

**RULES OF  
GEORGIA DEPARTMENT OF NATURAL RESOURCES  
ENVIRONMENTAL PROTECTION DIVISION**

**Chapter 391-3-19  
HAZARDOUS SITE RESPONSE**

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*Rule 391-3-19-.03 adopted May 26, 1993 (effective June 16, 1993); Rules 391-3-19-.04 and .05 adopted January 26, 1994 (effective February 20, 1994); Rules 391-3-19-.06, .07, and .08 adopted June 29, 1994 (effective July 21, 1994); Rule 391-3-19-.09 adopted February 22, 1995 (effective March 20, 1995); Rule 391-3-19-.09 amended December 6, 1995 (effective December 31, 1995); Rule 391-3-19-.03 amended July 14, 1999, effective August 26, 1999; Rules 391-3-19-.02 and .07 amended October 27, 1999 (effective November 23, 1999); Rules 391-3-19-.02, .06 and .07 amended June 25, 2003 (effective July 23, 2003).*

**391-3-19-.01 General Provisions**

(1) **Purpose.** The purpose of these Rules is to establish policies, procedures, requirements, and standards to implement the Georgia Hazardous Site Response Act, Official Code of Georgia Annotated (O.C.G.A.) §12-8-90 et seq. (1992), as amended. These Rules are promulgated to protect and enhance the quality of Georgia's environment and to protect the public health, safety, and well-being of its citizens.

(2) **Authority.** These Rules are issued under the authority of the Georgia Hazardous Site Response Act (HSRA), O.C.G.A. §12-8-90 et seq.  
*Authority O.C.G.A. Sec. 12-8-90 et seq.*

**391-3-19-.02 Conventions.**

(1) **Abbreviations.**

CERCLA--Federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended  
CFR--Code of Federal Regulations  
HEAST--USEPA's Health Effects Assessment Summary Tables  
HSRA--Georgia Hazardous Site Response Act, O.C.G.A. §12-8-90 et seq.

IEUBK--USEPA's Integrated Exposure Uptake Biokinetic Model for Lead in Children

IRIS--USEPA's Integrated Risk Information System

NCP--The National Oil and Hazardous Substances Pollution Contingency Plan,  
40 CFR Part 300

O.C.G.A.--Official Code of Georgia, Annotated

RAGS, Part A--"Risk Assessment Guidance for Superfund: Volume 1 - Human Health  
Evaluation Manual (Part A)," USEPA document EPA/540/1-89/002, December 1989

RAGS, Part B--"Risk Assessment Guidance for Superfund: Volume 1 - Human Health  
Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals)," USEPA  
document EPA/540/R-92/003, December 1991

SARA--Federal Superfund Amendments and Reauthorization Act of 1986, as amended

SW-846--"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,"  
USEPA Publication SW-846

USEPA--United States Environmental Protection Agency

(2) **Definitions.** Unless otherwise defined in this chapter, the definition of all terms included in the HSRA, O.C.G.A. 12-8-90 et seq, as amended, the Georgia Hazardous Waste Management Act (HWMA) O.C.G.A. §12-8-60 et seq., as amended, and in the Rules for Hazardous Waste Management, Section 391-3-11-.02, shall have the same meaning in this chapter. When used in this chapter, the following terms shall have the meaning given below:

(a) *Approved analytical test method* means SW-846 test methods that have been promulgated, recommended, or otherwise approved by USEPA, or methods approved for use by the Division;

(b) *Conditionally exempt small quantity generator* means a hazardous waste generator who generates 220 pounds or less of hazardous waste in one month;

(c) *Defined release* means any release which is an event which has a known duration of less than 30 consecutive days, which has a known source, and which involves quantities that are known or can be estimated;

(d) *Detection limit* means the practical quantitation limit (PQL), defined as the lowest concentration, for an approved analytical test method and for a given sample matrix, at which the quantity of a regulated substance can be measured with a stated degree of confidence under routine laboratory operating conditions;

(e) *Final receiving facility* means a receiving facility that receives a hazardous waste and from which that hazardous waste will not be reshipped for further off-site management;

(f) *Free product* means any non-aqueous phase liquid that contains a regulated substance and that has accumulated at a groundwater surface, has pooled above a low permeability boundary in an aquifer, or can move freely in the aquifer;

(g) *Ground water* means any subsurface water that is in a zone of saturation;

(h) *Large quantity generator* means a hazardous waste generator who generates 2.2 pounds or more of acute hazardous waste or 2200 pounds or more of hazardous waste in one month;

(i) *Non-residential property* means any real property or portion of a property not currently being used for human habitation or for other purposes with a similar potential for human exposure, at which activities have been or are being conducted that can be categorized in one of the 1987 Standard Industrial Classification (SIC) major groups 01-97 inclusive (except the four-digit codes 4941, 8051, 8059, 8062-3, 8069, 8211, 8221-2, 8351, 8661, and 9223). Non-residential property includes all of the contiguous block(s) and lot(s) controlled by the same owner or operator that are vacant land, or that are used in conjunction with such business. For leased properties, non-residential property includes the leasehold and any external tank, surface impoundment, septic system, or any other structure, vessel, contrivance, or unit that provides, or is utilized for the management of regulated substances to or from the leasehold;

(j) *Off-site management* means the movement of hazardous waste beyond the property boundary of the facility where it was generated for disposal, incineration, treatment, storage, burning for energy recovery, recycling and/or reuse at a receiving facility;

(k) *On-site management* means the disposal, incineration, treatment, storage, burning for energy recovery, recycling and/or reuse of self-generated hazardous waste by any large quantity generator before it is shipped for off-site management or discharged from an outfall regulated under the Georgia Water Quality Control Act;

(l) *Out-of-state generator* means any generator outside the State of Georgia that ships hazardous waste to a receiving facility located within the State of Georgia;

(m) *Receiving facility* means a facility that receives hazardous waste for disposal, incineration, treatment, storage, burning for energy recovery, recycling and/or reuse;

(n) *Regulated substance* means any substance defined in the Hazardous Waste Management Act, O.C.G.A. §12-8-62, by the terms "hazardous waste" or "hazardous constituent," or any substance defined in the Hazardous Site Response Act, O.C.G.A. §12-8-92, as "hazardous substance" (all such regulated substances are listed in Appendix I of this Chapter);

(o) *Release* means any intentional or unintentional act or omission resulting in the spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, including without limitation the abandonment or discarding of barrels, containers, and other closed receptacles, of any hazardous waste, hazardous constituent, or hazardous substance; provided however, that such term shall not include any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons; emissions from the engine exhaust of any motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station; or the normal application of fertilizer;

(p) *Reportable quantity* means the amount of any released regulated substance which causes a site to meet the criteria for listing on the Hazardous Site Inventory pursuant to the screening method provided in Appendix II of this Chapter;

(q) *Reshipped for further off-site management* means when a receiving facility has received hazardous waste and where such hazardous waste has undergone disposal, incineration, treatment, storage, recycling and/or reuse at that receiving facility and the receiving facility subsequently signs the manifest accompanying such hazardous waste to send it to another receiving facility where it will undergo further disposal, incineration, treatment, storage, burning for energy recovery, recycling and/or reuse;

(r) *Residential property* means any property that does not exclusively meet the definition of non-residential property. In addition to recognized residential use, it also includes property used for establishments classified by those SIC codes that are excepted from the definition herein of "non-residential". Also, a portion of non-residential property that is used in part for residential activities, such as a day care center, is defined as residential;

(s) *Responsible party* means any person who has contributed or who is contributing to a release, as defined at O.C.G.A. 12-8-92(9);

(t) *Self-generated hazardous waste* means hazardous waste generated by a large quantity generator or a small quantity generator;

(u) *Shipped for off-site management* means when a generator signs the manifest accompanying a hazardous waste shipment bound for a receiving facility where it will undergo disposal, incineration, treatment, storage, burning for energy recovery, recycling and/or reuse at that facility;

(v) *Site* means that portion of the owner's contiguous property and any other owner's property affected by a release exceeding a reportable quantity.

(w) *Small quantity generator* means a hazardous waste generator who generates greater than 220 pounds but less than 2200 pounds of hazardous waste in one month;

(x) *Soil* means any unconsolidated earth material, together with any unconsolidated plant or animal matter or foreign material that has become incorporated into it, that either consists of, remains within, or comes to be deposited on, native soil or regolith;

(y) *Source material* means any material that includes or contains regulated substances that act or may likely act as a reservoir for migration of regulated substances to groundwater, soil, surface water, or air, or acts as a source for direct exposure;

(z) *Ton of hazardous waste* means a standard short ton (2000 pounds) including any fraction thereof;

(aa) *Wastewater* means any self-generated hazardous waste that undergoes on-site management in a wastewater treatment facility prior to its discharge from an outfall that is regulated under the Georgia Water Quality Control Act.

(3) **Number and gender.** As used in this chapter, words in the singular also include the plural and words in the masculine gender also include the feminine and vice versa, as the case may require.

(4) **Submittal of documents.** All information required to be submitted to the Director pursuant to this Chapter shall be submitted in such form as may be prescribed by the Director including the submittal of information in electronic format.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

### **Chapter 391-3-19-.03 Hazardous Waste Management and Hazardous Substance Reporting Fees**

(1) **Exclusions.** Hazardous waste generated by the following is exempted from the hazardous waste management fees required by this section:

(a) Conditionally exempt small quantity generators;

(b) Corrective action required by an order, permit, or approved closure plan issued pursuant to the Georgia Hazardous Waste Management Act, O.C.G.A. §12-8-60 et seq, as amended;

(c) Corrective action required by an order of the Director pursuant to the Hazardous Site Response Act, O.C.G.A. §12-8-90 et seq as amended; and

(d) Response actions required under the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

(2) **Fees for off-site management of hazardous wastes.** The requirements of this subsection are applicable to generators that ship self-generated hazardous waste for off-site management.

(a) For the purpose of determining the tonnage of hazardous waste shipped for off-site management to which the fees of this subsection apply, the generator shall use the amount recorded on the manifest accompanying each hazardous waste shipment expressed in tons. These amounts shall be measured by methods that provide an accurate and precise measurement of the weight in tons of each shipment received by the final receiving facility.

1. Small quantity generators. Each small quantity generator shall pay an annual fee to the Division of \$100.00. Small quantity generators are not subject to any other provisions of this section regarding hazardous waste management fees; they may, however, be subject to the provisions regarding hazardous substance reporting fees.

2. Receiving facilities that are large quantity generators. Receiving facilities that are large quantity generators are subject to the requirements of this subsection only with respect to self-generated hazardous wastes.

3. Large quantity generators. Each large quantity generator shall pay an annual fee to the Division of either \$100.00, or for each ton of hazardous waste shipped for off-site management, the applicable fee in Schedule I of this subsection, whichever amount is greater for that calendar year. With respect to the fees specified in Schedule I of this subsection, no large quantity generator shall pay more than \$75,000.00 per calendar year.

**SCHEDULE I**  
**FEE SCHEDULE FOR HAZARDOUS WASTES SHIPPED OFF-SITE**  
**BY LARGE QUANTITY GENERATORS**

<b><u>If management at final receiving facility is</u></b>	<b><u>then fee is</u></b>
Incineration or disposal	\$20 per ton
Treatment or storage	16 per ton
Burning for energy recovery	9 per ton
Recycling or reuse	2 per ton

(i) Determination of applicable fee. Each large quantity generator shall determine which off-site management fee in Schedule I of this subsection is applicable for each ton of hazardous waste which has been shipped for off-site management based upon the method of off-site management that waste undergoes at the final receiving facility. When a large quantity generator ships a ton of hazardous waste for off-site management and pays the applicable fee of Schedule I of this subsection, that large quantity generator shall not pay any additional fees for any further off-site management of that hazardous waste. For each ton of hazardous waste shipped for off-site management, each large quantity generator shall pay the applicable fee in Schedule I of this subsection for the calendar year in which such shipment for off-site management occurred.

(ii) Beginning January 1, 1995, large quantity generators shall pay an annual fee of \$9.00 for each ton of hazardous waste that is shipped off-site to be burned for energy recovery.

(3) **Fees for on-site management of hazardous wastes.** The requirements of this subsection are applicable to large quantity generators whose self-generated wastes undergo on-site management and which are not ultimately shipped for off-site management. For each ton of hazardous waste that undergoes on-site management and which is not ultimately shipped for off-site management, each large quantity generator shall pay to the Division per calendar year the applicable fee in Schedule II of this subsection. When a ton of hazardous waste undergoes more than one form of on-site management the large quantity generator shall determine which fee in Schedule II of this subsection is applicable based upon the final method of on-site management that waste undergoes. For each ton of hazardous waste which undergoes on-site management and which is ultimately shipped for off-site management, the large quantity generator shall not pay the applicable on-site management fee of Schedule II of this subsection but shall instead pay the applicable off-site management fee as required by subsection 391-3-19-.03(2). With respect to the fees required by this subsection, no large quantity generator shall pay to the Division per calendar year more than the amounts shown in Schedules III and IV of this subsection. For the purpose of determining the tonnage of hazardous waste managed on-site, each large quantity generator shall employ direct measurement or other techniques that provide a precise and accurate determination of the tonnage of hazardous waste undergoing on-site management. Each large quantity generator shall pay the applicable fee in Schedule II of this subsection for the on-site management of that hazardous waste for the calendar year in which such on-site management occurred.

(a) For the purposes of this subsection, a generator who generates wastewater that is a hazardous waste shall not be required to count said wastewater in determining its generator status. However, if a generator determines that it is a large quantity generator, even without counting its hazardous waste wastewater, the generator shall pay the applicable fees on those wastewaters. For the purposes of this section, dilution of wastewater that is a hazardous waste shall be considered to be treatment and subject to the fees applicable to treated or stored hazardous waste.

(b) Beginning January 1, 1995, large quantity generators shall pay an annual fee of \$2.50 for each ton of hazardous waste that is burned on-site for energy recovery.

**SCHEDULE II  
FEE SCHEDULE FOR HAZARDOUS WASTES MANAGED ON-SITE BY  
LARGE QUANTITY GENERATORS**

<b><u>If waste is managed on-site by</u></b>	<b><u>the fee is</u></b>
Incineration or disposal	\$10 per ton
Treatment or storage	4 per ton
Burning for energy recovery	2.50 per ton
Recycling or reuse	1 per ton

**SCHEDULE III  
GRADUATED CAP ON TOTAL PAYMENTS PER  
CALENDAR YEAR FOR HAZARDOUS WASTES,  
EXCLUDING HAZARDOUS WASTEWATER FOR  
PAYMENTS DUE 7/1/95 AND THEREAFTER,  
MANAGED ON-SITE BY LARGE QUANTITY GENERATORS**

<b><u>Payments due on</u></b>	<b><u>for wastes managed</u></b>	<b><u>are capped at</u></b>
7/1/93	7/1/92 - 12/31/92	\$25,000
7/1/94	1/1/93 - 12/31/93	25,000
7/1/95	1/1/94 - 12/31/94	50,000
7/1/96	1/1/95 - 12/31/95	50,000
7/1/97	1/1/96 - 12/31/96	75,000
Thereafter	1/1 - 12/31	75,000

**SCHEDULE IV**  
**GRADUATED CAP ON TOTAL PAYMENTS PER**  
**CALENDAR YEAR FOR HAZARDOUS WASTEWATER MANAGED**  
**ON-SITE BY LARGE QUANTITY GENERATORS**

<u>Payments due on</u>	<u>for wastes managed</u>	<u>are capped at</u>
7/1/95	1/1/94 - 12/31/94	\$1,500
7/1/96	1/1/95 - 12/31/95	3,000
7/1/97	1/1/96 - 12/31/96	7,500
Thereafter	1/1 - 12/31	7,500

(4) **Fees for hazardous waste received from out-of-state generators.** The requirements of this subsection are applicable to receiving facilities that receive hazardous waste from an out-of-state generator. For each ton of hazardous waste received by a receiving facility from an out-of-state generator, the receiving facility shall pay to the Division the applicable fee in Schedule V of this subsection.

(a) For the purpose of determining the tonnage of hazardous waste received to which the fees of this section apply, the receiving facility shall use the amount recorded on the manifest accompanying each hazardous waste shipment expressed in tons. These amounts shall be measured by methods that provide an accurate and precise measurement of the weight in tons of each shipment received by the receiving facility. With respect to the fees specified in Schedule V of this subsection, no receiving facility shall be required to pay more than \$75,000.00 per calendar year per out-of-state generator.

(b) Each receiving facility shall determine which fee in Schedule V of this subsection is applicable for each ton of hazardous waste received from an out-of-state generator based upon the method of management that waste undergoes at the final receiving facility. When a receiving facility receives a ton of hazardous waste from an out-of-state generator and pays the applicable fee in Schedule V of this subsection that receiving facility shall not pay an additional fee in Schedule I of this subsection. For each ton of hazardous waste received by a receiving facility from an out-of-state generator, the receiving facility shall pay to the Division the applicable fee in Schedule V of this subsection for the calendar year in which such waste was received.

(c) Beginning January 1, 1995, receiving facilities shall pay an annual fee of \$9.00 for each ton of hazardous waste that is burned for energy recovery.



**SCHEDULE V**  
**FEE SCHEDULE FOR HAZARDOUS WASTES RECEIVED BY**  
**RECEIVING FACILITIES FROM OUT-OF-STATE GENERATORS**

<b><u>If management at final receiving facility is</u></b>	<b><u>then fee is</u></b>
Incineration or disposal	\$20 per ton
Treatment or storage	16 per ton
Burning for energy recovery	9 per ton
Recycling or reuse	2 per ton

(5) **Fees for hazardous substance reporting.** The requirements of this subsection are applicable to each person required to report pursuant to Section 313 of Title III of the federal Superfund Amendments and Reauthorization Act of 1986 (SARA), with the exception of persons specified in 391-3-19-.03(5) (c).

(a) Beginning January 1, 1996, each person required to report pursuant to Section 313 of Title III of SARA shall pay to the Division the appropriate annual hazardous substance reporting fee in items 1 through 4, below, for each reporting facility with such payments being due to the Division not later than July 1 of the following year. Fees shall be paid as follows:

- (1.) A facility with no reported releases shall pay no fee;
- (2.) A facility with reported releases of less than 1,000 pounds during the calendar year, including a facility reporting total releases of less than 500 pounds using US EPA Toxic Chemical Release Inventory Form A, shall pay a fee of \$500.00 for that calendar year;
- (3.) A facility with reported releases equal to or greater than 1,000 pounds but less than 10,000 pounds during the calendar year shall pay a fee of \$1,000.00 for that calendar year; and
- (4.) A facility with reported releases equal to or greater than 10,000 pounds during the calendar year shall pay a fee of \$1,500.00 for that calendar year.

(b) All hazardous substance reporting fees due on July 1 of each year shall be based on the hazardous substances reported for the preceding calendar year on US EPA Toxic Chemical Release Inventory Form R and/or Form A, or any other such document as may hereafter be designed, prescribed or required by the US EPA for reporting pursuant to Section 313 of Title III of SARA. In order to calculate the fee required by this section, the total of all releases listed on all such Forms or documents submitted by the same facility for the preceding calendar year shall be used. Any item for which reporting is required on said Forms or documents and which meets the definition of a release as defined by this Chapter shall be counted towards the total of all releases, except those items specifically excluded by this section.

(c) Persons who report pursuant to Section 313 of Title III of SARA shall not be required to pay the hazardous substance reporting fees required by this section for the following facilities:

- (i) Facilities which report only for substances not defined as regulated substances under Rule 391-3-19-.02; and
- (ii) Facilities which report only for petroleum fuels, lubricants, and hydraulic fluids and components thereof that are defined as regulated substances under Rule 391-3-19-.02.

**(6) Partial waivers of hazardous waste management and hazardous substance reporting fees.**

(a) Beginning January 1, 1998, the Director may, in his sole discretion, upon receipt of and concurrence with an annual written recommendation from the director of the Pollution Prevention Assistance Division, grant a waiver of up to 25% of the hazardous waste management and hazardous substance reporting fees required by this section which are owed by a facility for the prior calendar year. In deciding whether to grant a waiver to persons who are large quantity generators of hazardous waste or who are required to report releases pursuant to Section 313 of SARA Title III, the Director may consider whether the facility has reduced the amount of hazardous waste generated or the amount of releases reported pursuant to Section 313 of SARA Title III.

(b) The recommendation of the Pollution Prevention Assistance Division director shall document that the facility for which the waiver is recommended has reduced their generation of wastes and participated in a program established by the Pollution Prevention Assistance Division to recognize and reward pollution performance and environmental improvement.

(c) The recommendation from the Pollution Prevention Assistance Division director shall stipulate the program under which the waiver is recommended and the percentile amount of waiver applicable, as defined by such program, along with the name of the owner and the EPA ID number of the facility for which the waiver is recommended. The recommendation shall also include a signed certification from the applicant facility acknowledging that funds in an amount equivalent to the waiver requested have been or will be applied to the facility's pollution prevention activities.

(d) No waiver shall be granted to any facility which is in violation of any Act, Rule, regulation, permit or order subject to the enforcement authority of EPD.

