2-Chloroacrylate	Liquid	121	140	12	0.005	0.0006	0.03	
74-83-9	Methyl Bromide	Gas	95	3.6		0.78			
79-22-1	Methyl Chloroformate	Liquid	95	71	210	0.0018	0.01	0.03	
624-92-0	Methyl Disulfide	Liquid	94	109.7	28.6	0.0001	0.001	0.03	
60-34-4	Methyl Hydrazine	Liquid	46	87.5	49.6	0.00094	0.001	0.02	
624-83-9	Methyl Isocyanate	Liquid	57	39	348	0.0047	0.01	0.02	
556-61-6	Methyl Isothiocyanate	Solid	73	119	15	0.033			0.0009
74-93-1	Methyl Mercaptan	Gas	48	6.2		0.079			
3735-23-7	Methyl Phenkapton	Liquid	349	400	0.0000035	0.011	0.0000000004	0.04	
676-97-1	Methyl Phosphonic Dichloride	Solid	133	163	1	0.0014			0.0002
556-64-9	Methyl Thiocyanate	Liquid	73	130	20	0.085	0.0008	0.02	
78-94-4	Methyl Vinyl Ketone	Liquid	70	81.4	160	0.00007	0.006	0.02	
502-39-6	Methylmercuric Dicyanamide	Solid	299		0.00003	0.02			0.0001
75-79-6	Methyltrichlorosilane	Liquid	149	67	280	0.0018	0.02	0.04	
1129-41-5	Metolcarb	Solid	165	360	0.00001	0.0048			0.00000003
7786-34-7	Mevinphos	Liquid	224	280	0.0029	0.004	0.0000002	0.03	
315-18-4	Mexacarbate	Solid	222		0.000002	0.014			0.00000003
50-07-7	Mitomycin C	Solid	334	534	0.00001	0.023			0.0008
6923-22-4	Monocrotophos	Solid	223	430	0.000007	0.00063			0.000000000002
*2763-96-4	Muscimol	Solid	114		0.00001	0.017			
505-60-2	Mustard Gas	Liquid	159	215	0.09	0.001	0.000006	0.03	
*7440-02-0	Nickel	Solid	59	2732	0.00001	0.05			0.0000001
13463-39-3	Nickel Carbonyl	Liquid	171	43	400	0.00035 a	0.03	0.05	
54-11-5	Nicotine	Liquid	162	246.7	0.04	0.0035	0.000003	0.03	
65-30-5	Nicotine Sulfate	Solid	423		0.00001	0.009			
7697-37-2	Nitric Acid	Liquid	63	83	47.8	0.026	0.002	0.02	
10102-43-9	Nitric Oxide	Gas	30	-151		0.03 a			
98-95-3	Nitrobenzene	Liquid	123	210.8	0.005	0.1	0.0000003	0.03	
1122-60-7	Nitrocyclohexane	Liquid	129	205.5	0.35	0.0015	0.00002	0.03	
10102-44-0	Nitrogen Dioxide	Gas	46	21.15		0.0094			
62-75-9	Nitrosodimethylamine	Liquid	74	151	8	0.019	0.0003	0.02	
991-42-4	Norbormide	Solid	512		0.00001	0.0038			
0	Organorhodium Complex (PMN-82-147)	Solid				0.0008			

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
*65-86-1	Orotic Acid	Solid	156		0.00001	2			
*20816-12-0	Osmium Tetroxide	Solid	254	130	11	0.0001			0.002
630-60-4	Ouabain	Solid	585		0.00001	0.0083			
23135-22-0	Oxamyl	Solid	219	310	0.00023	0.0017			0.00002
78-71-7	Oxetane, 3,3-Bis(Chloromethyl)-	Liquid	155	200	0.5	0.002	0.00003	0.03	
2497-07-6	Oxydisulfoton	Liquid	274	330	0.00006	0.0035	0.000000006	0.03	
10028-15-6	Ozone	Gas	48	-111		0.002			
1910-42-5	Paraquat	Solid	257		0.0000001	0.00015			
2074-50-2	Paraquat Methosulfate	Solid	408		0.0000001	0.00015			
56-38-2	Parathion	Liquid	291	375	0.000038	0.002	0.000000004	0.03	
298-00-0	Parathion-Methyl	Solid	263	D	0.0000097	0.00034			
12002-03-8	Paris Green	Solid	1014		0.00001	0.022			