(e) No facility which owes delinquent hazardous waste management or hazardous substance reporting fees shall be granted a waiver.

(f) No facility shall be granted a waiver of fees for more than three years.

(g) If in any year the sum of all waivers recommended by the director of the Pollution Prevention Assistance Division exceeds ten percent (10%) of the total dollar amount collected by EPD for hazardous waste management and hazardous substance reporting fees in the preceding calendar year, the EPD director may cap the total dollar amount of waivers to be awarded in the current year at ten percent (10%) of the total dollar amount collected for hazardous waste management and hazardous substance reporting fees in the preceding calendar year. In any year the

director imposes a cap on waivers pursuant to this section, the waivers awarded to individual facilities shall be calculated using the following formula:

$$AW = \frac{[0.10(TC)](APP)}{TW}$$

Where:

AW =	Amount of adjusted waiver to be awarded to an individual facility.
TC =	Total amount of hazardous waste management and hazardous substance reporting fees collected in the preceding calendar year.
APP=	Individual facility's waiver application amount.
TW =	Total amount of all waivers recommended by Pollution Prevention Assistance Division for the current year.

**(7) Payment of hazardous waste management and hazardous substance reporting fees.**

(a) Payment due date. All hazardous waste management fees required by this section shall be paid to the Division not later than July 1 following the calendar year in which they were managed on-site, shipped for off-site management or received from an out-of-state generator. All hazardous substance reporting fees shall be paid to the Division not later than July 1 following the year for which a report is filed. Persons who make payments of fees required by this section later than thirty (30) days after the due date specified in this subsection shall pay a penalty of fifteen percent (15%) of the balance due and shall pay interest on the unpaid balance at the rate imposed by law for delinquent taxes due to the state.

(b) Hazardous waste management fee record. The payment of hazardous waste management fees required by this section shall be accompanied by such forms and other supporting information as may be prescribed by the Director. Any large quantity generator or receiving facility required to pay a fee under this Section shall maintain a written hazardous waste management fee record of the total amount, in tons, of hazardous waste managed on-site, shipped for off-site management or received from an out-of-state generator during the calendar year. Completed Hazardous Waste Management Fee Records shall be submitted to the Hazardous Sites Response Program by no later than March 31 of each year.

1. The hazardous waste management fee record shall provide a description of the method used to measure the amount of hazardous waste that is of sufficient detail to demonstrate that such method provides an accurate and precise measurement.

2. For hazardous waste shipped for off-site management or received from an out-of-state generator, the hazardous waste management fee record shall include the following information:

(i) Manifest number for each shipment;

(ii) Date of each shipment or receipt;

(iii) Name and EPA identification number of the designated facility, final receiving facility and the generator for each shipment; and

(iv) By EPA hazardous waste number and method of management at the designated facility and the final receiving facility (i.e., incineration or disposal, treatment or storage, burning for energy recovery, recycling or reuse), the tons of hazardous waste for each shipment and the total tons of hazardous waste for the calendar year.

(c) Signatories to the hazardous waste management fee record. The hazardous waste management fee record shall be signed no later than March 31 of each year by the following:

1. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures; or

2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

3. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA); or

4. By a duly authorized representative of that person. A person is a duly authorized representative only if the authorization is made in writing by a person described in this subsection and the authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).

(d) Certification. Any person signing the hazardous waste management fee record required under this subsection shall make the following certification:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

(e) Availability, retention, and disposition of the hazardous waste management fee record. Each large quantity generator and receiving facility shall keep a copy of the signed hazardous waste management fee record required by this subsection, including any supporting information used to complete the record, for a period of three years from

the end of the calendar year for which the record was completed. The hazardous waste management fee record and all supporting information shall be furnished upon request, and made available at all reasonable times for inspection by any representative of the Division. The retention period for all records required under this subsection may be extended at the request of the Director and is extended automatically during the course of any proceedings initiated by the Director pursuant to this subsection.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

#### **391-3-19-.04 Release Notification**

(1) **No duty to sample prior to notification.** Rule 391-3-19-.04(4) requires an owner of real property to notify the Director when a release described in Rule 391-3-19-.04(3) is discovered. An owner of real property is not required to sample prior to such notification. However, any owner of real property where a release has occurred shall furnish to the Director any information which that person may have or reasonably obtain which is relevant to the release when requested by the Director.

(2) **Exclusions.** The following are excluded from the notification requirements of this section:

(a) Any release that, within 30 days of the owner's discovery or of the effective date of these rules, whichever is later, no longer meets any criterion for notification under Rule 391-3-19-.04(3);

(b) Any defined release which is being cleaned-up under emergency response authorities other than the Hazardous Site Response Act where the person responsible for the clean-up remains in compliance with instructions given by the Division or by an on-scene coordinator under the NCP, such exclusion to expire 180 days after the date upon which the release began if at or after that time any of the criteria of Rule 391-3-19-.04(3) are met;

(c) Emissions regulated under the Georgia Air Quality Control Act, O.C.G.A. §12-9-1 et seq.;

(d) Releases of substances regulated under the Georgia Asbestos Safety Act, O.C.G.A. §12-2-1 et seq., except for releases at inactive disposal sites that are not in compliance with the performance standards in 40 CFR 61.153;

(e) Point source discharges that are regulated under the Georgia Water Quality Control Act, O.C.G.A. §12-5-20 et seq.;

(f) Releases of a pesticide which has been registered under the Georgia Pesticide Control Act, O.C.G.A. §2-7-50 et seq., when the release consists solely of the use of said pesticide in a manner consistent with its label or labeling;

(g) Releases regulated solely under the Georgia Underground Storage Tank Act, O.C.G.A. §12-13-1 et seq.;

(h) Releases of any petroleum-based fuel, lubricant, or hydraulic fluid;

(i) Releases consisting of treatment or disposal in a unit that is regulated under a permit issued, or rules promulgated, pursuant to the Georgia Hazardous Waste Management Act, O.C.G.A. §12-8-60 et seq., the Georgia Solid Waste Management Act, O.C.G.A. §12-8-20 et seq., or the Georgia Water Quality Control Act, O.C.G.A. §12-5-20 et seq., provided the Director has been informed, in accordance with requirements in such permit or rules, of

any discovery that such releases exceed standards permitted by these statutes and the rules promulgated pursuant to these statutes;

(j) Releases arising from the use of a commercial product that has been manufactured and sold for household use which is used by a private individual in a manner consistent with and incidental to the manufacturer's recommended use of the product;

(k) Releases arising from the application to soil of fertilizers, liming materials, or soil amendments (unless any are used in a manner constituting disposal as defined and regulated in the Rules for Hazardous Waste Management, Chapter 391-3-11);

(l) Releases of naturally-occurring radionuclides described in 40 CFR 302.6(c);

(m) Direct radiation and/or releases of radionuclides regulated by the Division under the Georgia Radiation Control Act, O.C.G.A. § 31-13 et seq., or by the U.S. Nuclear Regulatory Commission, or any successor agency, under the Atomic Energy Act of 1954, as amended;

(n) Any release to ground water that is discovered solely as a result of detection within a public drinking water system being monitored in accordance with the Rules for Safe Drinking Water, Chapter 391-3-5, provided that the Director is informed of such detection in accordance with the aforementioned Rules; and

(o) Releases that arise from land-disturbing activities involving the extraction and stockpiling of ores and minerals, or involving the removal, stockpiling, and replacement of overburden materials, at any mine permitted under the Georgia Surface Mining Act, O.C.G.A., §12-4-70 et seq.

(3) **Releases requiring notification.** Any of the following releases, when discovered, are releases that require notification under Rule 391-3-19-.04(4), unless excluded under Rule 391-3-19-.04(2):

(a) Releases to ground water. A release of a regulated substance which causes the concentration in ground water to exceed the naturally-occurring background concentration;

(b) Releases to soil. A release of a regulated substance which causes the concentration in soil to exceed a concentration in Appendix I; or

(c) Other releases. The discarding or abandonment of a regulated substance in barrels, drums, other containers, tanks, or other storage or transportation vessels, in process units, or in waste management units which have neither a permit nor interim status under the Georgia Hazardous Waste Management Act, O.C.G.A. §12-8-60 et seq., the Georgia Solid Waste Management Act, O.C.G.A. §12-8-20 et seq., or the Georgia Water Quality Control Act, O.C.G.A. §12-5-20 et seq.

(4) **Notification requirements.** Within 30 days after the effective date of these rules or after the date of discovery by the property owner of a release which requires notification under Rule 391-3-19-.04(3), whichever is later, the property owner shall notify the Director of the release. Upon the request of the Director, the property owner shall provide other such information as may be needed to ensure that the criteria of Rule 391-3-19-.05(1) may be accurately evaluated. Such notification shall, at a minimum, include the following:

- (a) Name, mailing address and telephone number of the site's property owner and, if different, of the facility owner and/or operator; and
- (b) Street address of the site or, if a numbered street address is not available, a location descriptor; and
- (c) An original of the most current topographic map of scale 1:24,000 produced by the United States Geological Survey, with the geographic center of the site identified; and
- (d) A chemical name, taken from Appendix I, of each regulated substance released at the site which independently meets the notification criteria in Rule 391-3-19-.04(3); and
- (e) A general description of the nature of the release and the location of areas affected by the release or by its subsequent migration, both within and beyond the original site's property boundaries; and
- (f) If known, the source, quantity, and date of the regulated substance released; and
- (g) A summary of actions taken to investigate, clean up, or otherwise remediate the site; and
- (h) A statement which identifies the criteria of Rule 391-3-19-.04(3) by which the property owner determined that a release which requires notification has occurred.

At the owner's option, the owner may complete the worksheets found in Appendix II of this Chapter to make a preliminary determination that a release may exceed a reportable quantity. If said worksheets indicate that a release exceeding a reportable quantity may have occurred, the owner may submit the information required under Rule 391-3-19-.05(2) along with the worksheets in lieu of the above notification.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

#### **391-3-19-.05 Reporting of Releases Exceeding Reportable Quantities and Listing of Sites on the Hazardous Site Inventory**

(1) **Listing on the Hazardous Site Inventory.** The Director shall list a site on the Hazardous Site Inventory if the Director determines that a release exceeding a reportable quantity has occurred or that a release poses a danger to human health and the environment. A determination that a release exceeding a reportable quantity has occurred shall be made in accordance with the method in Appendix II.

(2) **Release reporting.** If the Director determines that a release exceeding a reportable quantity has occurred, he shall notify the property owner in writing of his finding. If the Director determines that a release exceeding a reportable quantity has not occurred, he shall likewise issue such determination in writing. Within 45 days of the receipt of the Director's written determination that a release exceeding a reportable quantity has occurred, the property owner shall submit the following information unless such information has already been submitted pursuant to Rule 391-3-19-.04(4):

- (a) Name, mailing address, and telephone number of the site's property owner, lessee, tenant, or facility owner or operator; and
- (b) Street address of the site or, if a numbered street address is not available, a location descriptor; and
- (c) An original of the most current topographic map of scale 1:24,000 produced by the United States Geological Survey, with the geographic center of the site identified; and
- (d) A description of the property boundaries in the vicinity of the site, by legal description, survey plat, tax map, or other means; and
- (e) A chemical name, taken from Appendix I, of each regulated substance released at the site which independently meets the notification criteria in Rule 391-3-19-.04(3); and
- (f) A general description of the nature of the release and the location of areas affected by the release or by its subsequent migration, both within and beyond the original site's property boundaries; and
- (g) If known, the source, quantity, and date of the regulated substance released; and
- (h) Suspected or known date and quantity of each release at the site; and
- (i) Suspected or known source of each release at the site and the known or estimated extent of the area contaminated by said release or by its subsequent migration, both within and beyond the site's property boundaries; and
- (j) A summary of actions taken to investigate, clean up, or otherwise remediate the site; and
- (k) A statement which identifies the criteria of Rule 391-3-19-.04(3) by which the property owner determined that a release which requires notification has occurred.

(3) **Notifications under CERCLA 103(c).** A property owner that has previously notified USEPA under Section 103(c) of CERCLA may satisfy the requirements of Rule 391-3-19-.05(2) by submitting a copy of the 103(c) notice together with the topographic map referenced in Rule 391-3-19-.05(2)(c).

(4) **Removal of sites from the Hazardous Site Inventory.** The Director shall remove a site or an individual property at a site from the Hazardous Site Inventory if any of the following apply:

- (a) The Director determines that it had not had a release which either exceeded a reportable quantity or posed a danger to human health or the environment at the time of listing the site on the Hazardous Site Inventory.
- (b) The Director determines, that the site or individual property meets Type 1, Type 2, Type 3, or Type 4 risk reduction standards of Rule 391-3-19-.07, and, when required, the property owner has complied with Rule 391-3-19-.08(4).

*Authority O.C.G.A. Sec. 12-8-90 et seq.*



### **391-3-19-.06 Corrective Action.**

(1) **Applicability.** The requirements of Rule 391-3-19-.06 apply to any person who is a responsible party at a site listed on the Hazardous Site Inventory except as otherwise provided for in Rule 391-3-19-.06(7).

(2) **Classification of sites on the Hazardous Site Inventory.** Upon listing a site on the Hazardous Site Inventory, the Director shall designate the site or any individual property at the site as Class II unless or until he determines that it should be designated as Class I, Class III, Class IV, or Class V pursuant to Rule 391-3-19-.06(2)(a) through (d):

(a) Class I applies to any site or any individual property at a site which:

1. Includes the source of a release to a groundwater drinking water supply that has caused, or is likely to cause, human exposure through drinking water to concentrations of a regulated substance that exceed any of the Type 1 groundwater criteria described in Rule 391-3-19-.07(6)(b);

2. Has had a release which continues to add contaminants to soil, water, or air, or that continues to expand in area or volume;

3. Has had a release of a regulated substance that results in or is likely to result in any of the following:

(i) Bioaccumulation of a regulated substance in flora or fauna that causes adverse toxicological effects or that results in the need to recommend that human consumption be limited;

(ii) Adverse acute or chronic effects to domestic animals, fish, shellfish, or wildlife;

4. Includes an abandoned facility where the potential for exposure to a regulated substance is not controlled through on-site management;

5. Has been classified as Class I pursuant to Rule 391-3-19-.06(6)(b)(4) or (c); or

6. Does not meet any other criteria of Rule 391-3-19-.06(2)(a) but the Director has determined that it nevertheless poses a danger to human health or the environment.

(b) Class III applies to any site or individual property at a site which has been listed on the Hazardous Site Inventory (but not classified as Class IV pursuant to Rule 391-3-19-.06(2)(c)) and which has been determined by the Director to be in compliance with the Type 3, Type 4 or Type 5 risk reduction standards of Rule 391-3-19-.07.

(c) Class IV applies to any site or individual property at a site which has been listed on the Hazardous Site Inventory and at which corrective action as described in Rule 391-3-19-.06(7)(a) is being conducted or has been completed.

(d) Class V applies to any site or individual property at a site which has been listed on the Hazardous Site Inventory for which the Director has made a determination pursuant to Rule 391-3-19-.06(6)(b)5 that the site has had a known release needing corrective action and at which corrective action is being performed in compliance with a corrective action plan approved by the Director which will bring the site into compliance with the risk reduction

standards. If the Director determines that corrective action is not being performed in compliance with the approved corrective action plan, the site may be reclassified to Class I.

**(3) Compliance status report.**

(a) Any person who is a responsible party for a site on the Hazardous Site Inventory shall submit to the Director a compliance status report that documents the current status of the site with regard to the risk reduction standards of Rule 391-3-19-.07 for all regulated substances associated with each release at the site. The Director shall in writing request the submittal of said report and specify a deadline for submittal based on a priority for submittal to be determined by the Director.

(b) The report required by Rule 391-3-19-.06(3)(a) shall, at a minimum, include the items enumerated below for all regulated substances associated with each release at the site, unless otherwise stated in writing by the Director. This report should be compiled on the basis of site conditions which exist after the completion of any voluntary corrective action taken by the responsible party prior to the submittal of the report. Reports on previous investigations or remedial activities required under other laws or regulations or undertaken voluntarily should be incorporated into the compliance status report when possible.

1. A description of each known source which has contributed or is contributing to a release including:

- (i) Source name, number or other descriptor;
- (ii) Location of source on a map of scale of 1 inch = 200 feet or less;
- (iii) Name of each regulated substance released from each source;
- (iv) Chronology of each source of a release; and
- (v) If a source is an engineered structure or a waste management unit, a description of the function, design, dimensions, capacity and operation of the source, including as-built construction drawings where available.

2. If a release involves soil contamination, a complete definition of the horizontal and vertical extent of such soil contamination. Satisfactory evidence of a complete definition of the horizontal and vertical extent of soil contamination shall consist of an appropriate number of data points at sufficient locations with concentrations at background concentrations. An acceptable determination of background concentrations shall be made from samples that are representative of soil conditions not affected by a release of a regulated substance. In support of the definition of the extent of soil contamination the compliance report shall describe the following:

- (i) General approach used;
- (ii) Analytical parameters selected and rationale for selection;
- (iii) Location of all sampling points by sample identification number on a map with scale of 1 inch = 200 feet or less and, where applicable, on vertical cross-sections of appropriate number and scale;

(iv) Sampling and analysis procedures including but not limited to:

(I) Sampling equipment and collection techniques;

(II) Field analytical or measurement techniques including make and model of equipment and calibration schedule and type;

(III) Sample handling and preservation techniques;

(IV) Equipment decontamination procedures;

(V) Chain-of-custody procedures; and

(VI) Laboratory analytical techniques, including references to the analytical methods used, if standard, or in cases where standard analytical techniques do not exist, descriptions of the analytical methods used, including quality assurance and quality control procedures utilized;

(v) A description of any statistical procedures used to evaluate data;

(vi) Procedures used to establish background soil concentrations; and

(vii) Narrative and tabular summary of all pertinent field data and the results of all final laboratory analyses that are supported by sufficient quality assurance/quality control data to validate the results.

3. If a release involves groundwater contamination, a complete definition of the horizontal and vertical extent of groundwater contamination. Satisfactory definition of the horizontal and vertical extent of groundwater contamination shall consist of an appropriate number of data points at sufficient locations with concentrations at background concentrations. An acceptable determination of background concentrations shall be made from samples that are representative of groundwater conditions not affected by a release of a regulated substance. The compliance status report shall, at a minimum, describe the following:

(i) Analytical parameters selected and rationale for selection;

(ii) A description of the methods used to characterize subsurface geology;

(iii) A description of the methods used to characterize horizontal and vertical groundwater gradients, flow rates, and flow directions;

(iv) A description of the methods used to determine hydraulic conductivities and other pertinent hydrogeological characteristics, including a description of any slug and/or aquifer pumping tests;

(v) A description of groundwater monitoring well locations, and their installation and construction methods, including:

- (I) A map with scale of 1 inch = 200 feet or less depicting all existing well locations including a survey of each well's surface reference point and the elevation of its top-of-casing;
  - (II) Type of well casing material;
  - (III) Description of well-intake design including screen slot size and length, filter pack materials and length, and method of filter pack emplacement;
  - (IV) Method used to seal the well from the surface and any other features designed to prevent or minimize downward migration of contaminants along the well annulus; and
  - (V) Description of the methods and procedures used to develop the wells;
- (vi) Description of all sampling and analysis procedures used, including at a minimum:
- (I) Procedures and timing for measuring groundwater elevations for each sampling event;
  - (II) Well evacuation procedures including volume evacuated prior to sampling;
  - (III) Sample withdrawal techniques, sampling equipment and materials (tubing, rope, pump, etc.);
  - (IV) Sample handling and preservation techniques;
  - (V) Procedures for decontaminating sampling equipment between samples and sampling events;
  - (VI) Chain-of-custody procedures for all phases of sample management; and
  - (VII) Laboratory analytical techniques, including references to the analytical methods used, if standard, or in cases where standard analytical techniques do not exist, descriptions of the analytical methods used, including quality assurance and quality control procedures utilized;
- (vii) A description of procedures used to determine background groundwater quality which is representative of ground water not affected by a release;
- (viii) A map with scale of 1 inch = 200 feet or less depicting the horizontal extent of contamination;
- (ix) A map with scale of 1 inch = 200 feet or less depicting the potentiometric surface of ground water;
- (x) Maps and vertical cross-sections of appropriate scale depicting concentrations for all contaminants superimposed upon site stratigraphic features and monitoring wells; and
- (xi) Narrative and tabular summary of all pertinent field data and the results of all final laboratory analyses that are supported by sufficient quality assurance/quality control data to validate the results.

4. A description of any human or environmental receptors who may have been or could be potentially exposed to a release at the site.
5. A description of all properties which are part of the site including the address and location of such property, its legal description, and the property owner's name, address and telephone number.
6. The name, address and telephone number of any other person who may be a responsible party for the site and a description of the type and amount of regulated substances such party may have contributed to a release.
7. A summary of any previous actions taken to eliminate, control, or minimize any potential risk at the site, including actions taken to comply with the risk reduction standards of Rule 391-3-19-.07.
8. If the responsible party certifies pursuant to Rule 391-3-19-.06(4)(c) that the site is not in compliance with any of the risk reduction standards of Rule 391-3-19-.07, the compliance status report may include a proposed corrective action plan that describes the corrective action that the responsible party has determined is necessary to achieve compliance with the applicable risk reduction standards of Rule 391-3-19-.07.
9. If the responsible party certifies pursuant to Rule 391-3-19-.06(4)(c) that the site is in compliance with the Type 3, Type 4 or Type 5 risk reduction standards of Rule 391-3-19-.07, the compliance status report may include a proposed corrective action plan that describes the continuing actions that the responsible party has determined are necessary to achieve or maintain compliance with the Type 3, Type 4 or Type 5 risk reduction standards.
10. Attached to the front of the compliance status report, a concise statement of the findings of the report presented in plain language, immediately followed by the certification required pursuant to Rule 391-3-19-.06(4)(a).

**(4) Certification of compliance with risk reduction standards.**

(a) The compliance status report required by Rule 391-3-19-.06(3) shall include a compliance status certification regarding the responsible party's own determination as to the status of a site or any individual property at a site with regard to the applicable risk reduction standards of Rule 391-3-19-.07 for all regulated substances evaluated by the compliance status report.

(b) The compliance status certification shall be signed by the applicable person described in Items 1 through 4 of Rule 391-3-19-.03(6)(c). Where the compliance status report is submitted for two or more cooperating responsible parties, the certification may be signed by a duly authorized representative of said responsible parties, "duly authorized" having the same meaning as in Item 4 of Rule 391-3-19-.03(6)(c).

(c) Any person signing the certification of compliance required under Rule 391-3-19-.06(4) shall make the following certification:

*I certify under penalty of law that this report and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and*

*belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

*Based on my review of the findings of this report with respect to the risk reduction standards of the Rules for Hazardous Site Response, Rule 391-3-19-.07, I have determined that [(choose either of the following statements):*

*1) This site/property is in compliance with Type 1, Type 2, Type 3, Type 4, or Type 5 risk reduction standards (specify lowest numbered Type that applies, or all applicable types if more than one Type is applicable) or 2) This site/property is not in compliance with any Type risk reduction standards.].*

**(5) Public participation.**

(a) Within 7 days after submitting to the Director the compliance status report required pursuant to Rule 391-3-19-.06(3), the responsible party who submits the report shall publish a notice in both a major local newspaper of general circulation and the legal organ of the local governments in whose jurisdiction the site is located, announcing that such report is available for inspection by the general public. The public notice must include:

1. The name, address and location of the site as it appears on the Hazardous Site Inventory, and, if the plan applies to less than the full site, the street address and owner's name for applicable properties;

2. The following statement: *"The Georgia Environmental Protection Division, Department of Natural Resources, State of Georgia (EPD) has placed this site on the Hazardous Site Inventory pursuant to its authority under the Hazardous Site Response Act and Rules promulgated thereunder. As required by the Rules for Hazardous Site Response, the responsible party for this site was required to investigate the site and submit a compliance status report to EPD summarizing the results of that investigation. EPD is currently reviewing the compliance status report to determine if corrective action is needed for regulated substances that have been released at this site. Before EPD decides whether corrective action is needed, the public has the opportunity to review the compliance status report and provide comments to EPD about the report."*

3. Announcement of a 30-day public comment period beginning on the date of the published notice, and the name, address and telephone number of an EPD contact person to whom written or oral comments can be made;

4. Name, address and telephone number of the responsible party or its designated contact person; and

5. Location where the report may be viewed and copied.

(b) Within 7 days after submitting to the Director a proposed corrective action plan, or any subsequent revisions thereof, the responsible party who submits the plan shall publish a notice in both a major local newspaper of general circulation and the legal organ of the local governments in whose jurisdiction the site is located, announcing that such plan is available for inspection by the general public. The public notice must include:

1. The name, address and location of the site as it appears on the Hazardous Site Inventory, and, if the plan applies to less than the full site, the street address and owner's name for applicable properties;

2. The following statement: *"The Georgia Environmental Protection Division, Department of Natural Resources, State of Georgia (EPD) has placed this site on the Hazardous Site Inventory pursuant to its authority under the Hazardous Site Response Act and Rules promulgated thereunder. The Director of EPD has determined that this site needs corrective action and has required the responsible party for this site to submit to EPD a proposed corrective action plan that describes the corrective action the responsible party has determined is necessary to comply with the risk reduction standards of EPD's Rules for Hazardous Site Response. Before EPD decides whether to approve this proposed corrective action plan, the public has the opportunity to review the proposed corrective action and provide comments to EPD about the plan."*;

3. Announcement of a 30-day public comment period beginning on the date of the published notice, and the name, address and telephone number of an EPD contact person to whom written or oral comments can be made;

4. Name, address and telephone number of the responsible party or its designated contact person; and

5. Location where the plan may be viewed and copied.

(c) Where a proposed corrective action plan is submitted at the same time as the compliance status report required under Rule 391-3-19-.06(3), the same procedures as described under Items (a) and (b) above shall be followed, but with the substitution of the following statement for that given in Item (2):

*"The Georgia Environmental Protection Division, Department of Natural Resources, State of Georgia (EPD) has placed this site on the Hazardous Site Inventory pursuant to its authority under the Hazardous Site Response Act and Rules promulgated thereunder. As required by the Rules for Hazardous Site Response, the responsible party for the site was required to investigate the site and submit a compliance status report to EPD summarizing the results of that investigation. The responsible party has submitted to EPD, along with the compliance status report, a proposed corrective action plan that describes the corrective action the responsible party has determined is necessary to comply with the risk reduction standards of EPD's Rules for Hazardous Site Response. Before EPD decides whether to approve the proposed corrective action plan, the public has the opportunity to review the compliance status report and proposed corrective action and provide comments to EPD about the report and plan."*

(d) Within 15 days after publishing the public notice required by Rule 391-3-19-.06(5)(a), (b), or (c), the responsible party shall provide the Director with an exact copy of the public notice as it appeared in the paper.

(e) Within 7 days after submitting to the Director either the compliance status report required pursuant to Rule 391-3-19-.06(3), or a proposed corrective action plan, the responsible party shall provide to the county government in the county in which the site is located and to the government of any city in whose jurisdictions the site is located a written notice providing the same information required in Rule 391-3-19-.06(5)(a), (b), or (c) as applicable.

(f) Upon making a determination pursuant to Rule 391-3-19-.06(6) or upon determining that a proposed corrective action plan should be approved, the Director shall publish notice of such determination in both a major local newspaper of general circulation and the legal organ of the local governments in whose jurisdiction the site is located.

(6) **Determination of the need for corrective action.** Rule 391-3-19-.06(6) applies to any site or individual property at a site listed on the Hazardous Site Inventory.

(a) Any site or individual property at a site that is classified on the Hazardous Site Inventory as Class I, Class III, Class IV or Class V pursuant to Rule 391-3-19-.06(2) shall also be designated by the Director as having a known release needing corrective action.

(b) For any site or individual property at a site listed on the Hazardous Site Inventory, the Director shall review the compliance status certification required by Rule 391-3-19-.06(4) and do the following:

1. If the responsible party certifies that the site or an individual property at the site is in compliance with the Type 1 or Type 2 risk reduction standards of Rule 391-3-19-.07, and the Director concurs with that certification, the Director shall designate the site or property as not needing further action and shall remove the site or property from the Hazardous Site Inventory in accordance with Rule 391-3-19-.05(4).

2. If the responsible party certifies that the site or an individual property at the site is in compliance with the Type 3 or Type 4 risk reduction standards of Rule 391-3-19-.07, and the Director concurs with that certification, the Director shall designate the site or property on the Hazardous Site Inventory as having a known release needing corrective action, reclassify it as Class III, and state on the Inventory that corrective action shall presently consist of those activities needed to maintain compliance with the Type 3 or Type 4 risk reduction standards, including the property notices of Rule 391-3-19-.08(1) and (2). Upon compliance with Rule 391-3-19-.08(4), the Director shall remove the site or property from the Hazardous Site Inventory in accordance with Rule 391-3-19-.05(4).

3. If the responsible party certifies that the site or an individual property at the site is in compliance with the Type 5 risk reduction standards of Rule 391-3-19-.07, and the Director concurs with that certification, the Director shall designate the site or property on the Hazardous Site Inventory as having a known release needing corrective action, reclassify it as Class III, and state on the Inventory that corrective action shall presently consist of those activities needed to maintain compliance with the Type 5 risk reduction standards, including the property notices of Rule 391-3-19-.08(1), (2), and (7).

4. If the responsible party certifies that the site or an individual property at the site is not in compliance with any of the risk reduction standards of Rule 391-3-19-.07, the Director shall reclassify the site as a Class I site and designate the site on the Hazardous Site Inventory as having a known release needing corrective action, whereupon the owner of any property at the site which is not independently in compliance with Type 1 or Type 2 risk reduction standards shall make the property notices required by Rule 391-3-19-.08(1) and (2). If the site or an individual property at the site is a Class V site and the Director determines corrective action is not being conducted in accordance with the approved corrective action plan, the Director may reclassify the site as a Class I site and designate the site in the Hazardous Site Inventory as having a known release needing corrective action, whereupon the owner of any property at the site which is not independently in compliance with Type 1 or Type 2 risk reduction standards shall make the property notices required by Rule 391-3-19-.08(1) and (2).

5. If the responsible party certifies that the site or an individual property at the site is not in compliance with any of the risk reduction standards of Rule 391-3-19-.07, but corrective action is being performed in compliance with a corrective action plan approved by the Director which will bring the site into compliance with the risk reduction standards, the Director shall reclassify the site or individual property as a Class V site and designate the site or



individual property on the Hazardous Site Inventory as having a known release needing corrective action. Upon making such designation, the Director shall also state that corrective action is being performed in compliance with a corrective action plan approved by the Director that will bring the site or individual property into compliance with the risk reduction standards. Upon such designation being made, the owner of any property at the site which is not independently in compliance with Type 1 or Type 2 risk reduction standards shall make the property notices required by Rule 391-3-19-.08(1) and (2) to the extent that such notices have not already been made.

(c) The Director may reclassify a site or an individual property at a site listed on the Hazardous Site Inventory from Class II to Class I, and designate the site or property as having a known release needing corrective action, if:

1. The responsible party fails to submit or fails to agree to submit the compliance status report within the time specified in Rule 391-3-19-.06(3)(a); or
2. The compliance status report is deficient with respect to the requirements of Rule 391-3-19-.06(3)(b) and the Director has notified the responsible party in writing of such deficiencies and the responsible party has failed to correct such deficiencies by a deadline to be specified by the Director in writing; or
3. The responsible party certifies pursuant to Rule 391-3-19-.06(4) that the site or an individual property at the site is not in compliance with any of the applicable risk reduction standards of Rule 391-3-19-.07; or
4. The Director does not concur with the responsible party's certification made pursuant to Rule 391-3-19-.06(4) that the site or an individual property at the site is in compliance with the applicable risk reduction standards of Rule 391-3-19-.07.

(d) Upon making a determination pursuant to Rule 391-3-19-.06(6)(a)-(c) that a site has a known release needing corrective action, the Director shall provide the responsible party, and the owner of each property at the site which continues not to comply with either Type 1 or Type 2 risk reduction standards of Rule 391-3-19-.07, with written notice of such determination, including a statement concerning the requirements of Rule 391-3-19-.08.

(e) If the Director determines pursuant to Rule 391-3-19-.06(6)(b) that a site or an individual property at a site listed as Class I or Class V on the Hazardous Site Inventory subsequently comes into compliance with the risk reduction standards of Rule 391-3-19-.07, the Director shall reclassify such site or property in accordance with the provisions of Items 1 through 3 of Rule 391-3-19-.06(6)(b), except that the deed notice provisions of Rule 391-3-19-.08(1) and (2) need not be repeated.

(f) Notwithstanding a previous determination of the Director made pursuant to Rule 391-3-19-.06(6)(a) through (e), the Director may reclassify a site or an individual property at a site listed on the Hazardous Site Inventory as necessary to protect human health and the environment.

**(7) Other corrective actions.**

(a) The requirements of Rule 391-3-19-.06(3) through (5) do not apply to any person who is a responsible party for any of the following at a site or individual property listed on the Hazardous Site Inventory unless Rule 391-3-19-.06(7)(b) applies:

1. Corrective action required by an order of the Director executed before the effective date of these Rules pursuant to O.C.G.A. § 12-8-71(b) of the Hazardous Waste Management Act;
2. Corrective action required by an order of the Director executed before the effective date of these Rules pursuant to O.C.G.A. § 12-8-96(a) of HSRA;
3. Remedial actions conducted in accordance with a Record of Decision (ROD) under the NCP (referenced at 40 CFR 300.430(f)(5));
4. Remedial actions where compliance is demonstrated with applicable cleanup standards promulgated under the federal Toxic Substances Control Act;
5. Corrective action required by a hazardous waste management facility permit issued by the Director which contains conditions requiring corrective action in accordance with O.C.G.A. § 12-8-66(e) of the Hazardous Waste Management Act; or
6. Corrective action and assessment monitoring required by a solid waste handling permit or an order issued by the Director pursuant to the Comprehensive Solid Waste Management Act.

(b) Any site or individual property at which corrective action as described in Rule 391-3-19-.06(7)(a) is being conducted or has been completed shall be presumed to be in compliance with Type 5 of the risk reduction standards of Rule 391-3-19-.07(10) upon its listing on the Hazardous Site Inventory, and the requirements of Rule 391-3-19-.06(3) through (5) do not apply to any person who is a responsible party at such site unless:

1. The responsible party elects to certify compliance with other than Type 5 risk reduction standards of Rule 391-3-19-.07, in which case the site or property shall remain on the Hazardous Site Inventory as Class IV until the Director reclassifies it in accordance with 391-3-19-.06(6);
2. The Director determines that such corrective action fails to protect human health and the environment and that additional corrective action is necessary to comply with the risk reduction standards of Rule 391-3-19-.07, in which case the Director may reclassify the site or property in accordance with Rule 391-3-19-.06(6)(f); or
3. The Director determines that such corrective action fails to meet the Type 5 risk reduction standards of Rule 391-3-19-.07(10), in which case the Director may reclassify the site or property pursuant to 391-3-19-.06(6)(f).

(c) For any site described in Rule 391-3-19-.06(7)(a)(5) that is not also described by Item 1, 2, or 3 of Rule 391-3-19-.06(7)(b), the property notice requirements of Rule 391-3-19-.08(1) and (2) shall not apply until the Director

makes a determination that corrective action is needed pursuant to the Rules for Hazardous Waste Management, Chapter 391-3-11.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

### **391-3-19-.07 Risk Reduction Standards**

(1) **Purpose and Scope.** Rule 391-3-19-.07 specifies the information and procedures necessary to demonstrate compliance with requirements under HSRA for corrective action for all regulated substance releases at a site or individual property at a site listed on the Hazardous Site Inventory. Compliance with these requirements does not preclude the requirement to comply with any stricter standards that may be applicable under other state or federal laws or regulations. These risk reduction standards may be applicable, relevant, or appropriate requirements for remedial actions under the NCP.

(2) **[reserved]**

(3) **Completion of corrective action.** A required corrective action shall be considered complete when it is demonstrated that the site or individual property at a site meets any or a combination of the applicable risk reduction standards described in Rule 391-3-19-.07. All risk reduction standards will, when adequately carried out, assure adequate protection of human health and the environment from potential exposure to land-based releases of regulated substances.

(4) **Essential features of acceptable corrective actions.** For corrective action to be in compliance with these standards, the following common elements are required:

- (a) The corrective action shall, at a minimum, provide for the removal of free product to the extent practicable.
- (b) No soil remaining in place under Type 1, 2, 3, or 4 risk reduction standards shall exhibit the hazardous waste characteristics of ignitability, corrosivity, or reactivity as defined in 40 CFR 261 Subpart C, and the sum of regulated substance concentrations in air-filled soil pore space shall not exceed 1000 parts per million (by weight or volume) as determined using methods approved by the Director.
- (c) The corrective action shall not allow exposure to concentrations which would cause food chain contamination, damage to soils or to biota in the soils which could impair the use of soils for agricultural or silvicultural purposes, adverse effects on vegetation or wildlife, or the accumulation of vapors in buildings or other structures which pose a threat to human health or the environment.
- (d) The corrective action shall protect waters of the State from releases that would cause surface water to experience concentrations of regulated substances in excess of any general criterion specified in the Georgia Rules and Regulations for Water Quality Control at 391-3-6-.03(5) or, if concentration values are not provided in said Rules, concentrations at levels that exhibit acute toxicity to aquatic life as demonstrated pursuant to protocols established by the Director.
- (e) If the detection limit and/or the background concentration for a regulated substance is greater than the concentration specified in any risk reduction standard, the greater of the detection limit or background shall be used

for determining compliance with the applicable risk reduction standard. "Detection limit" in this context implies the non-fraudulent use of an approved analytical test method that is appropriate for the particular application. Background shall be determined from samples taken from media that are unaffected by a release. For radionuclides, background means background radioactivity.

(5) **Multiple property sites.** For sites consisting of more than one property, the Type risk reduction standard that shall apply to each individual property at that site shall be based upon the applicable use scenario for each individual property, i.e., residential or non-residential.

(6) **Criteria for Type 1 standards.**

(a) Type 1 standards provide for regulated substance concentrations that pose no significant risk on the basis of standardized exposure assumptions and defined risk levels for residential properties. To comply with these standards, all source materials must be removed or decontaminated to Type 1 media criteria.

(b) Criteria for ground water. At any point within ground water that has been affected by a release, concentrations of regulated substances in groundwater samples shall not exceed concentrations given in Table 1 of Appendix III or, for those substances not listed, the background or detection limit concentration. If two or more regulated organic compounds are present in ground water, their sum in a single sample shall not exceed 10 mg/L if the Table 1 value for each compound is less than 5 mg/L, or, where at least one compound has a Table 1 value greater than or equal to 5 mg/L, the sum of the concentrations shall not exceed the maximum Table 1 value for a detected compound plus 10 mg/L.

(c) Criteria for soil. Concentrations at any point above the uppermost groundwater zone in soil that has been affected by a release shall not exceed the concentrations given in Table 2 of Appendix III or, for those substances not listed, the least of the concentrations from Items 1 through 3 below:

1. Concentrations which will not cause contamination of ground water at levels which exceed Type 1 groundwater criteria, determined as the highest of the soil concentrations in Items (i)-(iii) below:

(i) Soil concentrations in Appendix I, excluding any values given in square brackets;

(ii) Multiplication of the Type 1 groundwater concentration criteria by a factor of 100;

(iii) Demonstration through use of the Toxicity Characteristic Leaching Procedure, SW-846 Method 1311, or other method approved by the Director that a concentration in soil will not generate leachate concentrations that exceed Type 1 groundwater concentration criteria.

[Note: For substances excluded under Item (i) above and not listed on Table 1 of Appendix III, the concentration under Rule 391-3-19-.07(6)(c)(1) shall be considered non-calculable.]

2. Concentrations which are unlikely to result in any noncancer toxic effects on human health via soil ingestion along with inhalation of volatiles and particulates, determined using Equation 7 of RAGS, Part B, and standard residential exposure assumptions in Table 3 of Appendix III.

3. Concentrations for which the upper bound on the estimated excess cancer risk is less than or equal to  $10^{-5}$  ( $10^{-4}$  for Class C carcinogens) via soil ingestion along with inhalation of volatiles and particulates, determined using Equation 6 of RAGS, Part B, and standard residential exposure assumptions in Table 3 of Appendix III.

[Note: Where concentrations are non-calculable under Items 1-3 above, the soil criterion shall be the higher of the background or detection limit concentrations.]

**(7) Criteria for Type 2 standards.**

(a) Type 2 standards provide for regulated substance concentrations that pose no significant risk on the basis of a site-specific risk assessment for residential properties. To comply with these standards, all source materials must be removed or decontaminated to Type 2 media criteria.

(b) Criteria for ground water. At any point within any ground water that has been affected by a release, concentrations of regulated substances in groundwater samples must not exceed the lesser of the values from Items 1 and 2 below or, for those substances for which neither calculation can be made, the higher of concentrations in Table 1 of Appendix III, background concentrations, or detection limit concentrations.

1. Concentrations which are unlikely to result in any noncancer toxic effects on human health via ingestion of, or inhalation of volatiles from, ground water, determined using Equation 2 from RAGS, Part B, and site-specific exposure factors for the residential use scenario.

2. Concentrations for which the upper bound on the estimated excess cancer risk is less than  $10^{-5}$  via ingestion of, and inhalation of volatiles from, ground water, determined using Equation 1 from RAGS, Part B, and site-specific exposure factors for the residential use scenario.

(c) Criteria for soil. Concentrations at any point above the uppermost groundwater zone in soil that has been affected by a release shall not exceed the least of the concentrations in Items 1 through 4 below, or, for those substances for which the calculations cannot be made, the highest of the concentrations in Table 2 of Appendix III, background concentrations, or detection limit concentrations:

1. Concentrations which will not cause contamination of ground water at levels which exceed Type 1 or 2 groundwater criteria, whichever is higher, as determined by any laboratory test and/or fate-and-transport model recognized by USEPA and approved by the Director, at a point of exposure defined as any point at which a drinking water well could be installed.