19624-22-7	Pentaborane	Liquid	63	60	170	0.0008	0.006	0.02	
*76-01-7	Pentachloroethane	Liquid	202	161	3.4	3.5	0.0003	0.04	
*87-86-5	Pentachlorophenol	Solid	266	309	0.0002	0.015			0.001
2570-26-5	Pentadecylamine	Solid	227	307.6	0.0003	0.002			0.00000001
79-21-0	Peracetic Acid	Liquid	76	105	60	0.0045	0.002	0.02	
594-42-3	Perchloromethylmercaptan	Liquid	186	147	10	0.0076	0.0007	0.04	
108-95-2	Phenol	Solid	94	181.75	0.35	0.039			0.00008
97-18-7	Phenol, 2,2'-Thiobis(4,6-Dichloro)-	Solid	356		0.0000001	0.007			
4418-66-0	Phenol,2,2'-Thiobis(4-Chloro-6-Methyl)-	Solid	315	443	0.0000001	0.0013			0.00001
64-00-6	Phenol, 3-(1-Methylethyl)-, Methylcarbamate	Solid	193	143	0.4	0.016			0.004
58-36-6	Phenoxarsine, 10,10'-Oxydi-	Solid	502		0.00001	0.014			
696-28-6	Phenyl Dichloroarsine	Liquid	223	254.4	0.033	0.004	0.000003	0.03	
59-88-1	Phenylhydrazine Hydrochloride	Solid	145	240 D	0.00001	0.25			0.03
62-38-4	Phenylmercury Acetate	Solid	337		0.000009	0.022			
2097-19-0	Phenylsilatrane	Solid	251	350	0.00001	0.001			0.0008
103-85-5	Phenylthiourea	Solid	152	320	0.000002	0.003			0.0002
298-02-2	Phorate	Liquid	260	290	0.00084	0.0001	0.00000008	0.04	
4104-14-7	Phosacetim	Solid	375	400	0.00001	0.0037			0.00000009
947-02-4	Phosfolan	Solid	255	410	0.00001	0.009			0.000000000002
75-44-5	Phosgene	Gas	99	8.2		0.0008			
732-11-6	Phosmet	Solid	317	D	0.0008	0.00054			0.000008
13171-21-6	Phosphamidon	Liquid	300	350	0.000025	0.0003	0.000000002	0.04	
7803-51-2	Phosphine	Gas	34	-88		0.028			
2703-13-1	Phosphonothioic Acid, Methyl-, O-Ethyl O-(4-(Methylthio)Phenyl) Ester	Liquid	262	298	0.0001	0.01	0.000000009	0.04	
50782-69-9	Phosphonothioic Acid, Methyl-, S-(2-(Bis(1-Methylethyl)Amino)Ethyl) O-Ethyl Ester	Liquid	267	298	0.0007	0.0009	0.00000006	0.04	
2665-30-7	Phosphonothioic Acid, Methyl-,O-(4-Nitrophenyl) O-Phenyl Ester	Liquid	309	400	0.00001	0.008	0.000000001	0.03	
3254-63-5	Phosphoric Acid, Dimethyl 4-(Methylthio) Phenyl Ester	Liquid	248	300	0.001	0.007	0.00000009	0.03	
2587-90-8	Phosphorothioic Acid, O,O-Dimethyl-S-(2-Methylthio) Ethyl Ester	Liquid	216	230		0.02		0.04	
7723-14-0	Phosphorus	Solid	31	280	0.05	0.003			0.00000005
10025-87-3	Phosphorus Oxychloride	Liquid	153	106	40	0.003	0.003	0.04	
10026-13-8	Phosphorus Pentachloride	Solid	208	160	1	0.02			0.006
1314-56-3	Phosphorus Pentoxide	Solid	142		0.00001	0.0006			
7719-12-2	Phosphorus Trichloride	Liquid	137	76	135	0.028	0.008	0.04	

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
*86-80-0	Phylloquinone	Liquid	451	450	0.00000001	25	0.000000000001	0.04	
57-47-6	Physostigmine	Solid	275		0.00001	0.0045			
57-64-7	Physostigmine, Salicylate (1:1)	Solid	414	D	0.00001	0.0025			
124-87-8	Picrotoxin	Solid	603		0.00001	0.015			
110-89-4	Piperidine	Liquid	85	106	40	0.022	0.002	0.03	