2. Concentrations which are unlikely to result in any noncancer toxic effects on human health via soil ingestion along with inhalation of volatiles and particulates, determined using Equation 7 from RAGS, Part B, and site-specific exposure factors for the residential use scenario.

3. Concentrations for which the upper bound on the estimated excess cancer risk is less than  $10^{-5}$  via soil ingestion along with inhalation of volatiles and particulates, determined using Equation 6 from RAGS, Part B, and site-specific exposure factors for the residential use scenario.

4. For lead, soil concentrations at the site must not exceed those concentrations that would cause a resident 6 year old child (averaged across preceding 84 months) to have a probability of no greater than 5% of a blood lead level greater than 10 ug/dL as determined by the IEUBK model using site-specific exposure assumptions, including the ingestion of site groundwater as drinking water and the probability of subsurface soils being brought to the land surface. The soil criterion at Item 1 above shall also apply to the Type 2 standard for lead.

(d) The exposure assessments under Items 2 and 3 of Rule 391-3-19-.07(7)(c) above shall be conducted in a manner consistent with USEPA's "Guidelines for Exposure Assessment" (57 FR 104:22888-22938; May 29, 1992).

(e) More stringent criteria may be established for a site than are specified under Rule 391-3-19-.07(7)(b) and (c) if the Director or the responsible party determines that it is necessary to protect human health or the environment.

**(8) Criteria for Type 3 standards.**

(a) Type 3 standards provide for regulated substance concentrations that pose no significant risk on the basis of standardized exposure assumptions and defined risk levels for the non-residential use scenario. To comply with Type 3 standards, all source materials must be removed or decontaminated to Type 3 media criteria.

(b) Type 3 standards are not applicable to residential properties. Type 3 standards are applicable where the responsible party documents that the activities being conducted on the property satisfy the definition for non-residential property at Rule 391-3-19-.02(2).

(c) Criteria for ground water. The ground water criteria for Type 3 are the same as for Type 1.

(d) Criteria for soils.

1. Concentrations at any point above the uppermost groundwater zone in soil that has been affected by a release shall not exceed the higher of:

(i) Concentrations described in Item 1 of Rule 391-3-19-.07(6)(c).

(ii) Concentrations listed in Table 2 of Appendix III.

(iii) For lead, 400 mg/kg.

2. Concentrations in surface soil (soil within 2 feet of the land surface) shall meet the criteria of Item 1 above and, in addition, shall not exceed the lower of the concentrations defined in Items (i) through (iii) below. If none of the calculations implied below can be made, the surface soil criterion shall be equal to the criterion of Item 1 above. In no event shall compliance with the surface soil criteria be achieved by applying two feet of clean soil onto the original land surface.

(i) Concentrations which are unlikely to result in any noncancer toxic effects on human health due to ingestion of soil and inhalation of particulates and volatiles, determined using Equation 7 of RAGS, Part B, and standard nonresidential exposure assumptions in Table 3 of Appendix III.

(ii) Concentrations for which the upper bound on the estimated excess cancer risk is less than or equal to  $10^{-5}$  ( $10^{-4}$  for Class C carcinogens) for human ingestion of soil and inhalation of particulates and volatiles, determined using Equation 6, RAGS, Part B, and standard nonresidential exposure assumptions in Table 3 of Appendix III.

(iii) For lead, 400 mg/kg.

**(9) Criteria for Type 4 standards.**

(a) Type 4 standards provide for regulated substance concentrations that pose no significant risk on the basis of a site-specific risk assessment for the non-residential use scenario. To comply with Type 4 standards, all source materials must be removed or decontaminated to Type 4 media criteria.

(b) Type 4 standards are not applicable to residential properties. Type 4 standards are applicable where the responsible party documents that the activities being conducted on the property satisfy the definition for non-residential property at Rule 391-3-19-.02(2) and documents that a monitoring program will assure continued compliance with the Type 4 standards.

(c) Criteria for ground water. Concentrations of regulated substances in groundwater samples must not exceed, at any point within the property boundaries, the lesser of the values from Items 1 and 2 below or, for those substances for which neither calculation can be made, the higher of concentrations in Table 1 of Appendix III, background concentrations, or detection limit concentrations.

1. Concentrations which are unlikely to result in any noncancer toxic effects on human health via ingestion of, or inhalation of volatiles from, ground water, determined using Equation 2 from RAGS, Part B, and site-specific exposure factors for the non-residential use scenario.

2. Concentrations for which the upper bound on the estimated excess cancer risk is less than  $10^{-5}$  via ingestion of, and inhalation of volatiles from, ground water, determined using Equation 1 from RAGS, Part B, and site-specific exposure factors for the non-residential use scenario.

(d) Criteria for soil. Concentrations in soil that has been affected by a release shall not exceed the least of the concentrations in Items 1 and 2 below, or, for those substances for which said concentrations cannot be calculated, the highest of concentrations in Table 2 of Appendix III, background concentrations, or detection limit concentrations:

1. Concentrations in soil at any point above the uppermost groundwater zone which will not cause contamination of ground water at levels which exceed Type 3 or 4 groundwater concentration criteria, whichever is higher, as determined by any laboratory test and/or fate-and-transport model recognized by USEPA and approved by the Director, at a point of exposure defined as any point at which a drinking water well could be installed.

2. Concentrations in surface soil shall meet the criteria of Item 1 above and shall not exceed the lower of the concentrations in Item (i) through (iii) below. The depth of soil considered surface soil may be based upon site specific exposure factors approved by the Director, or assumed to be the top two feet of soil. In no event shall compliance be achieved by applying clean soil or any other barrier onto surface soil.

(i) Concentrations which are unlikely to result in any noncancer toxic effects on human health via soil ingestion along with inhalation of volatiles and particulates, determined using Equation 7 from RAGS, Part B, and site-specific exposure factors for the non-residential use scenario.

(ii) Concentrations for which the upper bound on the estimated excess cancer risk is less than  $10^{-5}$  via soil ingestion along with inhalation of volatiles and particulates, determined using Equation 6 from RAGS, Part B, and site-specific exposure factors for the non-residential use scenario.

(iii) For lead at nonresidential sites, soil concentrations at the site must not exceed concentrations that are determined by the procedures described in Appendix IV. In cases where children frequent the site, soil concentrations may be determined pursuant to Rule 391-3-19-.07(9)(f). In all instances, the soil criterion at Item 1 above shall also apply to the Type 4 standard for lead.

(e) The exposure assessments under Rule 391-3-19-.07(9)(c) and (d) above shall be conducted in a manner consistent with USEPA's "Guidelines for Exposure Assessment" (57 FR 104:22888-22938; May 29, 1992).

(f) More stringent criteria may be established for a site than are specified under Rule 391-3-19-.07(9)(c) and (d) if the Director or the responsible party determines that it is necessary to protect human health or the environment.

#### **(10) Criteria for Type 5 Standards.**

(a) Type 5 standards allow, in those instances where application of Type 1-4 standards is not appropriate under present circumstances, the use of measures to control the regulated substances or the property where the regulated substances are located. Such measures may consist of engineering controls such as construction of a fence, placement of a cap, installation of a slurry wall, or stabilization/solidification/fixation of the waste or waste residues. Under Type 5 standards, removal, decontamination, or treatment are used where appropriate to remove the principal threats at a site. The responsible party has the burden of being able to demonstrate to the satisfaction of the Director that the particular mix of removal, decontamination, treatment and/or control measures is appropriate to eliminate or abate present and future threats to human health and the environment. Institutional controls should not be substituted for active remedial measures unless such active measures are determined not to be practicable.

(b) Compliance with Type 5 standards requires long-term monitoring and maintenance, as appropriate for implemented remedial measures, plus a restrictive covenant provided in accordance with Rule 391-3-19-.08(7).

(c) Compliance with Type 5 standards requires that Type 1, 2, 3, or 4 risk reduction standards, as applicable, be met beyond the boundary of the area for which compliance with Type 5 standards are sought whenever implementation of remedial measures is complete.



(d) Remedial measures designed to achieve compliance with Type 5 standards shall be consistent with the general requirements of Rule 391-3-19-.07(10)(a) and meet all the following performance criteria:

1. Carcinogens. For carcinogens, the measures shall be expected to permanently prevent exposures which exceed the upper bound on an estimated excess cancer risk of  $10^{-5}$  ( $10^{-4}$  for Class C carcinogens) for individual carcinogenic substances and individual exposure pathways. The cumulative excess cancer risk for multiple carcinogenic substances and exposure pathways shall not be greater than  $10^{-5}$ .

2. Systemic toxicants. For systemic toxicants, the measures shall be expected to permanently prevent exposures which exceed the dose to which the human population (including sensitive subgroups) could be exposed on a daily basis without appreciable risk of deleterious effect during a lifetime. Exposures shall not exceed a hazard quotient of one or a hazard index of one. The hazard quotient is the ratio of a single systemic toxicant exposure level for a specified time period to a reference dose for that systemic toxicant derived from the same time period. The hazard index is the sum of the hazard quotients for a single or multiple systemic toxicants which affect the same target organ, or which act by the same method of toxicity through single or multiple media exposure pathways.

3. Air. The measures shall be expected to permanently assure that any emission from the contamination being addressed under these rules does not cause ambient atmospheric concentrations to exceed the lowest of the following concentrations:

(i) NESHAP and NAAQ Standards, and other applicable federal and state standards and guidelines of the USEPA and EPD.

(ii) For residential exposure conditions, concentrations that satisfy Items 1 and 2 of Rule 391-3-19-.07(10)(d) above at exposure points located both at the property boundary and within the contaminated area.

(iii) For non-residential exposure conditions, either OSHA permissible exposure limits, threshold limit values or other criteria applicable to an industrial exposure setting within the property boundary, and concentrations that satisfy Items 1 and 2 of Rule 391-3-19-.07(10)(d) at the property boundary.

4. Ground Water. At a minimum, for all Type 5 cases, free product shall be removed to the extent practicable. For groundwater contaminated with regulated substances that the responsible party demonstrates is not appropriate to remove or treat to the Type 1 – 4 standards, the criteria under Items (i) and (ii) below shall be met.

(i) If all source material and soil is removed, or treated to concentrations that are protective of groundwater as specified in Rule 391-3-19-.07(6)(c)(1), (7)(c)(1), (8)(d)(1)(i), (9)(d)(1), whichever are applicable, the responsible party shall implement engineering controls, institutional controls, and monitoring for groundwater, unless the Director determines that they are not needed, to ensure:

(I) Groundwater contaminated with regulated substances in excess of the Type 1 through 4 standards will not migrate beyond the limits of the engineering controls, institutional controls and monitoring;

(II) Regulated substances in groundwater will not increase in concentration or toxicity in excess of Type 1 through 4 standards at the limits of engineering and institutional controls and monitoring; and

(III) Exposure to regulated substances in groundwater in concentrations exceeding the Type 1 through 4 standards will not occur.

(ii) If all source material and soil is not removed or treated to concentrations that are protective of groundwater as specified in Rule 391-3-19-.07(6)(c)(1), (7)(c)(1), (8)(d)(1)(i), or (9)(d)(1), whichever are applicable, removal or treatment of groundwater shall be implemented at the hydraulically downgradient limit of the engineering controls used to control source material and soil to prevent or eliminate the horizontal and vertical migration of regulated substances in excess of the Type 1 through 4 standards beyond the hydraulically downgradient limit of such engineering controls. Beyond the engineering controls for source material and soil, the responsible party shall implement engineering controls, institutional controls and monitoring for groundwater, unless the Director determines that they are not needed, to ensure that the criteria specified in Items 4. (i)(I) – (III) above are met.

5. Soil. For soil contaminated with regulated substances at sites where a Type 5 standard is being sought, exposure area averaging using methods recognized by USEPA and approved by the Director may be used to demonstrate compliance with soil criteria derived pursuant to this section, provided the engineering and institutional controls for soil will permanently maintain exposure conditions consistent with those used to calculate such criteria.

(e) More stringent criteria may be established for a site than are specified under 391-3-19-.07(10)(d) if the Director or the responsible party determines that it is necessary to protect human health or the environment.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

### **391-3-19-.08 Property Notices**

(1) **Notices to private property instruments.** This Rule applies to the owner of any property that is included in a site which is listed on the Hazardous Site Inventory and which has been designated as needing corrective action pursuant to Rule 391-3-19-.06(6). The requirements of this paragraph do not apply to the owner of any property at the site where the Director concurs with a demonstration that the property complies, independently of other properties at the site, with either Type 1 or Type 2 risk reduction standards.

(a) From and after the date any owner receives written notice from the Director under Rule 391-3-19-.06(6)(d) that property of such owner that is listed on the Hazardous Site Inventory has been designated as needing corrective action, the owner of any such property shall include the following notice in any warranty deed, mortgage, security deed, lease, rental agreement, or other instrument that is thereafter given or caused to be given by the property owner which creates an interest in or grants a use of the property:

*"This property has been listed on the state's hazardous site inventory and has been designated as needing corrective action due to the presence of hazardous wastes, hazardous constituents, or hazardous substances regulated under state law. Contact the property owner or the Georgia Environmental Protection Division for further information concerning this property. This notice is provided in compliance with the Georgia Hazardous Site Response Act."*

[Note: The term "instrument that is thereafter given or caused to be given by the property owner which creates an interest in or grants a use of the property" does not include options or contracts to purchase real property.]

(b) Rule 391-3-19-.08(1)(a) shall not apply after filing of the affidavit referred to in Rule 391-3-19-.08(6).

(2) **Affidavit in county deed records.** No later than forty five (45) days from the date the Director issues the written notice pursuant to Rule 391-3-19-.06(6)(d) that a property or part thereof listed on the Hazardous Site Inventory has been designated as needing corrective action, the owner of any such property shall cause to be prepared an affidavit of such fact in recordable form as set forth in O.C.G.A. § 44-2-20 and shall file such affidavit with the clerk of the superior court of each county in which the real property or any part thereof lies. Such affidavit shall be recorded in the clerk's deed records pursuant to O.C.G.A. § 44-2-20. Such affidavit shall include the statement provided in Rule 391-3-19-.08(1). The requirements of this paragraph do not apply to the owner of any property where the Director concurs with a demonstration that the property complies, independently of other properties at the site, with either Type 1 or Type 2 risk reduction standards.

(3) **Petitions for hearing.** The notices required by Rule 391-3-19-.08(1) and (2) shall be stayed if the property owner files a petition for a hearing in accordance with O.C.G.A. 12-8-73 within thirty (30) days of the date the Director issues the written notice pursuant to Rule 391-3-19-.06(6)(d) that the site upon which the property is located needs corrective action.

(4) **Documentation of property notices.** Within thirty (30) days after the recorded affidavit required by Rule 391-3-19-.08(2) is returned by the county clerk to the property owner, the property owner shall submit a copy of such recorded affidavit to EPD.

(5) **Director's affidavit in county deed records.** Where ownership or control of any real property at a site subject to Rule 391-3-19-.08(1) and (2) is involuntarily acquired by a unit of state or local government through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function as sovereign, the Director shall give thirty (30) days notice to any person who owned, operated, or otherwise controlled activities at the property immediately beforehand that the property is subject to the requirements of Rule 391-3-19-.08 and that, barring said person's contest under Rule 391-3-19-.08(3), the Director shall prepare and file the notice referenced in Rule 391-3-19-.08(2).

(6) **Subsequent affidavits.** If, subsequent to the filing of the initial affidavit referenced in Rule 391-13-19-.08(2), the Director determines that no further action is needed, and the property is removed from the Hazardous Site Inventory pursuant to Rule 391-3-19-.05(4), the Director shall notify the property owner in writing of such determination whereupon the property owner may file an additional affidavit with the clerk of superior court attaching a copy of such determination, which shall be restricted to the following declaration:

*"This property was listed on the state's hazardous site inventory and was designated as needing corrective action due to the presence of hazardous wastes, hazardous constituents, or hazardous substances regulated under state law. However, this property has since been designated as needing no further action and has been removed from the state's hazardous site inventory. A copy of that determination is attached hereto. The notice requirements of O.C.G.A. § 12-8-97 no longer apply to this property and prior notices given under this code section are no longer in effect. The property owner or the Georgia Environmental Protection*

*Division may be contacted for further information concerning this property. This notice is provided in compliance with the Georgia Hazardous Site Response Act."*

(7) **Restrictive covenants.** The owner of any property at which the Type 5 risk reduction standards of Rule 391-3-19-.07(10) are being used shall, upon the request of the Director, execute a restrictive covenant for such property. The covenant shall be recorded with the clerk of superior court for the county in which the property is located, and a copy shall be provided to any zoning or land use planning authority that has jurisdiction over the property. Such restrictions shall run with the land and be binding on the owner's successors and assigns. If the Director determines subsequent to the execution and recording of the restrictive covenant that the property is in compliance with Type 1, 2, 3, or 4 risk reduction standards and removes the property from the Hazardous Site Inventory, the Director shall so notify the property owner whereupon the restrictive covenant may be amended or revoked. The restrictive covenant shall be prepared by the Director and may include, but not necessarily be limited to, provisions to accomplish the following:

(a) Prohibit activities on the property that may substantially interfere with a remedial action, operation and maintenance, long-term monitoring, or other measures necessary to ensure the integrity of the remedial action.

(b) Prohibit activities that may result in human exposures above those specified for residential scenarios in Rule 391-3-19-.07(6) and (7) or for non-residential scenarios at Rule 391-3-19-.07(8) and (9), whichever scenario is applicable, and activities that would result in the release of a regulated substance which has been remedied in accordance with Rule 391-3-19-.07(10).

(c) Allow the Director to enforce the restrictions set forth in the covenant by legal action in a court of appropriate jurisdiction.

(d) Require the installation and maintenance of a permanent marker on each side of the site which delineates the restricted area.

(e) Describe uses of the property that are prohibited.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

### **391-3-19-.09 Funding to State and Local Governments from the Hazardous Waste Trust Fund.**

(1) **Purpose and Scope.** This Rule applies to the use of the Hazardous Waste Trust Fund to finance the state and local share of costs associated with the investigation, remediation, post-closure care and maintenance of sites placed on the National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, and on the Hazardous Site Inventory pursuant to the Hazardous Site Response Act. For the purposes of this Rule, *state* means any agency, board, bureau, commission or authority of the State of Georgia. For the purposes of this Rule, *local government* means any county or municipality or consolidated city-county government, any local solid waste management authority, or any regional solid waste management authority created pursuant to O.C.G.A. §12-8-53 of the Comprehensive Georgia Solid Waste Management Act.

(2) **Eligibility Requirements.** A state or local government may be eligible to receive financial assistance from the Hazardous Waste Trust Fund under this section for eligible costs described in Rule 391-3-19-.09(4)(a) provided that the state or local government meets all the following eligibility requirements:

(a) the site for which financial assistance is requested is a solid waste handling facility as defined by Rule 391-3-4-.01(67) of the Rules for Solid Waste Management and is listed on the National Priorities List or the Hazardous Site Inventory;

(b) the Director has notified the state or local government in writing that they are a responsible party for the site;

(c) the state or local government has entered into a contract with the Director which describes the financial assistance provided and the activities for which the monies shall be used;

(d) the state or local government has established and maintains an accounting system in accordance with the Governmental Accounting Standards Board (GASB);

(e) the state or local government has adopted an authorizing resolution; and

(f) the state or local government has submitted to the Director a completed application for financial assistance on forms as provided by the Director.

(g) the state or local government has submitted to the Director a written statement of the percentage of total costs associated with the actions described in Rule 391-3-19-.09(4)(a) for which a state or local government is liable. Such statement shall also include a description of how such percentage was determined including the results of negotiations with any other responsible parties for the site.

(3) **Financial Assistance.** A state or local government that meets all the eligibility requirements described in Rule 391-3-19-.09(2) may receive financial assistance from the Hazardous Waste Trust Fund as described in Rule 391-3-19-.09(3)(a), (b), and (c). However, total payment of eligible costs from the Hazardous Waste Trust Fund shall in no event exceed \$2,000,000 per site.

(a) For state or local governments that have been designated as a responsible party for a site, and that are not the owner of the site, the Director may pay up to 50% of the first \$500,000 of eligible costs, as described in Rule 391-3-19-.09(4)(a), and up to 25% of all eligible costs exceeding \$500,000.

(b) For state or local governments, excluding counties or municipal corporations, that have been designated as a responsible party for a site, and that are the owner of the site, the Director may pay up to 50% of the first \$500,000 of eligible costs, as described in Rule 391-3-19-.09(4)(a), and up to 25% of all eligible costs exceeding \$500,000.

(c) For counties or municipal corporations that have been designated as a responsible party for a site and that own or operate such site, the Director shall pay 100% of the first \$500,000 of eligible costs, as described in Rule 391-3-19-.09(4)(a), and may pay up to 50% of all eligible costs exceeding \$500,000.

(d) In the event that the unencumbered balance of the Hazardous Waste Trust Fund falls below \$4.0 million, the Director may suspend the provision of financial assistance to state and local governments as described herein.

(4) **Eligible Costs.** Eligible costs are the percentage of the total costs associated with the actions described in Rule 391-3-19-.09(4)(a) for sites described in Section 391-3-19-.09(2)(a) for which a state or local government may seek financial assistance pursuant to Rule 391-3-19-.09(2).

(a) Only the costs associated with the following actions are eligible for payment:

1. Completion and submittal of a compliance status report as required by Rule 391-3-19-.06(3);
2. Certification of compliance with the risk reduction standards as required by Rule 391-3-19-.06(4);
3. Compliance with the public participation requirements required by Rule 391-3-19-.06(5);
4. Corrective action required by an order of the Director issued pursuant to O.C.G.A. §12-8-96 of the Hazardous Site Response Act;
5. Response required by an order of the EPA Regional Administrator issued pursuant to Sections 104 and 106 of CERCLA. For the purposes of this section, the term *response* shall have the same meaning as that used in Section 101(25) of CERCLA;
6. Post-closure care not required by Section 391-3-4-.12 of the Rules for Solid Waste Management but which may be required by the Director under an order issued pursuant to the Hazardous Site Response Act; or
7. Corrective action and assessment monitoring required by a solid waste handling permit or an order issued by the Director pursuant to the Comprehensive Solid Waste Management Act.

(b) The following costs are not eligible for payment:

1. Purchase or routine maintenance of equipment of a durable nature that is expected to have a period of service of one (1) year or more after being put into use at the site without material impairment of its physical condition, unless the applicant can adequately demonstrate that the equipment was a total loss and that the loss occurred during the activities for which reimbursement is being requested;
2. Materials or supplies not purchased specifically for the activities for which reimbursement is being requested;
3. Administrative costs associated with filing an application for funding from the Hazardous Waste Trust Fund;
4. Employee salaries and out-of-pocket expenses normally provided for in the applicant's operating budget (i.e. meals, fuel) and employee fringe benefits;
5. Medical expenses incurred as a result of activities at the site;

6. Legal expenses;
7. Other expenses which the Director determines are not directly related to the investigation, remediation, post-closure care and maintenance of the site;
8. Costs arising as a result of claims for damages filed by third parties against the state or local government or its agents;
9. Costs resulting from releases that occur as a result of violations of state or federal laws, rules or regulations; and
10. Post-closure care required solely by Section 391-3-4-.12 of the Rules for Solid Waste Management.
11. Any costs described in Rule 391-3-19-.09(4)(a) for sites where the state or local government becomes the owner or operator after the site is listed on the Hazardous Site Inventory or the National Priorities List.
12. Any costs described in Rule 391-3-19-.09(4)(a) for sites where the state or local government voluntarily becomes the owner or operator and where the state or local government had knowledge at the time of becoming the owner or operator that a release of a regulated substance had occurred at such site.

(5) **Application Procedures.** Any state or local government that meets the eligibility requirements under Section 391-3-19-.09(2) and that is seeking financial assistance from the Hazardous Waste Trust Fund shall submit an application on forms as may be provided by the Director.

(a) The Director may determine that an application is incomplete and shall notify the applicant that additional information is required before the application may be further processed or approved.

(b) The Director must approve an application prior to the expenditure of funds from the Hazardous Waste Trust Fund under this section.

*Authority O.C.G.A. Sec. 12-8-90 et seq.*

# APPENDIX I

## REGULATED SUBSTANCES AND SOIL CONCENTRATIONS THAT TRIGGER NOTIFICATION

The following table contains all substances that are regulated under this chapter and includes all chemicals and chemical categories listed in the following three sources: (A) "List of Hazardous Substances and Reportable Quantities," 40 CFR Part 302, Table 302.4; (B) "List of Extremely Hazardous Substances and Their Threshold Planning Quantities," 40 CFR Part 355; and (C) "Hazardous Constituents," 40 CFR Part 261, Appendix VIII. The column labelled "Source" indicates which of the above sources lists a particular substance. The column labelled "CAS No." provides the number assigned to the substance by the Chemical Abstracts Service Registry (negative numbers are those arbitrarily assigned by EPD for use in administering this chapter). The table is sorted alphanumerically by chemical name; many substances are listed several times under synonyms.

Soil concentrations that trigger notification requirements (NCs), for the purposes of Rule 391-3-19-.04(3)(b), are those given in the last column of the table. Non-numeric symbols in the NC column are explained in the legend at the end of the table. Concentrations are on a dry-weight total soil basis unless specifically indicated otherwise. Where a release involves multiple regulated substances and/or where a regulated substance can meet more than one listing, all relevant substance listings must be considered in determining whether an NC has been exceeded. If the concentration in the soil sample exceeds an NC for any listing, a notifiable condition exists. Whether or not a notifiable soil concentration has been exceeded is independent of the number of contributing releases or the number of contributing substances.

CAS No.	Source	Chemical Name	NC (mg/kg)
92875	AC	(1,1'-Biphenyl)-4,4'-diamine	DL/.05
119904	AC	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-	1.75
119937	AC	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-	1.30
98828	A	(1-Methylethyl)benzene	21.88
62384	ABC	(Acetato)-phenylmercury	DL/.024
91941	AC	1,1'-Biphenyl-4,4'-diamine, 3,3'-dichloro-	25.00
630206	AC	1,1,1,2-Tetrachloroethane	1.03
71556	AC	1,1,1-Trichloroethane	5.44
79345	AC	1,1,2,2-Tetrachloroethane	0.13
76131	A	1,1,2-Trichloro-1,2,2-trifluoroethane	6.92
79005	AC	1,1,2-Trichloroethane	0.50
75343	AC	1,1-Dichloroethane	0.03
75354	AC	1,1-Dichloroethene	0.36
75354	AC	1,1-Dichloroethylene	0.36
78999	A	1,1-Dichloropropane	[1000]
465736	ABC	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene	DL(P)
55630	AC	1,2,3-Propanetriol, trinitrate-	DL(P)
96184	AC	1,2,3-Trichloropropane	0.54
95943	AC	1,2,4,5-Tetrachlorobenzene	25.00
120821	AC	1,2,4-Trichlorobenzene	10.83
56553	AC	1,2-Benzanthracene	5.00
496720	AC	1,2-Benzenediamine, 4-methyl-	[100]
85449	AC	1,2-Benzenedicarboxylic acid anhydride	[1000]
117817	AC	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester	50.00
85687	AC	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	50.00
84742	AC	1,2-Benzenedicarboxylic acid, dibutyl ester	13.70
84662	AC	1,2-Benzenedicarboxylic acid, diethyl ester	0.74
131113	AC	1,2-Benzenedicarboxylic acid, dimethyl ester	0.66
117840	AC	1,2-Benzenedicarboxylic acid, dioctyl ester	50.00



218019	AC	1,2-Benzphenanthrene	5.00
107153	AB	1,2-Diaminoethane	[1000]
106934	AC	1,2-Dibromoethane	0.01
95501	AC	1,2-Dichlorobenzene	25.00
107062	AC	1,2-Dichloroethane	0.02
78875	AC	1,2-Dichloropropane	0.02
123331	AC	1,2-Dihydro-3,6-pyridazinedione	DL/5E-4
95476	A	1,2-Dimethylbenzene	20.00
540738	AC	1,2-Dimethylhydrazine	0.32
528290	A	1,2-Dinitrobenzene	[1000]
122667	AC	1,2-Diphenylhydrazine	7.20
107153	AB	1,2-Ethanediamine	[1000]
91805	AC	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	[1000]
111546	AC	1,2-Ethanediybiscarbamodithioic acid	[1000]
1120714	AC	1,2-Oxathiolane, 2,2-dioxide	[100]
75558	ABC	1,2-Propyleneimine	DL(P)
1464535	ABC	1,2:3,4-Diepoxybutane	[100]
53703	AC	1,2:5,6-Dibenzanthracene	5.00
99354	AC	1,3,5-Trinitrobenzene	DL/.07
123637	AC	1,3,5-Trioxane, 2,4,6-trimethyl-	[1000]
823405	AC	1,3-Benzenediamine, 2-methyl-	[100]
95807	AC	1,3-Benzenediamine, 4-methyl-	3.74
108463	AC	1,3-Benzenediol	DL/.030
120581	AC	1,3-Benzodioxole, 5-(1-propenyl)-	[1000]
94597	AC	1,3-Benzodioxole, 5-(2-propenyl)-	[1000]
94586	AC	1,3-Benzodioxole, 5-propyl	[100]
87683	AC	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	17.50
541731	AC	1,3-Dichlorobenzene	2.22
142289	A	1,3-Dichloropropane	[1000]
542756	AC	1,3-Dichloropropene	0.20
108383	A	1,3-Dimethylbenzene	20.00
99650	A	1,3-Dinitrobenzene	1.05
96457	AC	1,3-Ethylenethiourea	19.94
85449	AC	1,3-Isobenzofurandione	[1000]
504609	A	1,3-Pentadiene	[1000]
1120714	AC	1,3-Propane sultone	[100]
106503	A	1,4-Benzenediamine	[25]
764410	AC	1,4-Dichloro-2-butene	[25]
106467	AC	1,4-Dichlorobenzene	6.84
123911	AC	1,4-Diethylene dioxide	DL/.13
100254	A	1,4-Dinitrobenzene	[1000]
123911	AC	1,4-Dioxane	DL/.13
130154	AC	1,4-Naphthalenedione	[1000]
130154	AC	1,4-Naphthoquinone	[1000]
117806	A	1,4-Naphthoquinone, 2,3-dichloro-	[25]
5344821	ABC	1-(o-Chlorophenyl)thiourea	DL(P)
591082	AC	1-Acetyl-2-thiourea	DL(P)
79196	ABC	1-Amino-2-thiourea	DL(P)
109739	A	1-Aminobutane	[1000]
101553	AC	1-Bromo-4-phenoxybenzene	[1000]
109739	A	1-Butanamine	[1000]
924163	AC	1-Butanamine, N-butyl-N-nitroso-	DL/.40
71363	A	1-Butanol	DL/.54
106898	ABC	1-Chloro-2,3-epoxypropane	DL/.003
7005723	A	1-Chloro-4-phenoxybenzene	[1000]
504609	A	1-Methylbutadiene	[1000]
63252	A	1-Naphthyl methylcarbamate	1/BG
86884	ABC	1-Naphthyl-2-thiourea	DL(P)
134327	AC	1-Naphthylamine	[1000]
98862	AC	1-phenylethanone	DL/.26
107108	AC	1-Propanamine	[1000]
78819	A	1-Propanamine, 2-methyl	[1000]
621647	AC	1-Propanamine, N-nitroso-n-propyl-	1.71
142847	A	1-Propanamine, N-propyl-	[1000]

126727	AC	1-Propanol, 2,3-dibromo-, phosphate	25.00
78831	AC	1-Propanol, 2-methyl-	DL/.07
765344	AC	1-Propenal, 2,3-epoxy-	DL/.07
1888717	AC	1-Propene, 1,1,2,3,3,3-hexachloro-	[1000]
107051	A	1-Propene, 3-chloro-	[1000]
107186	ABC	1-Propen-3-ol	DL(P)
1464535	ABC	2,2'-Bioxirane	[100]
108601	AC	2,2'-oxybis(1-chloropropane)	[1000]
75990	A	2,2-Dichloropropanoic acid	10.00
58902	AC	2,3,4,6-Tetrachlorophenol	25.00
15950660	A	2,3,4-Trichlorophenol	[100]
933788	A	2,3,5-Trichlorophenol	25.00
933755	A	2,3,6-Trichlorophenol	10.05
1746016	AC	2,3,7,8-Tetrachlorodibenzo-p-dioxin	8.0E-5
616239	A	2,3-Dichloro-1-propanol	[25]
78886	A	2,3-Dichloropropene	[1000]
3164292	A	2,3-Dihydroxybutanedioic acid, diammonium salt	[1000]
93765	AC	2,4,5-T	0.66
2545597	A	2,4,5-T 2-butoxyethyl ester	0.66
1928478	A	2,4,5-T 2-ethylhexyl ester	0.66
2008460	A	2,4,5-T amines	0.66
93798	A	2,4,5-T esters	0.66
13560991	A	2,4,5-T salts	0.66
93721	AC	2,4,5-TP	10.00
32534955	A	2,4,5-TP acid esters	10.00
95954	AC	2,4,5-Trichlorophenol	4.56
93765	AC	2,4,5-Trichlorophenoxyacetic acid	0.66
1319728	A	2,4,5-trichlorophenoxyacetic acid, compound with 1-amino-2-propanol (1:1)	0.66
6369977	A	2,4,5-Trichlorophenoxyacetic acid, dimethylamine salt	0.66
25168154	A	2,4,5-Trichlorophenoxyacetic acid, isooctyl ester	0.66
3813147	A	2,4,5-Trichlorophenoxyacetic acid, triethanolamine salt	0.66
6369966	A	2,4,5-Trichlorophenoxyacetic acid, trimethylamine salt	0.66
61792072	A	2,4,5-trichlorophenoxyacetic acid-1-methylpropyl ester	0.66
93721	AC	2,4,5-Trichlorophenoxypropionic acid	10.00
88062	AC	2,4,6-Trichlorophenol	0.66
94757	AC	2,4-D	1.16
1929733	A	2,4-D 2-butoxyethyl ester	1.16
2971382	A	2,4-D chlorocrotyl ester	1.16
94111	A	2,4-D Esters	1.16
1928387	A	2,4-D Methyl ester	1.16
1928616	A	2,4-D propyl ester	1.16
1320189	A	2,4-D, Propylene glycol butyl ether ester	1.16
-99001	C	2,4-D, salts, esters	1.16
95807	AC	2,4-Diaminotoluene	3.74
120832	AC	2,4-Dichlorophenol	0.96
94111	A	2,4-Dichlorophenoxyacetic acid, esters	1.16
25168267	A	2,4-Dichlorophenoxyacetic acid, isooctyl ester	1.16
94757	AC	2,4-Dichlorophenoxyacetic acid, salts and esters	1.16
105679	AC	2,4-Dimethylphenol	1.51
51285	AC	2,4-Dinitrophenol	3.30
121142	AC	2,4-Dinitrotoluene	0.66
541537	ABC	2,4-Dithiobiuret	DL(P)
106514	AC	2,5-Cyclohexadiene-1,4-dione	[100]
329715	A	2,5-Dinitrophenol	[100]
108316	AC	2,5-Furandione	[1000]
823405	AC	2,6-Diaminotoluene	[100]
1194656	A	2,6-Dichlorobenzonitrile	[1000]
87650	AC	2,6-Dichlorophenol	[1000]
573568	A	2,6-Dinitrophenol	[100]
606202	AC	2,6-Dinitrotoluene	0.76
823405	AC	2,6-Toluenediamine	[100]
2312358	A	2-(p-tert-butylphenoxy) cyclohexyl 2-propynyl sulfite	[100]
53963	AC	2-Acetylaminofluorene	[25]
95534	AC	2-Amino-1-methylbenzene	49.85

13952846	A	2-Aminobutane	[1000]
13952846	A	2-Butanamine	[1000]
513495	A	2-Butanamine, (S)-	[1000]
78933	AC	2-Butanone	0.79
1338234	AC	2-Butanone peroxide	[100]
39196184	ABC	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methyl amino)carbamoyl]oxime	DL(P)
4170303	ABC	2-Butenal	[1000]
123739	AB	2-Butenal, (E)-	6.30
764410	AC	2-Butene, 1,4-dichloro (mixture of cis and trans)	[25]
126998	AC	2-Chloro-1,3-butadiene	[25]
107200	AC	2-Chloro-1-ethanal	DL(P)
78886	A	2-Chloroallyl chloride	[1000]
110758	AC	2-Chloroethylvinyl ether	[1000]
91587	AC	2-Chloronaphthalene	25.00
95578	AC	2-Chlorophenol	0.68
131895	AC	2-Cyclohexyl-4,6-dinitrophenol	DL(P)
110805	AC	2-Ethoxyethanol	DL/.16
640197	ABC	2-Fluoroacetamide	DL(P)
98011	A	2-Furaldehyde	DL/.012
98011	A	2-Furancarboxaldehyde	DL/.012
96457	AC	2-Imidazolidinethione	19.94
78795	A	2-Methyl-1,3-butadiene	[1000]
534521	ABC	2-Methyl-4,6-dinitrophenol	DL(P)
107120	ABC	2-Methylacetonitrile	DL(P)
75558	ABC	2-Methylaziridine	DL(P)
75865	ABC	2-Methylactonitrile	\$
95487	AB	2-Methylphenol	3.80
109068	AC	2-Methylpyridine	[1000]
494031	AC	2-Naphthaleneamine, N,N-bis(2-chloroethyl)	[1000]
91598	AC	2-Naphthylamine	[100]
88755	A	2-Nitrophenol	[1000]
79469	AC	2-Nitropropane	[100]
109068	AC	2-Picoline	[1000]
75649	A	2-Propanamine, 2-methyl-	[1000]
67641	A	2-Propanone	2.74
598312	AC	2-Propanone, 1-bromo-	DL(P)
107186	ABC	2-Propen-1-ol	DL(P)
107028	ABC	2-Propenal	DL(P)
79061	ABC	2-Propenamide	DL/.001
107131	ABC	2-Propenenitrile	1.37
126987	ABC	2-Propenenitrile, 2-methyl-	DL/.016
79107	A	2-Propenoic acid	DL/.008
97632	AC	2-Propenoic acid, 2-methyl-, ethyl ester	[1000]
80626	AC	2-Propenoic acid, 2-methyl-, methyl ester	DL/.17
140885	A	2-Propenoic acid, ethyl ester	249.25
107197	AC	2-Propyn-1-ol	DL(P)
88857	ABC	2-sec-butyl-4,6-dinitrophenol	0.66
56042	AC	2-Thio-6-methyluracil	[100]
2763964	ABC	3(2H)-Isoxazolone, 5-(aminomethyl)-	DL(P)
91941	AC	3,3'-Dichlorobenzidine	25.00
119904	AC	3,3'-Dimethoxybenzidine	1.75
119937	AC	3,3'-Dimethylbenzidine	1.30
39196184	ABC	3,3-dimethyl-1-(methylthio)-2-butanone-O-[(methylaminocarbon yl]oxime	DL(P)
609198	A	3,4,5-Trichlorophenol	19.60
225514	AC	3,4-Benzacridine	[1000]
205992	AC	3,4-Benzofluoranthene	5.00
50328	AC	3,4-Benzopyrene	1.64
496720	AC	3,4-Diaminotoluene	[100]
610399	A	3,4-Dinitrotoluene	[100]
496720	AC	3,4-Toluenediamine	[100]
78591	A	3,5,5-Trimethyl-2-cyclohexenone	DL/.19
330541	A	3-(3,4-Dichlorophenyl)-1,1-dimethylurea	[1000]
81812	ABC	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin	DL(P)

107051	A	3-Chloropropene	[1000]
542767	ABC	3-Chloropropionitrile	DL(P)
56495	AC	3-Methylcholanthrene	5.00
108394	A	3-Methylphenol	3.80
554847	A	3-Nitrophenol	[1000]
99081	A	3-Nitrotoluene	[1000]
56042	AC	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	[100]
72548	AC	4,4'-DDD	0.66
72559	AC	4,4'-DDE	0.66
50293	AC	4,4'-DDT	0.66
101144	AC	4,4'-Methylenebis(2-chloroaniline)	25.00
534521	ABC	4,6-Dinitro-o-cresol	DL(P)
-99002	C	4,6-Dinitro-o-cresol salts	[1000]
106490	AC	4-Amino-1-methylbenzene	62.97
92671	C	4-Aminobiphenyl	[25]
504245	ABC	4-Aminopyridine	DL(P)
101553	AC	4-Bromophenyl phenyl ether	[1000]
59507	AC	4-Chloro-3-methylphenol	13.20
3165933	A	4-Chloro-o-toluidine, hydrochloride	26.01
106478	AC	4-Chloroaniline	DL(P)
7005723	A	4-Chlorophenylphenyl ether	[1000]
108101	A	4-Methyl-2-pentanone	3.30
106445	A	4-Methylphenol	3.80
100027	AC	4-Nitrophenol	3.30
99990	A	4-Nitrotoluene	1.12
504245	ABC	4-Pyridinamine	DL(P)
2763964	ABC	5-(Aminomethyl)-3-isoxazolol	DL(P)
99558	AC	5-Nitro-o-toluidine	362.54
57976	AC	7,12-Dimethyl-1,2-Benzanthracene	[25]
57976	AC	7,12-Dimethylbenz(a)anthracene	[25]
194592	C	7H-Dibenzo[c,g]carbazole	5.00
83329	A	Acenaphthene	300.00
208968	A	Acenaphthylene	130.00
83329	A	Acenaphthylene, 1,2-dihydro-	300.00
75070	A	Acetaldehyde	DL/.003
107200	AC	Acetaldehyde, chloro-	DL(P)
640197	ABC	Acetamide, 2-fluoro-	DL(P)
62442	AC	Acetamide, N-(4-ethoxyphenyl)-	[1000]
591082	AC	Acetamide, N-(aminothioxomethyl)-	DL(P)
53963	AC	Acetamide, N-9H-fluoren-2-yl	[25]
53963	AC	Acetamidofluorene	[25]
64197	A	Acetic acid	[1000]
108054	AB	Acetic acid ethylene ether	0.51
94791	A	Acetic acid, (2,4-dichlorophenoxy)-, 1-methylpropyl ester	[1000]
540885	A	Acetic acid, 1,1-dimethylethyl ester	[1000]
105464	A	Acetic acid, 1-methylpropyl ester	[1000]
631618	A	Acetic acid, ammonium salt	[1000]
123864	A	Acetic acid, butyl ester	[1000]
141786	A	Acetic acid, ethyl ester	DL/.07
301042	AC	Acetic acid, lead (2+) salt	(i)
563688	AC	Acetic acid, thallium (1+) salt	(n)
108247	A	Acetic anhydride	[1000]
108247	A	Acetic oxide	[1000]
67641	A	Acetone	2.74
75865	ABC	Acetone cyanohydrin	\$
1752303	B	Acetone Thiosemicarbazide	[25]
75058	AC	Acetonitrile	DL/.04
98862	AC	Acetophenone	DL/.26
506967	A	Acetyl bromide	[1000]
75365	AC	Acetyl chloride	[1000]
108247	A	Acetyl oxide	[1000]
75207	A	Acetylenogen	[100]
1066337	A	Acid ammonium carbonate	[1000]
1341497	A	Acid ammonium fluoride	[1000]
107028	ABC	Acrolein	DL(P)