5281-13-0	Piprotal	Solid	457	463	0.0000001	0.0044			0.0000004
23505-41-1	Pirimifos-Ethyl	Liquid	333	130 D	0.00029	0.025	0.00000003	0.09	
*10025-65-7	Platinous Chloride	Solid	266		0.00001	0.013			
*13454-96-1	Platinum Tetrachloride	Solid	337		0.00001	0.002			
10124-50-2	Potassium Arsenite	Solid	254		0.00001	0.014			
151-50-8	Potassium Cyanide	Solid	65		0.00001	0.005			
506-61-6	Potassium Silver Cyanide	Solid	199		0.00001	0.02			
2631-37-0	Promecarb	Solid	207	345	0.00003	0.016			0.0000003
106-96-7	Propargyl Bromide	Liquid	119	88	180	0.00003	0.01	0.03	
57-57-8	Propiolactone, Beta-	Liquid	72	162	3.4	0.0015 a	0.0001	0.02	
107-12-0	Propionitrile	Liquid	55	97.2	40	0.0037	0.001	0.02	
542-76-7	Propionitrile, 3-Chloro-	Liquid	90	175	2.5	0.009	0.0001	0.02	
70-69-9	Propiophenone, 4-Amino-	Solid	149			0.0056			
109-61-5	Propyl Chloroformate	Liquid	123	114	24	0.01	0.001	0.03	
*1331-17-5	Propylene Glycol, Allyl Ether	Liquid	116	160	2	0.51	0.0001	0.03	
75-56-9	Propylene Oxide	Liquid	58	34.23	517	0.48	0.02	0.02	
75-55-8	Propyleneimine	Liquid	57	66	149	0.12	0.005	0.02	
2275-18-5	Prothoate	Solid	285	330	0.0001	0.0017			0.000000001
*95-63-6	Pseudocumene	Liquid	120	169	1.9	0.18	0.0001	0.03	
129-00-0	Pyrene	Solid	202	404	0.00001	0.0017			0.00001
140-76-1	Pyridine, 2-Methyl-5-Vinyl-	Liquid	119	181	1.7	0.0019	0.00009	0.03	
504-24-5	Pyridine, 4-Amino-	Solid	94	273.5	0.002	0.02			0.0007
1124-33-0	Pyridine, 4-Nitro-, 1-Oxide	Solid	140	390	0.00001	0.08			0.00002
53558-25-1	Pyriminil	Solid	272		0.00001	0.0062			
*10049-07-7	Rhodium Trichloride	Solid	209	800	0.00001	0.0062			0.00002
14167-18-1	Salcomine	Solid	325		0.00001	0.039			
107-44-8	Sarin	Liquid	140	147	2.9	0.00005	0.0002	0.03	
7783-00-8	Selenious Acid	Solid	129		4	0.25			0.002
7791-23-3	Selenium Oxychloride	Liquid	166	180	2.9	0.01	0.0002	0.03	
563-41-7	Semicarbazide Hydrochloride	Solid	112		0.00001	0.1			
3037-72-7	Silane, (4-Aminobutyl)Diethoxymethyl-	Liquid	205	220	0.06	0.045	0.000005	0.03	
*128-56-3	Sodium Anthraquinone-1-Sulfonate	Solid	310		0.00001	14			
7631-89-2	Sodium Arsenate	Solid	326		0.00001	0.13			
7784-46-5	Sodium Arsenite	Solid	130		0.00001	0.01			
26628-22-8	Sodium Azide (Na(N3))	Solid	65		0.00001	0.02			
124-65-2	Sodium Cacodylate	Solid	160	D	0.00001	0.004			
143-33-9	Sodium Cyanide (Na(CN))	Solid	49	1496	0.00001	0.005			0.0000000000001
62-74-8	Sodium Fluoroacetate	Solid	100		0.00001	0.0005			
131-52-2	Sodium Pentachlorophenate	Solid	288		0.00001	0.0024			
13410-01-0	Sodium Selenate	Solid	189		0.00001	0.0016			
10102-18-8	Sodium Selenite	Solid	173		0.00001	0.0023			
10102-20-2	Sodium Tellurite	Solid	222		0.00001	0.02			
900-95-8	Stannane, Acetoxytriphenyl-	Solid	409			0.02			
57-24-9	Strychnine	Solid	334	460	0.00000001	0.0003			0.0007