79061	ABC	Acrylamide	DL/.001
79107	A	Acrylic acid	DL/.008
107028	ABC	Acrylic aldehyde	DL(P)
107131	ABC	Acrylonitrile	1.37
814686	B	Acrylyl Chloride	[25]
124049	A	Adipic acid	DL/.006
111693	B	Adiponitrile	[1000]
51434	AC	Adrenalin	\$
1402682	C	Aflatoxins	\$
116063	ABC	Aldicarb	DL(P)
309002	ABC	Aldrin	0.66
110178	A	Allomaleic acid	[1000]
107186	ABC	Allyl alcohol	DL(P)
107051	A	Allyl chloride	[1000]
107119	B	Allylamine	[25]
122098	AC	alpha, alpha-Dimethylphenethylamine	DL(P)
80159	A	alpha,alpha-Dimethylbenzylhydroperoxide	[100]
319846	A	alpha-Benzenehexachloride	0.66
319846	A	alpha-BHC	0.66
75865	ABC	alpha-Hydroxyisobutyronitrile	\$
134327	AC	alpha-Naphthylamine	[1000]
86884	ABC	alpha-Naphthylthiourea	DL(P)
109068	AC	alpha-Picoline	[1000]
20859738	ABC	Aluminum phosphide (AlP)	DL(P)
10043013	A	Aluminum sulfate	[1000]
60571	AC	Alvit	0.66
62533	ABC	Aminobenzene	DL/.038
74895	A	Aminomethane	[1000]
62533	ABC	Aminophen	DL/.038
54626	B	Aminopterin	[25]
78535	B	Amiton	[25]
3734972	B	Amiton Oxalate	[25]
61825	AC	Amitrole	10.00
7664417	AB	Ammonia	500.00
10380297	A	Ammoniated copper sulfate monohydrate	(h)
631618	A	Ammonium acetate	[1000]
7773060	A	Ammonium amidosulfate	[1000]
1111780	A	Ammonium aminoformate	[1000]
1863634	A	Ammonium benzoate	[1000]
1066337	A	Ammonium bicarbonate	[1000]
1341497	A	Ammonium bifluoride	[1000]
5972736	A	Ammonium bioxalate monohydrate	[1000]
10192300	A	Ammonium bisulfite	[1000]
13826830	A	Ammonium borofluoride	[1000]
1111780	A	Ammonium carbamate	[1000]
506876	A	Ammonium carbonate	[1000]
12125029	A	Ammonium chloride	[1000]
7789095	A	Ammonium chromate ((NH4)2CrO7)	(f)
7788989	A	Ammonium chromate (VI)	(f)
3012655	A	Ammonium citrate, dibasic	[1000]
3164292	A	Ammonium d-tartrate	[1000]
7789095	A	Ammonium dichromate (VI)	(f)
1185575	A	Ammonium ferric citrate	[1000]
13826830	A	Ammonium fluoborate	[1000]
12125018	A	Ammonium fluoride	[1000]
16919190	A	Ammonium fluosilicate	[1000]
1066337	A	Ammonium hydrogen carbonate	[1000]
1341497	A	Ammonium hydrogen fluoride	[1000]
1336216	A	Ammonium hydroxide	[1000]
12125029	A	Ammonium muriate	[1000]
15699180	A	Ammonium nickel sulfate	(k)
6009707	A	Ammonium oxalate monohydrate	[1000]
131748	A	Ammonium picrate	DL(P)
1762954	A	Ammonium rhodanite	[1000]
16919190	A	Ammonium silicofluoride	[1000]

7773060	A	Ammonium sulfamate	[1000]
12135761	A	Ammonium sulfide	[1000]
10196040	A	Ammonium sulfite	[1000]
1762954	A	Ammonium sulfocyanate	[1000]
14307438	A	Ammonium tartrate	[1000]
1762954	A	Ammonium thiocyanate	[1000]
7803556	AC	Ammonium vanadate	(p)
300629	B	Amphetamine	\$
628637	A	Amyl acetate	[1000]
123922	A	Amylacetic ester	[1000]
628637	A	Amylacetic ester	[1000]
62533	ABC	Aniline	DL/.038
88051	B	Aniline, 2,4,6-Trimethyl-	[25]
120127	A	Anthracene	500.00
7440360	AC	Antimony	10/BG
-99003	C	Antimony compounds, N.O.S.	(b)
7783564	A	Antimony fluoride	(b)
7647189	A	Antimony pentachloride	(b)
7783702	B	Antimony Pentafluoride	(b)
28300745	A	Antimony potassium tartrate	(b)
7789619	A	Antimony tribromide	(b)
10025919	A	Antimony trichloride	(b)
7783564	A	Antimony trifluoride	(b)
1309644	A	Antimony trioxide	(b)
1397940	B	Antimycin A	[25]
7697372	AB	Aqua fortis	(v)
140578	C	Aramite	[25]
137268	AC	Arasan	10.00
506616	ABC	Argentate(1-), dicyano-, potassium	(r)
12674112	A	Aroclor 1016	(s)
11104282	A	Aroclor 1221	(s)
11141165	A	Aroclor 1232	(s)
53469219	A	Aroclor 1242	(s)
12672296	A	Aroclor 1248	(s)
11097691	A	Aroclor 1254	(s)
11096825	A	Aroclor 1260	(s)
1336363	A	Aroclors	(s)
7784465	AB	Arsenous acid, sodium salt	(a)
7440382	AC	Arsenic	41.00
7778394	AC	Arsenic acid (H3AsO4)	(a)
7778441	AB	Arsenic acid (H3AsO4), calcium salt (2:3)	(a)
7631892	AB	Arsenic acid (H3AsO4), sodium salt	(a)
1303282	ABC	Arsenic acid anhydride	(a)
7645252	A	Arsenic acid, lead salt	(a)
7784409	A	Arsenic acid, lead(2+) salt (1:1)	(a)
10102484	A	Arsenic acid, lead(4+) salt (3:2)	(a)
7784341	AB	Arsenic chloride	(a)
-99004	AC	Arsenic compounds, N.O.S.	(a)
1303328	A	Arsenic disulfide	(a)
1303282	ABC	Arsenic pentoxide	(a)
1303328	A	Arsenic sulfide	(a)
1327533	ABC	Arsenic trioxide	(a)
1303339	A	Arsenic trisulfide	(a)
1327533	ABC	Arsenic(III) oxide (As2O3)	(a)
1303282	ABC	Arsenic(V) oxide (As2O5)	(a)
10124502	AB	Arsenious acid	(a)
1303339	A	Arsenious sulfide	(a)
1327533	ABC	Arsenous oxide	(a)
7784341	AB	Arsenous trichloride	(a)
7784421	B	Arsine	(a)
692422	AC	Arsine, diethyl	(a)
75605	AC	Arsinic acid, dimethyl	(a)
10124502	AB	Arsonic acid, potassium salt	(a)
696286	ABC	Arsonous dichloride, phenyl-	(a)
1332214	A	Asbestos	\$

492808	AC	Auramine	[1000]
2303164	AC	Avadex	196.13
115026	AC	Azaserine	[25]
2642719	B	Azinphos-Ethyl	10.00
86500	AB	Azinphos-methyl	10.00
151564	ABC	Aziridine	DL(P)
75558	ABC	Aziridine, 2-methyl-	DL(P)
625161	A	Banana oil	[1000]
7440393	C	Barium	500.00/BG
-99005	C	Barium compounds, N.O.S.	(c)
--	--	Barium sulfate {not a regulated substance}	
542621	AC	Barium cyanide	(r)
333415	A	Basudin	1/BG
225514	AC	Benz(c)acridine	[1000]
98873	ABC	Benzal chloride	[1000]
62533	ABC	Benzenamine	DL/.038
636215	AC	Benzenamine, 2-methyl-, hydrochloride	[1000]
99558	AC	Benzenamine, 2-methyl-5-nitro-	362.54
98168	B	Benzenamine, 3-(Trifluoromethyl)-	[25]
101144	AC	Benzenamine, 4,4'-methylenebis[2chloro-	25.00
492808	AC	Benzenamine, 4,4'carbonimidoylbis[N,N-dimethyl-	[1000]
106478	AC	Benzenamine, 4-chloro-	DL(P)
3165933	A	Benzenamine, 4-chloro-2-methyl, hydrochloride	26.01
106490	AC	Benzenamine, 4-methyl-	62.97
100016	AC	Benzenamine, 4-nitro-	DL(P)
60117	AC	Benzenamine, N,N-dimethyl-4-(phenylazo)-	[100]
86306	A	Benzenamine, N-nitroso-N-phenyl	6.46
122394	AC	Benzenamine, N-phenyl	[25]
71432	AC	Benzene	0.02
108907	AC	Benzene chloride	4.18
100447	ABC	Benzene, (chloromethyl)-	1.05
98873	ABC	Benzene, (dichloromethyl)-	[1000]
98077	ABC	Benzene, (trichloromethyl)-	[100]
95943	AC	Benzene, 1,2,4,5-tetrachloro-	25.00
120821	AC	Benzene, 1,2,4-trichloro-	10.83
528290	A	Benzene, 1,2-Dinitro-	205.10
94597	AC	Benzene, 1,2-methylenedioxy-4-allyl	[1000]
120581	AC	Benzene, 1,2-methylenedioxy-4-propenyl-	[1000]
94586	AC	Benzene, 1,2-methylenedioxy-4-propyl-	[100]
99354	AC	Benzene, 1,3,5-trinitro-	DL/.07
541731	AC	Benzene, 1,3-dichloro-	2.22
91087	AB	Benzene, 1,3-diisocyanato-2-methyl	[1000]
26471625	AC	Benzene, 1,3-diisocyanatomethyl-	[1000]
99650	A	Benzene, 1,3-dinitro-	1.05
106467	AC	Benzene, 1,4-dichloro-	6.84
100254	A	Benzene, 1,4-dinitro-	205.10
100141	B	Benzene, 1-(Chloromethyl)-4-Nitro-	[25]
101553	AC	Benzene, 1-bromo-4-phenoxy-	[1000]
7005723	A	Benzene, 1-chloro-4-phenoxy	[1000]
121142	AC	Benzene, 1-methyl-2,4-dinitro	0.66
98828	A	Benzene, 1-methylethyl-	21.88
606202	AC	Benzene, 2-methyl-1,3-dinitro-	0.76
25321226	AC	Benzene, dichloro- (N.O.S.)	[1000]
1330207	A	Benzene, dimethyl-	20.00
110827	A	Benzene, hexahydro-	20.00
98953	ABC	Benzene, nitro-	0.70
608935	AC	Benzene, pentachloro-	25.00
98055	BC	Benzenearsonic acid	(a)
305033	AC	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino-	[100]
98884	A	Benzenecarbonyl chloride	\$
65850	A	Benzenecarboxylic acid	1000
25376458	AC	Benzenediamine, ar-methyl-	[100]
122098	AC	Benzenethanamine, alpha, alpha-dimethyl-	DL(P)
608731	A	Benzenehexachloride	0.66
98099	A	Benzenesulfonic chloride	[1000]

98099	A	Benzenesulfonyl acid chloride	[1000]
108985	ABC	Benzenethiol	DL(P)
92875	AC	Benzidine	DL/.05
3615212	B	Benzimidazole, 4,5-dichloro-2-(trifluoromethyl)-	[25]
56553	AC	Benzo(a)anthracene	5.00
50328	AC	Benzo(a)pyrene	1.64
205992	AC	Benzo(b)fluoranthene	5.00
91225	A	Benzo(b)pyridine	DL/.51
191242	A	Benzo(ghi)perylene	500.00
206440	AC	Benzo(j,k)fluorene	500.00
207089	AC	Benzo(k)fluoranthene	5.00
65850	A	Benzoic acid	1000
100470	A	Benzonitrile	DL/.17
98077	ABC	Benzotrichloride	[100]
98884	A	Benzoyl chloride	\$
129000	AB	Benzo[def]phenanthrene	500.00
205823	C	Benzo[j]fluoranthene	5.00
100447	ABC	Benzyl chloride	1.05
140294	B	Benzyl Cyanide	[1000]
98873	ABC	Benzylidene chloride	[1000]
205992	AC	Benz[e]acephenanthrylene	5.00
56495	AC	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	5.00
7440417	AC	Beryllium	3.00/BG
7787475	A	Beryllium chloride	(d)
-99006	AC	Beryllium compounds, N.O.S.	(d)
7787497	A	Beryllium fluoride	(d)
13597994	A	Beryllium nitrate	(d)
7787555	A	Beryllium nitrate trihydrate	(d)
319857	A	beta-Benzenhexachloride	0.66
319857	A	beta-BHC	0.66
33213659	A	beta-Endosulfan	10.00
91598	AC	beta-Naphthylamine	[100]
608731	A	BHC	0.66
15271417	B	Bicyclo[2.2.1]heptane-2-carbonitrile,5-chloro-6-(((methylamino)carbonyl)oxy)imino)-,(1S-(1-alpha,2-beta,4-alpha,5-alpha,6E))-.	[25]
108601	AC	bis(2-Chloro-1-methylethyl) ether	170.91
111911	AC	bis(2-Chloroethoxy)methane	DL/.027
111444	ABC	bis(2-Chloroethyl) ether	DL/.60
108601	AC	bis(2-Chloroisopropyl) ether	170.91
117817	AC	bis(2-Ethylhexyl) phthalate	50.00
534076	B	Bis(Chloromethyl) Ketone	[25]
542881	ABC	Bis(chloromethyl)ether	DL(P)
137268	AC	bis(Dimethylthiocarbamoyl)disulfide	10.00
4044659	B	Bitoscanate	[25]
7723140	AB	Black phosphorus	[25]
3689245	ABC	Bladafum	DL(P)
110178	A	Boletic acid	[1000]
10294345	B	Boron Trichloride	[25]
7637072	B	Boron Trifluoride	[25]
353424	B	Boron trifluoride compound with methyl ether (1:1)	[25]
28772567	B	Bromadiolone	[25]
7726956	B	Bromine	[25]
506683	ABC	Bromine cyanide	(r)
598312	AC	Bromoacetone	DL(P)
75274	A	Bromodichloromethane	1.18
75252	AC	Bromoform	1.0
74839	ABC	Bromomethane	0.80
357573	AC	Brucine	DL(P)
14307438	A	Butanedioic acid, 2,3-di-hydroxy-(R-(R*,R*))-, ammonium salt	[1000]
305033	AC	Butanoic acid, 4-[bis(2-chloroethyl)-amino]benzene-	[100]
110178	A	(E)-2-Butenedioic acid	[1000]
94804	A	Butyl 2,4-D	[1000]
85687	AC	Butyl benzyl phthalate	50.00
107926	A	Butyric acid	[1000]



75605	AC	Cacodylic acid	(a)
7440439	AC	Cadmium	39.00
543908	A	Cadmium acetate	(e)
7789426	A	Cadmium bromide	(e)
10108642	A	Cadmium chloride	(e)
-99007	AC	Cadmium compounds, N.O.S.	(e)
1306190	B	Cadmium Oxide	(e)
2223930	B	Cadmium Stearate	(e)
7778441	AB	Calcium arsenate	(a)
52740166	A	Calcium arsenite	(a)
75207	A	Calcium carbide	[100]
13765190	AC	Calcium chromate	(f)
592018	AC	Calcium cyanide	(r)
26264062	A	Calcium dodecylbenzene sulfonate	[1000]
7778543	A	Calcium hypochlorite	[100]
56257	B	Cantharidin	[25]
133062	A	Captan	1/BG
51832	B	Carbachol Chloride	[25]
51796	AC	Carbamic acid, ethyl ester	[1000]
63252	A	Carbamic acid, methyl-, 1-naphthyl ester	1/BG
2032657	AB	Carbamic acid, methyl-, 4-(methylthio)-3,5-xylyl ester	10.00
315184	AB	Carbamic acid, methyl-, 4-dimethylamino-3,5-xylyl ester	10.00
26419738	B	Carbamic acid, methyl-, O-(((2,4-dimethyl-1,3-dithiolan-2-yl)methylene)amino)-.	[25]
615532	AC	Carbamic acid, methylnitroso-, ethyl ester	[25]
79447	AC	Carbamic chloride, dimethyl-	[25]
684935	AC	Carbamide, N-methyl-N-nitroso-	[25]
62566	AC	Carbamide, thio-	[100]
630104	AC	Carbamimidoseleonic acid	DL(P)
111546	AC	Carbamodithioic acid, 1,2-ethanediybis-, salts and esters	[1000]
2303164	AC	Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester	196.13
63252	A	Carbaryl	1/BG
1563662	AB	Carbofuran	0.80
108952	ABC	Carbolic acid	50.00
75150	ABC	Carbon bisulfide	DL(P)
75150	ABC	Carbon disulfide	DL(P)
353504	AC	Carbon oxyfluoride	[1000]
56235	AC	Carbon tetrachloride	0.17
6533739	ABC	Carbonic acid, dithallium (1+) salt	(n)
75445	ABC	Carbonic dichloride	DL(P)
353504	AC	Carbonic difluoride	[1000]
79221	ABC	Carbonochloridic acid, methyl ester	[1000]
75445	ABC	Carbonyl chloride	DL(P)
353504	AC	Carbonyl fluoride	[1000]
786196	B	Carbophenothion	1/BG
1310732	A	Caustic soda	(v)
62384	ABC	Ceresan	DL/.024
75694	AC	CFC-11	0.70
75718	AC	CFC-12	1.49
305033	AC	Chlorambucil	[100]
57749	ABC	Chlordane	9.20
470906	B	Chlorfenvinfos	[25]
68411450	AC	Chlorinated benzenes, NOS	[25]
68411723	AC	Chlorinated ethane, NOS	[25]
-99008	C	Chlorinated fluorocarbons, N.O.S.	[25]
70776033	AC	Chlorinated naphthalene, NOS	[25]
-99009	AC	Chlorinated phenol, N.O.S.	[25]
7782505	AB	Chlorine	\$
506774	AC	Chlorine cyanide	(r)
24934916	B	Chlormephos	[25]
999815	B	Chlormequat Chloride	[25]
494031	AC	Chlornaphazine	[1000]
107200	AC	Chloroacetaldehyde	DL(P)
79118	B	Chloroacetic Acid	[25]

-99010	AC	Chloroalkyl ethers, N.O.S.	[25]
107051	A	Chloroallylene	[1000]
108907	AC	Chlorobenzene	4.18
68411450	A	Chlorobenzenes	[25]
510156	AC	Chlorobenzilate	[100]
124481	A	Chlorodibromomethane	1.63
75003	A	Chloroethane	0.17
107073	B	Chloroethanol	[25]
627112	B	Chloroethyl Chloroformate	[25]
67663	ABC	Chloroform	0.68
75445	ABC	Chloroformyl chloride	DL(P)
74873	AC	Chloromethane	0.04
107302	ABC	Chloromethyl methyl ether	DL/.012
3691358	B	Chlorophacinone	[25]
59507	AC	Chlorophenol, 4-, methyl, 3-	13.20
126998	AC	Chloroprene	[25]
7790945	A	Chlorosulfonic acid	[1000]
1982474	B	Chloroxuron	[25]
2921882	A	Chlorpyrifos	1/BG
21923239	B	Chlorthiophos	[25]
7738945	A	Chromic (VI) acid	(f)
1066304	A	Chromic acetate	(f)
7789095	A	Chromic acid (H2Cr2O7), diammonium salt	(f)
7738945	A	Chromic acid (H2CrO4)	(f)
7788989	A	Chromic acid (H2CrO4), diammonium salt	(f)
13765190	AC	Chromic acid, calcium salt	(f)
10025737	B	Chromic Chloride	(f)
10101538	A	Chromic sulfate	(f)
7440473	AC	Chromium	1200.00
-99011	AC	Chromium compounds, N.O.S.	(f)
10049055	A	Chromous chloride	(f)
218019	AC	Chrysene	5.00
110167	A	cis-1,2-Ethylenedicarboxylic acid	[1000]
110167	A	cis-Butenedioic acid	[1000]
108316	AC	cis-Butenedioic acid anhydride	[1000]
3012655	A	Citric acid diammonium salt	[1000]
6358538	C	Citrus red No. 2	[25]
8007452	C	Coal tar creosote	5.00
7789437	A	Cobalt bromide	(g)
10210681	B	Cobalt Carbonyl	(g)
7789437	A	Cobalt dibromide	(g)
544183	A	Cobalt formate	(g)
14017415	A	Cobalt sulfamate	(g)
-99204	-	Cobalt {reference only, not regulated substance}	25/BG
62207765	B	Cobalt, ((2,2'-(1,2-ethanediylbis(nitrilomethylidene))bis(6-f luorophenolato))(2-)-N,N',O,O')-.	(g)
14017415	A	Cobaltous sulfamate	(g)
65996818	A	Coke oven emissions	\$
64868	B	Colchicine	[25]
2312358	A	Comite	[100]
7440508	A	Copper	1500.00
142712	A	Copper acetate	(h)
12002038	AB	Copper acetate arsenite	(a)
12002038	AB	Copper acetoarsenite	(a)
-99012	A	Copper and compounds	(h)
7447394	A	Copper chloride	(h)
544923	AC	Copper cyanide	(r)
3251238	A	Copper nitrate	(h)
7758987	A	Copper sulfate	(h)
815827	A	Copper tartrate	(h)
10380297	A	Copper(2+), tetraammine-, sulfate (1:1), monohydrate	(h)
56724	AB	Coumaphos	1/BG
56724	AB	Coumarin, 3-chloro-7-hydroxy-4-methyl-, O-ester with O,O-diethylpyrophosphorothioate	1/BG
5836293	B	Coumatetralyl	[25]

8001589	AC	Creosote	--
1319773	AC	Cresols	3.80
1319773	AC	Cresylic acid	3.80
535897	B	Crimidine	[25]
4170303	ABC	Crotonaldehyde	[1000]
123739	AB	Crotonaldehyde, (E)	[1000]
4170303	ABC	Crotylaldehyde	[1000]
98828	A	Cumene	21.88
80159	A	Cumene hydroperoxide	[100]
142712	A	Cupric acetate	(h)
12002038	AB	Cupric acetoarsenite	(a)
7447394	A	Cupric chloride	(h)
3251238	A	Cupric nitrate	(h)
5893663	A	Cupric oxalate	(h)
7758987	A	Cupric sulfate	(h)
10380297	A	Cupric sulfate, ammoniated, monohydrate	(h)
815827	A	Cupric tartrate	(h)
57125	AC	Cyanides (soluble salts and complexes) n.o.s.	(r)
-99013	A	Cyanides {CN anion}	10.00
100470	A	Cyanobenzene	DL/.17
107131	ABC	Cyanoethylene	1.37
460195	AC	Cyanogen	DL(P)
506683	ABC	Cyanogen bromide	(r)
506774	AC	Cyanogen chloride	(r)
506785	B	Cyanogen Iodide	(r)
506683	ABC	Cyanogen monobromide	(r)
2636262	B	Cyanophos	[25]
675149	B	Cyanuric Fluoride	[25]
14901087	C	Cycasin	[25]
110827	A	Cyclohexane	20.00
108941	A	Cyclohexanone	DL/.031
71432	AC	Cyclohexatriene	0.02
66819	B	Cycloheximide	[25]
108918	B	Cyclohexylamine	[25]
50180	AC	Cyclophosphamide	[100]
60515	ABC	Cygon	DL(P)
18883664	AC	D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	[25]
75990	A	Dalapon	10.00
20830813	AC	Daunomycin	[100]
20830813	AC	Daunorubicin	[100]
96128	AC	DBCP	DL/.003
156605	AC	DCE, trans-1,2-	0.53
108601	AC	DCIP	170.91
330541	A	DCMU	[1000]
72548	AC	DDD	0.66
72559	AC	DDE	0.66
50293	AC	DDT	0.66
62737	AB	DDVP	1/BG
17702419	B	Decaborane(14)	[25]
319868	A	delta-Benzenehexachloride	[25]
319868	A	delta-BHC	[25]
8065483	B	Demeton	20.51
919868	B	Demeton-S-Methyl	[25]
56531	AC	DES	[25]
115322	A	Di(p-chlorophenyl)-trichloromethylcarbinol	1/BG
117840	AC	Di-n-octyl phthalate	50.00
621647	AC	Di-n-propylnitrosamine	1.71
10311849	B	Dialifor	[25]
2303164	AC	Diallate	196.13
302012	ABC	Diamine	DL/4E-5
25376458	AC	Diaminotoluene	[100]
7788989	A	Diammonium chromate ((NH4)2CrO4)	(f)
3012655	A	Diammonium citrate	[1000]
7789095	A	Diammonium dichromate	(f)
6009707	A	Diammonium oxalate monohydrate	[1000]

3164292	A	Diammonium tartrate	[1000]
1309644	A	Diantimony trioxide	(b)
333415	A	Diazinon	1/BG
53703	AC	Dibenzo(a,h)anthracene	5.00
189559	AC	Dibenzo(a,i)pyrene	5.00
192654	C	Dibenzo[a,e]pyrene	5.00
189640	C	Dibenzo[a,h]pyrene	5.00
1746016	AC	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	8.0E-5
226368	C	Dibenz[a,h]acridine	[25]
224420	C	Dibenz[a,j]acridine	[25]
19287457	B	Diborane	[25]
300765	A	Dibrom	[100]
124481	A	Dibromochloromethane	1.63
96128	AC	Dibromochloropropane	DL/.003
74953	AC	Dibromomethane	[1000]
84742	AC	Dibutyl phthalate	13.70
1918009	A	Dicamba	1/BG
1194656	A	Dichlobenil	[1000]
117806	A	Dichlone	[25]
25321226	AC	Dichlorobenzene, N.O.S.	[1000]
1331471	A	Dichlorobenzidines	[25]
75274	A	Dichlorobromomethane	1.18
75718	AC	Dichlorodifluoromethane	1.49
72548	AC	Dichlorodiphenyldichloroethane	0.66
111444	ABC	Dichloroethyl ether	DL/.60
25323302	C	Dichloroethylene, N.O.S.	0.53
75092	AC	Dichloromethane	0.08
149746	B	Dichloromethylphenylsilane	[25]
696286	ABC	Dichlorophenylarsine	(a)
8003198	A	Dichloropropane - dichloropropene mixture	[1000]
26638197	AC	Dichloropropane, NOS	[1000]
26545733	C	Dichloropropanol, N.O.S.	[25]
26952238	AC	Dichloropropene, NOS	[1000]
62737	AB	Dichlorvos	1/BG
115322	A	Dicofol	1/BG
141662	B	Dicrotophos	[25]
60571	AC	Dieldrin	0.66
56382	ABC	Diethyl 4-nitrophenylphosphorothioate	DL(P)
814493	B	Diethyl Chlorophosphate	[25]
60297	A	Diethyl ether	0.56
84662	AC	Diethyl phthalate	0.74
311455	AC	Diethyl-p-nitrophenyl phosphate	DL(P)
109897	A	Diethylamine	[1000]
692422	AC	Diethylarsine	(a)
1642542	B	Diethylcarbamazine Citrate	[25]
56531	AC	Diethylstilbestrol	DL
71636	B	Digitoxin	§
2238075	B	Diglycidyl Ether	[25]
20830755	B	Digoxin	[25]
94586	AC	Dihydrosafrole	[100]
55914	ABC	Diisopropylfluorophosphate	DL(P)
115264	B	Dimefox	[25]
60515	ABC	Dimethoate	DL(P)
2524030	B	Dimethyl Phosphorochloridothioate	[25]
131113	AC	Dimethyl phthalate	0.66
77781	ABC	Dimethyl sulfate	DL/.12
99989	B	Dimethyl-p-Phenylenediamine	[25]
124403	A	Dimethylamine	[1000]
79447	AC	Dimethylcarbamoyl chloride	[25]
75785	B	Dimethyldichlorosilane	[25]
62759	ABC	Dimethylnitrosamine	0.66
1300716	A	Dimethylphenol	307.64
644644	B	Dimetilan	[25]
25154545	AC	Dinitrobenzene, NOS	[1000]
10544726	A	Dinitrogen tetroxide	[100]

25550587	A	Dinitrophenol	[100]
25321146	A	Dinitrotoluene	[100]
88857	ABC	Dinoseb	0.66
1420071	B	Dinoterb	[25]
78342	B	Dioxathion	1/BG
1746016	AC	Dioxin	8.0E-5
82666	B	Diphacinone	[25]
122394	AC	Diphenylamine	[25]
38622183	A	Diphenylhydrazine	[25]
152169	ABC	Diphosphoramidate, octamethyl-	DL(P)
333415	A	Dipofene	1/BG
142847	A	Dipropylamine	[1000]
2764729	A	Diquat	2.00
85007	A	Diquat dibromide	2.00
7631892	AB	Disodium arsenate	(a)
7558794	A	Disodium phosphate	[1000]
10102188	AB	Disodium selenite	(L)
14644612	A	Disulfatozirconic acid	[1000]
298044	ABC	Disulfoton	DL(P)
8014957	A	Disulphuric acid	(v)
298044	ABC	Disyston	DL(P)
514738	B	Dithiazanone Iodide	[25]
75150	ABC	Dithiocarbonic anhydride	DL(P)
3689245	ABC	Dithiopyrophosphoric acid, tetraethyl ester	DL(P)
330541	A	Diuron	[1000]
72435	AC	DMDT	10.00
27176870	A	Dodecylbenzenesulfonic acid	[1000]
2921882	A	Dursban	1/BG
106934	AC	EDB	0.01
60004	A	Edetic acid	[1000]
60004	A	EDTA	[1000]
316427	B	Emetine, Dihydrochloride	[25]
959988	A	Endosulfan (alpha)	10.00
115297	ABC	Endosulfan (mixed isomers)	3.30
1031078	A	Endosulfan sulfate	1.65
959988	A	Endosulfan-I	10.00
33213659	A	Endosulfan-II	10.00
145733	AC	Endothall	0.66
2778043	B	Endothion	[25]
72208	ABC	Endrin	10.00
7421934	A	Endrin aldehyde	10.00
-99014	AC	Endrin metabolites	10.00
106898	ABC	Epichlorhydrin	DL/.003
51434	AC	Epinephrine	s
2104645	B	EPN	[25]
50146	B	Ergocalciferol	[25]
379793	B	Ergotamine Tartrate	[25]
1464535	ABC	Erythritol anhydride	[100]
75070	A	Ethanal	DL/.003
122098	AC	Ethanamine, 1,1-dimethyl-2-phenyl	DL(P)
55185	AC	Ethanamine, N-ethyl-N-nitroso-	DL/.014
5893663	A	Ethandioic acid copper salt	(h)
60297	A	Ethane, 1,1'-oxybis-	0.56
111444	ABC	Ethane, 1,1'-oxybis[2-chloro-	DL/.60
111911	AC	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	DL/.027
630206	AC	Ethane, 1,1,1,2-tetrachloro-	1.03
106934	AC	Ethane, 1,2-dibromo-	0.01
107062	AC	Ethane, 1,2-dichloro-	0.02
460195	AC	Ethanedinitrile	DL(P)
55488874	A	Ethanedioic acid, ammonium iron salt	[1000]
2944674	A	Ethanedioic acid, ammonium iron(3+) salt (3:3:1)	[1000]
14258492	A	Ethanedioic acid, ammonium salt	[1000]
6009707	A	Ethanedioic acid, diammonium salt, monohydrate	[1000]
5972736	A	Ethanedioic acid, monoammonium salt, monohydrate	[1000]
75058	AC	Ethanimitrile	DL/.04

1622328	B	Ethanesulfonyl Chloride, 2-Chloro-	[25]
62555	AC	Ethanethioamide	[100]
64197	A	Ethanoic acid	[1000]
10140871	B	Ethanol, 1,2-Dichloro-, Acetate	[25]
1116547	AC	Ethanol, 2,2'-(nitrosoimino)bis-	4.27
98862	AC	Ethanone, 1-phenyl-	DL/.26
75365	AC	Ethanoyl chloride	[1000]
4549400	AC	Ethenamine, N-methyl-N-nitroso-	DL(P)
110758	AC	Ethene, (2-chloroethoxy)-	[1000]
75014	AC	Ethene, chloro	0.04
563122	AB	Ethion	[100]
13194484	B	Ethoprophos	[25]
141786	A	Ethyl acetate	DL/.07
140885	A	Ethyl acrylate	[1000]
75070	A	Ethyl aldehyde	DL/.003
51796	AC	Ethyl carbamate	[1000]
75003	A	Ethyl chloride	0.17
107120	ABC	Ethyl cyanide	DL(P)
60297	A	Ethyl ether	0.56
97632	AC	Ethyl methacrylate	[1000]
62500	AC	Ethyl methanesulfonate	[25]
510156	AC	Ethyl-4,4'-dichlorobenzilate	44.31
107926	A	Ethylacetic acid	[1000]
75047	A	Ethylamine	[1000]
100414	A	Ethylbenzene	20.00
538078	B	Ethylbis(2-Chloroethyl)Amine	[25]
106934	AC	Ethylene dibromide	0.01
107062	AC	Ethylene dichloride	0.02
371620	B	Ethylene Fluorohydrin	[25]
110805	AC	Ethylene glycol monoethyl ether	DL/.16
75218	ABC	Ethylene oxide	11.73
79016	AC	Ethylene trichloride	0.13
111546	AC	Ethylenebisdithiocarbamic acid, salts and esters	[1000]
107153	AB	Ethylenediamine	[1000]
60004	A	Ethylenediamine tetraacetic acid	[1000]
151564	ABC	Ethyleneimine	DL(P)
96457	AC	Ethylenethiourea	19.94
79094	A	Ethylformic acid	[1000]
75343	AC	Ethylidene dichloride	0.03
542905	B	Ethylthiocyanate	[25]
52857	AC	Famophos	DL(P)
52857	AC	Famphur	DL(P)
22224926	B	Fenamiphos	[25]
122145	B	Fenitrothion	[25]
115902	B	Fensulfothion	10.00
1185575	A	Ferric ammonium citrate	[1000]
55488874	A	Ferric ammonium oxalate	[1000]
2944674	A	Ferric ammonium oxalate	[1000]
7705080	A	Ferric chloride	[1000]
7783508	A	Ferric fluoride	[1000]
10421484	A	Ferric nitrate	[1000]
10028225	A	Ferric persulfate	[1000]
10028225	A	Ferric sesquisulfate	[1000]
10028225	A	Ferric sulfate	[1000]
10045893	A	Ferrous ammonium sulfate	[1000]
7758943	A	Ferrous chloride	[1000]
7720787	A	Ferrous sulfate	[1000]
7782630	A	Ferrous sulfate heptahydrate	[1000]
4301502	B	Fluenetil	[25]
206440	AC	Fluoranthene	500.00
86737	A	Fluorene	360.00
7782414	ABC	Fluorine	600/BG
144490	B	Fluoroacetic Acid	[25]
62748	ABC	Fluoroacetic acid, sodium salt	DL(P)
359068	B	Fluoroacetyl Chloride	[25]

75694	AC	Fluorotrichloromethane	0.70
51218	B	Fluorouracil	[25]
944229	B	Fonofos	[25]
30525894	A	Formagene	[1000]
50000	ABC	Formaldehyde	DL/.010
107164	B	Formaldehyde Cyanohydrin	\$
50000	ABC	Formalin	DL/.010
23422539	B	Formetanate Hydrochloride	[25]
64186	AC	Formic acid	[1000]
2540821	B	Formothion	[25]
17702577	B	Formparanate	[25]
21548323	B	Fosthietan	[25]
76131	A	Freon 113	6.92
3878191	B	Fuberidazole	[25]
628864	AC	Fulminic acid, mercury (2+) salt	DL
110178	A	Fumaric acid	[1000]
8014957	A	Fuming sulfuric acid	(v)
1563662	AB	Furadan	0.80
110009	AB	Furan	512.74
109999	A	Furan, tetrahydro-	DL/.014
98011	A	Furfural	DL/.012
110009	AB	Furfuran	512.74
13450903	B	Gallium Trichloride	[25]
58899	ABC	gamma-Benzenhexachloride	0.66
58899	ABC	gamma-BHC	0.66
64197	A	Glacial acetic acid	[1000]
765344	AC	Glycidylaldehyde	DL/.07
7720787	A	Green vitriol	[1000]
70257	AC	Guanidine, N-methyl-N'-nitro-N-nitroso-	[100]
-99205	A	Haloethers	[25]
-99015	AC	Halomethanes, N.O.S.	[25]
-99017	A	Hazardous Waste No. D001 (Ignitable)	(u)
-99094	A	Hazardous Waste No. D002 (Corrosive)	(v)
-99018	A	Hazardous Waste No. D003 (Reactive)	(w)
-99069	A	Hazardous Waste No. D004 (Arsenic)	(x)
-99068	A	Hazardous Waste No. D005 (Barium)	(x)
-99066	A	Hazardous Waste No. D006 (Cadmium)	(x)
-99140	A	Hazardous Waste No. D007 (Chromium)	(x)
-99139	A	Hazardous Waste No. D008 (Lead)	(x)
-99138	A	Hazardous Waste No. D009 (Mercury)	(x)
-99137	A	Hazardous Waste No. D010 (Selenium)	(x)
-99136	A	Hazardous Waste No. D011 (Silver)	(x)
-99113	A	Hazardous Waste No. D012 (Endrin)	(x)
-99108	A	Hazardous Waste No. D013 (Lindane)	(x)
-99107	A	Hazardous Waste No. D014 (Methoxychlor)	(x)
-99100	A	Hazardous Waste No. D015 (Toxaphene)	(x)
-99118	A	Hazardous Waste No. D016 (2,4-D)	(x)
-99096	A	Hazardous Waste No. D017 (2,4,5-TP)	(x)
-99300	A	Hazardous Waste No. D018 (Benzene)	(x)
-99016	A	Hazardous Waste No. D019 (Carbon tetrachloride)	(x)
-99019	A	Hazardous Waste No. D020 (Chlordane)	(x)
-99021	A	Hazardous Waste No. D021 (Chlorobenzene)	(x)
-99020	A	Hazardous Waste No. D022 (Chloroform)	(x)
-99122	A	Hazardous Waste No. D023 (o-Cresol)	(x)
-99121	A	Hazardous Waste No. D024 (m-Cresol)	(x)
-99120	A	Hazardous Waste No. D025 (p-Cresol)	(x)
-99119	A	Hazardous Waste No. D026 (Cresols)	(x)
-99117	A	Hazardous Waste No. D027 (1,4-Dichlorobenzene)	(x)
-99116	A	Hazardous Waste No. D028 (1,2-Dichloroethane)	(x)
-99115	A	Hazardous Waste No. D029 (1,1-Dichloroethylene)	(x)
-99114	A	Hazardous Waste No. D030 (2,4-Dinitrotoluene)	(x)
-99112	A	Hazardous Waste No. D031 (Heptachlor and its epoxide)	(x)
-99111	A	Hazardous Waste No. D032 (Hexachlorobenzene)	(x)
-99110	A	Hazardous Waste No. D033 (Hexachlorobutadiene)	(x)
-99109	A	Hazardous Waste No. D034 (Hexachloroethane)	(x)