60-41-3	Strychnine, Sulfate	Solid	383		0.00000001	0.005			
3689-24-5	Sulfotep	Liquid	322	310	0.00017	0.0035	0.00000002	0.04	
3569-57-1	Sulfoxide, 3-Chloropropyl Octyl	Liquid	239	338	0.0002	0.008	0.00000002	0.03	

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
7446-09-5	Sulfur Dioxide	Gas	64	-10		0.026			
7783-60-0	Sulfur Tetrafluoride	Gas	108	-40		0.0092			
7446-11-9	Sulfur Trioxide	Solid	80	45	433	0.003			0.01
7664-93-9	Sulfuric Acid	Liquid	98	290	0.000001	0.008	0.00000000005	0.02	
77-81-6	Tabun	Liquid	162	240	0.07	0.00015	0.000005	0.03	
13494-80-9	Tellurium	Solid	128	989.9	0.00001	0.02			0.00000002
7783-80-4	Tellurium Hexafluoride	Gas	242	-39 S		0.001			
107-49-3	TEPP	Liquid	290	310	0.00047	0.001	0.00000005	0.04	
13071-79-9	Terbufos	Liquid	288	315	0.0003	0.001	0.00000003	0.04	
78-00-2	Tetraethyllead	Liquid	323	110	0.2	0.004	0.00002	0.06	
597-64-8	Tetraethyltin	Liquid	235	181	2	0.007	0.0002	0.04	
75-74-1	Tetramethyllead	Liquid	267	110	22	0.004	0.002	0.05	
509-14-8	Tetranitromethane	Liquid	196	126	13	0.008 a	0.001	0.04	
*1314-32-5	Thallic Oxide	Solid	457	875	0.00001	0.002			0.003
10031-59-1	Thallium Sulfate	Solid	1527	D	0.00001	0.002			
6533-73-9	Thallous Carbonate	Solid	469		0.00001	0.002			
7791-12-0	Thallous Chloride	Solid	240	720	0.0000001	0.002			0.00007
2757-18-8	Thallous Malonate	Solid	511	300	0.00001	0.002			
7446-18-6	Thallous Sulfate	Solid	505		0.0000001	0.002			
2231-57-4	Thiocarbazide	Solid	106		0.00001	0.1			
*21564-17-0	Thiocyanic Acid, 2-(Benzothiazolylthio) Methyl Ester	Liquid	238	350	0.00001	1.6	0.0000000008	0.03	
39196-18-4	Thiofanox	Solid	218	315	0.00017	0.0085			0.00000009
*640-15-3	Thiometon	Liquid	246	340	0.0003	0.06	0.00000003	0.03	
297-97-2	Thionazin	Liquid	248	360	0.003	0.0035	0.0000003	0.03	
108-98-5	Thiophenol	Liquid	110	168.3	1	0.0014	0.00005	0.03	
79-19-6	Thiosemicarbazide	Solid	91	320	0.00001	0.0092			0.0004
5344-82-1	Thiourea, (2-Chlorophenyl)-	Solid	187	323	0.000002	0.0046			0.0001
614-78-8	Thiourea, (2-Methylphenyl)-	Solid	166		0.000002	0.05			
7550-45-0	Titanium Tetrachloride	Liquid	190	136.4	10	0.001	0.0007	0.04	
584-84-9	Toluene 2,4-Diisocyanate	Liquid	174	251	1	0.007	0.00007	0.03	
91-08-7	Toluene 2,6-Diisocyanate	Liquid	174	245	0.5	0.0009	0.00003	0.03	
110-57-6	Trans-1,4-Dichlorobutene	Liquid	125	155.5	6	0.0044	0.0003	0.03	
1031-47-6	Triamiphos	Solid	294	400	0.0000001	0.01			0.000000003
24017-47-8	Triazofos	Liquid	313	350	0.00001	0.0028	0.000000001	0.04	
76-02-8	Trichloroacetyl Chloride	Liquid	182	118	0.0000001	0.0045	0.000000000007	0.04	
115-21-9	Trichloroethylsilane	Liquid	164	97.9	0.6	0.003	0.00004	0.04	
327-98-0	Trichloronate	Liquid	334	360	20	0.01	0.002	0.04	
98-13-5	Trichlorophenylsilane	Liquid	212	201.5	0.01	0.0033	0.0000008	0.04	
*52-68-6	Trichlorophon	Solid	257	280	0.000008	0.013			
1558-25-4	Trichloro(Chloromethyl)Silane	Liquid	184	118	30	0.0003	0.002	0.04	
27137-85-5	Trichloro(Dichlorophenyl)Silane	Liquid	280	260	70	0.008	0.007	0.04	
998-30-1	Triethoxysilane	Liquid	164	132	23	0.005	0.002	0.04	
75-77-4	Trimethylchlorosilane	Liquid	109	57	71	0.05	0.004	0.03	
824-11-3	Trimethylolpropane Phosphite	Solid	162	200	0.2	0.0025			0.0001
1066-45-1	Trimethyltin Chloride	Solid	199	154	3	0.02			0.0004
639-58-7	Triphenyltin Chloride	Solid	385	400	0.000001	0.02			0.0000001
555-77-1	Tris(2-Chloroethyl)Amine	Liquid	205	256	0.011	0.0008	0.0000008	0.03	
2001-95-8	Valinomycin	Solid	1112		0.00001	0.0025			
1314-62-1	Vanadium Pentoxide	Solid	182	1750	0.0000001	0.007			0.0000000000002
108-05-4	Vinyl Acetate Monomer	Liquid	86	72	124	0.054	0.005	0.03	
*3048-64-4	Vinylnorbornene	Liquid	120	141	5	4.37	0.0003	0.03	

Exhibit C-1
List of Extremely Hazardous Substances and Data for Hazards Analysis
(Alphabetical Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
81-81-2	Warfarin	Solid	308	356	0.00001	0.02			0.0001
129-06-6	Warfarin Sodium	Solid	330		0.00001	0.009			
28347-13-9	Xylylene Dichloride	Solid	175	239	0.02	0.002			0.0003
58270-08-9	Zinc, Dichloro(4,4-Dimethyl-5((((Methyl amino)Carbonyl)Oxy)Imino) Pentanenitrile)-, (T-4)-	Solid	334		0.00001	0.009			
1314-84-7	Zinc Phosphide	Solid	258	1100	0.0000001	0.012			0.0000000002

a: ACGIH TLV values were used for these chemicals.

* Chemicals proposed for deletion.

D: Decomposes

S: Sublimes

Exhibit C-2
List of Extremely Hazardous Substances and Data for Hazards Analysis
(CAS # Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
0	Organorhodium Complex (PMN-82-147)	Solid				0.0008			
50-00-0	Formaldehyde	Gas	30	-19		0.012			
50-07-7	Mitomycin C	Solid	334	534	0.00001	0.023			0.0008
50-14-6	Ergocalciferol	Solid	397		0.00001	0.04			
51-21-8	Fluorouracil	Solid	130	361	0.00001	0.019			0.004
51-75-2	Mechlorethamine	Liquid	156	200	0.6	0.029	0.00004	0.03	
51-83-2	Carbachol Chloride	Solid	183		0.00001	0.015			
*52-68-6	Trichlorophon	Solid	257	280	0.000008	0.013			
*53-86-1	Indomethacin	Solid	358		0.00001	0.0024			
54-11-5	Nicotine	Liquid	162	246.7	0.04	0.0035	0.000003	0.03	
54-62-6	Aminopterin	Solid	440		0.00001	0.025			
55-91-4	Isofluorphate	Liquid	184	185	0.58	0.0036	0.00004	0.03	
56-25-7	Cantharidin	Solid	196	110 S	0.02	0.0043			0.02
56-38-2	Parathion	Liquid	291	375	0.000038	0.002	0.000000004	0.03	
56-72-4	Coumaphos	Solid	363		0.0000001	0.003			
57-14-7	Dimethylhydrazine	Liquid	60	63.9	157	0.012	0.005	0.02	
57-24-9	Strychnine	Solid	334	460	0.00000001	0.0003			0.0007
57-47-6	Physostigmine	Solid	275		0.00001	0.0045			
57-57-8	Propiolactone, Beta-	Liquid	72	162	3.4	0.0015 a	0.0001	0.02	
57-64-7	Physostigmine, Salicylate (1:1)	Solid	414	D	0.00001	0.0025			
57-74-9	Chlordane	Liquid	410	400	0.00001	0.05	0.000000001	0.04	
58-36-6	Phenoxarsine, 10,10'-Oxydi-	Solid	502		0.00001	0.014			
58-89-9	Lindane	Solid	291	323.4 D	0.0000094	0.1			0.00004
59-88-1	Phenylhydrazine Hydrochloride	Solid	145	240 D	0.00001	0.25			0.03
60-34-4	Methyl Hydrazine	Liquid	46	87.5	49.6	0.00094	0.001	0.02	
60-41-3	Strychnine, Sulfate	Solid	383		0.00000001	0.005			
60-51-5	Dimethoate	Solid	229		0.0000085	0.03			
62-38-4	Phenylmercury Acetate	Solid	337		0.000009	0.022			
62-53-3	Aniline	Liquid	93	184	0.67	0.038	0.00003	0.02	
62-73-7	Dichlorvos	Liquid	221	400	0.01	0.02	0.0000008	0.03	
62-74-8	Sodium Fluoroacetate	Solid	100		0.00001	0.0005			
62-75-9	Nitrosodimethylamine	Liquid	74	151	8	0.019	0.0003	0.02	
64-00-6	Phenol, 3-(1-Methylethyl)-, Methylcarbamate	Solid	193	143	0.4	0.016			0.004
64-86-8	Colchicine	Solid	399	407	0.00001	0.0009			0.00001
65-30-5	Nicotine Sulfate	Solid	423		0.00001	0.009			
*65-86-1	Orotic Acid	Solid	156		0.00001	2			
66-81-9	Cycloheximide	Solid	281	245	0.006	0.002			0.0008
67-66-3	Chloroform	Liquid	119	61.7	160.0	0.49	0.009	0.04	
70-69-9	Propiophenone, 4-Amino-	Solid	149			0.0056			
71-63-6	Digitoxin	Solid	765		0.00001	0.00018			
72-20-8	Endrin	Solid	381		0.000002	0.02			
74-83-9	Methyl Bromide	Gas	95	3.6		0.78			
74-90-8	Hydrocyanic Acid	Gas	27	25.7		0.0055			
74-93-1	Methyl Mercaptan	Gas	48	6.2		0.079			
75-15-0	Carbon Disulfide	Liquid	76	46.5	360.0	0.16	0.01	0.03	
75-18-3	Dimethyl Sulfide	Liquid	62	37.3	520	0.0003	0.02	0.02	
75-21-8	Ethylene Oxide	Gas	44	10.7		0.14			
75-44-5	Phosgene	Gas	99	8.2		0.0008			
75-55-8	Propyleneimine	Liquid	57	66	149	0.12	0.005	0.02	
75-56-9	Propylene Oxide	Liquid	58	34.23	517	0.48	0.02	0.02	
75-74-1	Tetramethyllead	Liquid	267	110	22	0.004	0.002	0.05	

Exhibit C-2
List of Extremely Hazardous Substances and Data for Hazards Analysis
(CAS # Order)

CAS #	Chemical Name	Physical State	Molecular Weight	Boiling Point (oC)	Vapor Pressure @ 25 C (mm Hg)	Level of Concern (gm/m3)	Liquid Factor Ambient LFA	Liquid Factor Boiling LFB	Liquid Factor Molten LFM
75-77-4	Trimethylchlorosilane	Liquid	109	57	71	0.05	0.004	0.03	
75-78-5	Dimethyldichlorosilane	Liquid	129	70	139	0.003	0.008	0.04	
75-79-6	Methyltrichlorosilane	Liquid	149	67	280	0.0018	0.02	0.04	
75-86-5	Acetone Cyanohydrin	Liquid	85	200	0.50	0.012	0.00002	0.02	
*76-01-7	Pentachloroethane	Liquid	202	161	3.4	3.5	0.0003	0.04	
76-02-8	Trichloroacetyl Chloride	Liquid	182	118	0.0000001	0.0045	0.000000000007	0.04	
77-47-4	Hexachlorocyclopentadiene	Liquid	273	239	0.08	0.0002	0.000007	0.04	
77-78-1	Dimethyl Sulfate	Liquid	126	188	0.1	0.005	0.000006	0.03	
77-81-6	Tabun	Liquid	162	240	0.07	0.00015	0.000005	0.03	
78-00-2	Tetraethyllead	Liquid	323	110	0.2	0.004	0.00002	0.06	
78-34-2	Dioxathion	Liquid	457	250	0.01	0.0034	0.000001	0.06	
78-53-5	Amiton	Liquid	269	330	0.000001	0.0033	0.00000000009	0.03	
78-71-7	Oxetane, 3,3-Bis(Chloromethyl)-	Liquid	155	200	0.5	0.002	0.00003	0.03	
78-82-0	Isobutyronitrile	Liquid	69	103.8	50	0.025	0.002	0.02	
78-94-4	Methyl Vinyl Ketone	Liquid	70	81.4	160	0.00007	0.006	0.02	
78-97-7	Lactonitrile	Liquid	71	182	1.7	0.018	0.00006	0.02	
79-06-1	Acrylamide	Solid	71	250	0.007	0.11			0.00004
79-11-8	Chloroacetic Acid	Solid	95	189	0.5	0.0018			0.0002
79-19-6	Thiosemicarbazide	Solid	91	320	0.00001	0.0092			0.0004
79-21-0	Peracetic Acid	Liquid	76	105	60	0.0045	0.002	0.02	
79-22-1	Methyl Chloroformate	Liquid	95	71	210	0.0018	0.01	0.03	
80-63-7	Methyl 2-Chloroacrylate	Liquid	121	140	12	0.005	0.0006	0.03	
81-81-2	Warfarin	Solid	308	356	0.00001	0.02			0.0001
82-66-6	Diphacinone	Solid	340		0.00001	0.0009			
*84-80-0	Phylloquinone	Liquid	451	450	0.00000001	25	0.000000000001	0.04	
86-50-0	Azinphos-Methyl	Solid	317	400	0.0000001	0.0007			0.000000003
86-88-4	ANTU	Solid	202	400	0.000001	0.01			0.00009
*87-86-5	Pentachlorophenol	Solid	266	309	0.0002	0.015			0.001
88-05-1	Aniline, 2,4,6-Trimethyl-	Liquid	135	232	0.10	0.0029	0.000006	0.03	
88-85-7	Dinoseb	Solid	240	345	0.0001	0.0045			0.000000002
91-08-7	Toluene 2,6-Diisocyanate	Liquid	174	245	0.5	0.0009	0.00003	0.03	
*93-05-0	Diethyl-p-Phenylenediamine	Liquid	164	260	0.02	1.25	0.000001	0.03	
95-48-7	Cresol, o-	Solid	108	191	0.5	0.11			0.00003
*95-63-6	Pseudocumene	Liquid	120	169	1.9	0.18	0.0001	0.03	
97-18-7	Phenol, 2,2'-Thiobis(4,6-Dichloro)-	Solid	356		0.0000001	0.007			
98-05-5	Benzenearsonic Acid	Solid	202		0.00001	0.00027			
98-07-7	Benzotrichloride	Liquid	195	220.8	1.0	0.0007	0.00007	0.03	
*98-09-9	Benzenesulfonyl Chloride	Liquid	177	251	0.03	0.2	0.000002	0.03	
98-13-5	Trichlorophenylsilane	Liquid	212	201.5	0.01	0.0033	0.0000008	0.04	
98-16-8	Benzenamine, 3-(Trifluoromethyl)-	Liquid	161	187.5	1.0	0.0044	0.00007	0.03	
98-87-3	Benzal Chloride	Liquid	161	205	1.0	0.0023	0.00007	0.03	
98-95-3	Nitrobenzene	Liquid	123	210.8	0.005	0.1	0.0000003	0.03	
99-98-9	Dimethyl-p-Phenylenediamine	Solid	136	262	0.0001	0.00013			0.000005
100-14-1	Benzene, 1-(Chloromethyl)-4-Nitro-	Solid	172	230	0.05	0.028			0.00008
100-44-7	Benzyl Chloride	Liquid	127	179	1.0	0.0052	0.00006	0.03	
102-36-3	Isocyanic Acid,3,4-Dichlorophenyl Ester	Solid	188	240	0.02	0.014			0.000009
103-85-5	Phenylthiourea	Solid	152	320	0.000002	0.003			0.0002
106-89-8	Epichlorohydrin	Liquid	93	116.5	16	0.038	0.0007	0.03	
106-96-7	Propargyl Bromide	Liquid	119	88	180	0.00003	0.01	0.03	
*106-99-0	Butadiene	Gas	54	-4.4		4.43			
107-02-8	Acrolein	Liquid	56	52.5	220.0	0.0011	0.007	0.02	
107-07-3	Chloroethanol	Liquid	81	128	5.0	0.0033	0.0002	0.02	