-99106	A	Hazardous Waste No. D035 (Methyl ethyl ketone)	(x)
-99105	A	Hazardous Waste No. D036 (Nitrobenzene)	(x)
-99104	A	Hazardous Waste No. D037 (Pentachlorophenol)	(x)
-99103	A	Hazardous Waste No. D038 (Pyridine)	(x)
-99101	A	Hazardous Waste No. D039 (Tetrachloroethylene)	(x)
-99099	A	Hazardous Waste No. D040 (Trichloroethylene)	(x)
-99098	A	Hazardous Waste No. D041 (2,4,5-Trichlorophenol)	(x)
-99097	A	Hazardous Waste No. D042 (2,4,6-Trichlorophenol)	(x)
-99095	A	Hazardous Waste No. D043 (Vinyl chloride)	(x)
-99124	A	Hazardous Waste No.F001	(z)
-99082	A	Hazardous Waste No.F002	(z)
-99123	A	Hazardous Waste No.F003	(u)
-99081	A	Hazardous Waste No.F004	(z)
-99080	A	Hazardous Waste No.F005	(z)
-99079	A	Hazardous Waste No.F006	(z)
-99078	A	Hazardous Waste No.F007	(z)
-99077	A	Hazardous Waste No.F008	(z)
-99076	A	Hazardous Waste No.F009	(z)
-99075	A	Hazardous Waste No.F010	(z)
-99074	A	Hazardous Waste No.F011	(z)
-99073	A	Hazardous Waste No.F012	(z)
-99072	A	Hazardous Waste No.F019	(z)
-99185	A	Hazardous Waste No.F020	(z)
-99184	A	Hazardous Waste No.F021	(z)
-99183	A	Hazardous Waste No.F022	(z)
-99182	A	Hazardous Waste No.F023	(z)
-99181	A	Hazardous Waste No.F024	(z)
-99180	A	Hazardous Waste No.F025	(z)
-99179	A	Hazardous Waste No.F026	(z)
-99178	A	Hazardous Waste No.F027	(z)
-99177	A	Hazardous Waste No.F028	(z)
-99176	A	Hazardous Waste No.F032	(z)
-99175	A	Hazardous Waste No.F034	(z)
-99174	A	Hazardous Waste No.F035	(z)
-99173	A	Hazardous Waste No.F037	(z)
-99172	A	Hazardous Waste No.F038	(z)
-99171	A	Hazardous Waste No.K001	(z)
-99170	A	Hazardous Waste No.K002	(z)
-99169	A	Hazardous Waste No.K003	(z)
-99168	A	Hazardous Waste No.K004	(z)
-99167	A	Hazardous Waste No.K005	(z)
-99166	A	Hazardous Waste No.K006	(z)
-99165	A	Hazardous Waste No.K007	(z)
-99164	A	Hazardous Waste No.K008	(z)
-99163	A	Hazardous Waste No.K009	(z)
-99162	A	Hazardous Waste No.K010	(z)
-99161	A	Hazardous Waste No.K011	(z)
-99160	A	Hazardous Waste No.K013	(z)
-99159	A	Hazardous Waste No.K014	(z)
-99158	A	Hazardous Waste No.K015	(z)
-99157	A	Hazardous Waste No.K016	(z)
-99156	A	Hazardous Waste No.K017	(z)
-99155	A	Hazardous Waste No.K018	(z)
-99154	A	Hazardous Waste No.K019	(z)
-99153	A	Hazardous Waste No.K020	(z)
-99152	A	Hazardous Waste No.K021	(z)
-99151	A	Hazardous Waste No.K022	(z)
-99150	A	Hazardous Waste No.K023	(z)
-99149	A	Hazardous Waste No.K024	(z)
-99148	A	Hazardous Waste No.K025	(z)
-99147	A	Hazardous Waste No.K026	(z)
-99146	A	Hazardous Waste No.K027	(z)
-99145	A	Hazardous Waste No.K028	(z)
-99144	A	Hazardous Waste No.K029	(z)
-99143	A	Hazardous Waste No.K030	(z)



-99135	A	Hazardous Waste No.K031	(z)
-99134	A	Hazardous Waste No.K032	(z)
-99133	A	Hazardous Waste No.K033	(z)
-99132	A	Hazardous Waste No.K034	(z)
-99131	A	Hazardous Waste No.K035	(z)
-99130	A	Hazardous Waste No.K036	(z)
-99129	A	Hazardous Waste No.K037	(z)
-99128	A	Hazardous Waste No.K038	(z)
-99127	A	Hazardous Waste No.K039	(z)
-99126	A	Hazardous Waste No.K040	(z)
-99125	A	Hazardous Waste No.K041	(z)
-99071	A	Hazardous Waste No.K042	(z)
-99070	A	Hazardous Waste No.K043	(z)
-99102	A	Hazardous Waste No.K044	(w)
-99142	A	Hazardous Waste No.K045	(w)
-99067	A	Hazardous Waste No.K046	(z)
-99141	A	Hazardous Waste No.K047	(w)
-99086	A	Hazardous Waste No.K048	(z)
-99087	A	Hazardous Waste No.K049	(z)
-99090	A	Hazardous Waste No.K050	(z)
-99092	A	Hazardous Waste No.K051	(z)
-99065	A	Hazardous Waste No.K052	(z)
-99083	A	Hazardous Waste No.K060	(z)
-99064	A	Hazardous Waste No.K061	(z)
-99084	A	Hazardous Waste No.K062	(z)
-99063	A	Hazardous Waste No.K064	(z)
-99062	A	Hazardous Waste No.K065	(z)
-99061	A	Hazardous Waste No.K066	(z)
-99060	A	Hazardous Waste No.K069	(z)
-99059	A	Hazardous Waste No.K071	(z)
-99058	A	Hazardous Waste No.K073	(z)
-99057	A	Hazardous Waste No.K083	(z)
-99091	A	Hazardous Waste No.K084	(z)
-99056	A	Hazardous Waste No.K085	(z)
-99093	A	Hazardous Waste No.K086	(z)
-99089	A	Hazardous Waste No.K087	(z)
-99055	A	Hazardous Waste No.K088	(z)
-99054	A	Hazardous Waste No.K090	(z)
-99088	A	Hazardous Waste No.K091	(z)
-99053	A	Hazardous Waste No.K093	(z)
-99052	A	Hazardous Waste No.K094	(z)
-99051	A	Hazardous Waste No.K095	(z)
-99050	A	Hazardous Waste No.K096	(z)
-99049	A	Hazardous Waste No.K097	(z)
-99048	A	Hazardous Waste No.K098	(z)
-99047	A	Hazardous Waste No.K099	(z)
-99046	A	Hazardous Waste No.K100	(z)
-99045	A	Hazardous Waste No.K101	(z)
-99044	A	Hazardous Waste No.K102	(z)
-99043	A	Hazardous Waste No.K103	(z)
-99042	A	Hazardous Waste No.K104	(z)
-99041	A	Hazardous Waste No.K105	(z)
-99085	A	Hazardous Waste No.K106	(z)
-99040	A	Hazardous Waste No.K107	(z)
-99039	A	Hazardous Waste No.K108	(z)
-99038	A	Hazardous Waste No.K109	(z)
-99037	A	Hazardous Waste No.K110	(z)
-99036	A	Hazardous Waste No.K111	(z)
-99035	A	Hazardous Waste No.K112	(z)
-99034	A	Hazardous Waste No.K113	(z)
-99033	A	Hazardous Waste No.K114	(z)
-99032	A	Hazardous Waste No.K115	(z)
-99031	A	Hazardous Waste No.K116	(z)
-99030	A	Hazardous Waste No.K117	(z)
-99029	A	Hazardous Waste No.K118	(z)

-99028	A	Hazardous Waste No.K123	(z)
-99027	A	Hazardous Waste No.K124	(z)
-99026	A	Hazardous Waste No.K125	(z)
-99025	A	Hazardous Waste No.K126	(z)
-99024	A	Hazardous Waste No.K131	(z)
-99023	A	Hazardous Waste No.K132	(z)
-99022	A	Hazardous Waste No.K136	(z)
118741	AC	HCB	2.14
77474	ABC	HCP	15.20
76448	AC	Heptachlor	0.66
1024573	AC	Heptachlor epoxide	1.65
-99186	C	Heptachlorodibenzo-p-dioxins	(t{.01})
-99187	C	Heptachlorodibenzofurans.	(t{.01})
118741	AC	Hexachlorobenzene	2.14
87683	AC	Hexachlorobutadiene	17.50
608731	A	Hexachlorocyclohexane	0.66
319846	A	Hexachlorocyclohexane (alpha)	0.66
319857	A	Hexachlorocyclohexane (beta)	0.66
319868	A	Hexachlorocyclohexane (delta)	[25]
58899	ABC	Hexachlorocyclohexane (gamma)	0.66
77474	ABC	Hexachlorocyclopentadiene	15.20
19408743	C	Hexachlorodibenzo-p-dioxins	1.9E-3
-99188	C	Hexachlorodibenzofurans	(t{0.1})
67721	AC	Hexachloroethane	9.99
465736	ABC	Hexachlorohexahydro-endo,endo-dimethanonaphthalene	DL(P)
70304	AC	Hexachlorophene	25.00
1888717	AC	Hexachloropropene	[1000]
757584	AC	Hexaethyltetraphosphate	DL(P)
10124568	A	Hexametaphosphate, sodium salt	[1000]
110827	A	Hexamethylene	20.00
4835114	B	Hexamethylenediamine, N,N'-Dibutyl-	[25]
124049	A	Hexanedioic acid	DL/.006
302012	ABC	Hydrazine	DL/4E-5
57147	ABC	Hydrazine, 1,1-dimethyl	4.60
1615801	AC	Hydrazine, 1,2-diethyl-	[100]
540738	AC	Hydrazine, 1,2-dimethyl	0.32
122667	AC	Hydrazine, 1,2-diphenyl	7.20
79196	ABC	Hydrazinecarbothioamide	DL(P)
122667	AC	Hydrazobenzene	7.20
7647010	AB	Hydrochloric acid	(v)
74908	ABC	Hydrocyanic acid	(r)
7664393	ABC	Hydrofluoric acid	(v)
7647010	AB	Hydrogen chloride (gas only)	(v)
74908	ABC	Hydrogen cyanide	(r)
7664393	ABC	Hydrogen fluoride	(v)
7722841	B	Hydrogen Peroxide (Conc > 52%)	[25]
7803512	ABC	Hydrogen phosphide	DL(P)
7783075	B	Hydrogen Selenide	(L)
7783064	ABC	Hydrogen sulfide	[1000]
80159	A	Hydroperoxide, 1-methyl-1-phenylethyl-	[100]
123319	B	Hydroquinone	[25]
7783064	ABC	Hydrosulfuric acid	[1000]
108952	ABC	Hydroxybenzene	50.00
75605	AC	Hydroxydimethylarsine oxide	(a)
1300716	A	Hydroxydimethylbenzene	307.64
7778543	A	Hypochlorous acid, calcium salt	[100]
7681529	A	Hypochlorous acid, sodium salt	[1000]
10022705	A	Hypochlorous acid, sodium salt, pentahydrate	[1000]
193395	AC	Indeno(1,2,3-cd)pyrene	5.00
74884	AC	Iodomethane	[1000]
7758943	A	Iron chloride	[1000]
7758943	A	Iron dichloride	[1000]
10421484	A	Iron nitrate	[1000]
13463406	B	Iron pentacarbonyl	[25]
7705080	A	Iron trichloride	[1000]

110190	A	iso-Butyl acetate	[1000]
78819	A	iso-Butylamine	[1000]
79312	A	iso-Butyric acid	[1000]
123922	A	Isoamyl acetate	[1000]
297789	B	Isobenzan	[25]
78831	AC	Isobutyl alcohol	DL/.07
78820	B	Isobutyronitrile	[25]
624839	ABC	Isocyanic acid, methyl ester	DL(P)
102363	B	Isocyanic Acid,3,4-Dichlorophenyl Ester	[25]
465736	ABC	Isodrin	DL(P)
55914	ABC	Isofluorophate	DL(P)
78591	A	Isophorone	DL/.19
4098719	B	Isophorone Diisocyanate	[25]
78795	A	Isoprene	[1000]
42504461	A	Isopropanolamine dodecylbenzene sulfonate	[1000]
108236	B	Isopropyl Chloroformate	[25]
98828	A	Isopropylbenzene	21.88
119380	B	Isopropylmethylpyrazolyl dimethylcarbamate	[25]
120581	AC	Isosafrole	[1000]
115322	A	Kelthane	1/BG
143500	AC	Kepone	10.00
148823	AC	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	10.00
115026	AC	L-Serine, diazoacetate (ester)	[25]
3164292	A	L-Tartaric acid ammonium salt	[1000]
78977	B	Lactonitrile	\$
303344	A	Lasiocarpine	[100]
303341	C	Lasiocarpine	[100]
7439921	AC	Lead	400.00
301042	AC	Lead acetate	(i)
7784409	A	Lead acid arsenate	(a)
7645252	A	Lead arsenate	(a)
7758954	A	Lead chloride	(i)
-99189	AC	Lead compounds, N.O.S.	(i)
7783462	A	Lead difluoride	(i)
13814965	A	Lead fluoborate	(i)
7783462	A	Lead fluoride	(i)
10101630	A	Lead iodide	(i)
10099748	A	Lead nitrate	(i)
7446277	AC	Lead phosphate	(i)
1072351	A	Lead stearate	(i)
7428480	A	Lead stearate	(i)
52652592	A	Lead stearate	(i)
56189094	A	Lead stearate	(i)
1335326	AC	Lead subacetate	(i)
7446142	A	Lead sulfate	(i)
15739807	A	Lead sulfate	(i)
1314870	A	Lead sulfide	(i)
592870	A	Lead sulfocyanate	(i)
78002	ABC	Lead tetraethyl	DL(P)
592870	A	Lead thiocyanate	(i)
1335326	AC	Lead, bis(acetato-O)tetrahydroxytri-	(i)
56189094	A	Lead, bis(octadecanoato)dioxodi-	(i)
21609905	B	Leptophos	[25]
541253	B	Lewisite	[25]
58899	ABC	Lindane	0.66
14307358	A	Lithium chromate	(f)
7580678	B	Lithium Hydride	[25]
108394	A	m-Cresol	3.80
541731	AC	m-Dichlorobenzene	2.22
99650	A	m-Dinitrobenzene	1.05
554847	A	m-Nitrophenol	[1000]
99081	A	m-Nitrotoluene	[1000]
108383	A	m-Xylene	20.00
121755	A	Malathion	1/BG
110167	A	Maleic acid	[1000]

108316	AC	Maleic anhydride	[1000]
123331	AC	Maleic hydrazide	DL/5E-4
109773	ABC	Malononitrile	10.25
12108133	B	Manganese, tricarbonyl methylcyclopentadienyl	[25]
51752	B	Mechlorethamine	[25]
78933	AC	MEK	0.79
148823	AC	Melphalan	10.00
72208	ABC	Mendrin	10.00
950107	B	Mephosfolan	[25]
108985	ABC	Mercaptobenzene	DL(P)
96457	AC	Mercaptoimidazoline	19.94
74931	ABC	Mercaptomethane	[1000]
1600277	B	Mercuric Acetate	DL
7487947	B	Mercuric Chloride	(j)
10045940	A	Mercuric nitrate	(j)
21908532	B	Mercuric Oxide	(j)
7783359	A	Mercuric sulfate	(j)
592858	A	Mercuric sulfocyanide	[100]
592858	A	Mercuric thiocyanate	[100]
10415755	A	Mercurous nitrate	(j)
7782867	A	Mercurous nitrate, monohydrate	(j)
10415755	A	Mercurous protonitrate	(j)
7439976	AC	Mercury	17.00
-99190	AC	Mercury compounds, N.O.S.	(j)
592041	A	Mercury cyanide	(j)
628864	AC	Mercury fulminate	DL
62384	ABC	Mercury, (acetato-O)phenyl-	DL/.024
108463	AC	meta-Dihydroxybenzene	DL/.030
10124568	A	Metaphosphoric acid, hexasodium salt	[1000]
7785844	A	Metaphosphoric acid, trisodium salt	[1000]
10476956	B	Methacrolein Diacetate	[25]
760930	B	Methacrylic Anhydride	[25]
126987	ABC	Methacrylonitrile	DL/.016
920467	B	Methacryloyl Chloride	[25]
30674807	B	Methacryloyloxyethyl Isocyanate	[25]
10265926	B	Methamidophos	25.64
74895	A	Methanamine	[1000]
124403	A	Methanamine, N-methyl-	[1000]
107302	ABC	Methane, chloromethoxy-	DL/.012
109773	ABC	Methane, dicyano-	10.25
624839	ABC	Methane, isocyanato-	DL(P)
542881	ABC	Methane, oxybis[chloro-	DL(P)
509148	ABC	Methane, tetranitro-	DL(P)
594423	AB	Methanesulfenyl chloride, trichloro-	[1000]
62500	AC	Methanesulfonic acid, ethyl ester	[25]
558258	B	Methanesulfonyl Fluoride	[25]
74931	ABC	Methanethiol	[1000]
64186	AC	Methanoic acid	[1000]
67561	A	Methanol	1.37
91805	AC	Methapyrilene	[1000]
950378	B	Methidathion	[25]
2032657	AB	Methiocarb	10.00
16752775	ABC	Methomyl	10.00
72435	AC	Methoxychlor	10.00
151382	B	Methoxyethylmercuric Acetate	DL
80637	B	Methyl 2-Chloroacrylate	[25]
67561	A	Methyl alcohol	1.37
74839	ABC	Methyl bromide	0.80
74873	AC	Methyl chloride	0.04
79221	ABC	Methyl chlorocarbonate	[1000]
71556	AC	Methyl chloroform	5.44
79221	ABC	Methyl chloroformate	[1000]
75058	AC	Methyl cyanide	DL/.04
78933	AC	Methyl ethyl ketone	0.79
1338234	AC	Methyl ethyl ketone peroxide	[100]

74884	AC	Methyl iodide	[1000]
624839	ABC	Methyl isocyanate	DL(P)
556616	B	Methyl Isothiocyanate	[25]
74931	ABC	Methyl mercaptan	[1000]
80626	AC	Methyl methacrylate	DL/.17
66273	C	Methyl methanesulfonate	[25]
298000	ABC	Methyl parathion	DL(P)
3735237	B	Methyl Phenkapton	[25]
676971	B	Methyl Phosphonic Dichloride	[25]
77781	ABC	Methyl sulfate	DL/.12
556649	B	Methyl Thiocyanate	[25]
78944	B	Methyl Vinyl Ketone	[25]
79094	A	Methylacetic acid	[1000]
123626	A	Methylacetic anhydride	[1000]
74895	A	Methylamine	[1000]
108883	AC	Methylbenzene	14.40
74953	AC	Methylene bromide	[1000]
75092	AC	Methylene chloride	0.08
50000	ABC	Methylene oxide	DL/.010
60344	ABC	Methylhydrazine	DL(P)
108101	A	Methylisobutylketone	3.30
502396	B	Methylmercuric Dicyanamide	(j)
25376458	AC	Methylphenylene diamine	[100]
56042	AC	Methylthiouracil	[100]
75796	B	Methyltrichlorosilane	[25]
1129415	B	Metolcarb	[25]
7786347	AB	Mevinphos	10.00
108101	A	MIBK	3.30
50077	ABC	Mitomycin C	[100]
70257	AC	MNNG	[100]
101144	AC	MOCA	25.00
107302	ABC	Monochlorodimethyl ether	DL/.012
6923224	B	Monocrotophos	[25]
75047	A	Monoethylamine	[1000]
74895	A	Monomethylamine	[1000]
60344	ABC	Monomethylhydrazine	DL(P)
7647010	AB	Muriatic acid	(v)
2763964	ABC	Muscimol	DL(P)
50562	BC	Mustard gas	[25]
1615801	AC	N,N'-Diethylhydrazine	[100]
494031	AC	N,N-Bis(2-chloroethyl)-2-naphthylamine	[1000]
107926	A	n-Butanoic acid	[1000]
123864	A	n-Butyl acetate	[1000]
71363	A	n-Butyl alcohol	DL/.54
109739	A	n-Butylamine	[1000]
759739	AC	N-Nitroso-N-ethylurea	DL
684935	AC	N-Nitroso-N-methylurea	[25]
615532	AC	N-Nitroso-N-methylurethane	[25]
924163	AC	N-Nitrosodi-n-butylamine	DL/.40
621647	AC	N-Nitrosodi-n-propylamine	1.71
1116547	AC	N-Nitrosodiethanolamine	4.27
55185	AC	N-Nitrosodiethylamine	DL/.014
62759	ABC	N-Nitrosodimethylamine	0.66
86306	A	N-Nitrosodiphenylamine	6.46
10595956	C	N-Nitrosomethylethylamine	DL
4549400	AC	N-Nitrosomethylvinylamine	DL(P)
59892	C	N-Nitrosomorpholine	[25]
16543558	C	N-Nitrosornicotine	[25]
100754	AC	N-Nitrosopiperidine	[100]
930552	AC	N-Nitrosopyrrolidine	DL/.14
13256229	C	N-Nitrososarcosine	[25]
122394	AC	N-Phenylbenzeneamine	[25]
103855	ABC	N-Phenylthiourea	DL(P)
107108	AC	n-Propylamine	[1000]
300765	A	Naled	[100]

91203	AC	Naphthalene	100.00
91587	AC	Naphthalene, 2-chloro-	25.00
1338245	A	Naphthenic acid	[1000]
12125018	A	Neutral ammonium fluoride	[1000]
72571	AC	Niagara blue	[100]
7440020	AC	Nickel	420.00
7718549	A	Nickel (II) chloride	(k)
557197	AC	Nickel (II) cyanide	(r)
15699180	A	Nickel ammonium sulfate	(k)
13463393	ABC	Nickel carbonyl	(k)
37211055	A	Nickel chloride	(k)
-99191	AC	Nickel compounds, N.O.S.	(k)
12054487	A	Nickel hydroxide	(k)
14216752	A	Nickel nitrate	(k)
7786814	A	Nickel sulfate	(k)
13463393	ABC	Nickel tetracarbonyl	(k)
7718549	A	Nickelous chloride	(k)
54115	ABC	Nicotine	DL(P)
-99192	C	Nicotine salts	[25]
65305	B	Nicotine Sulfate	[25]
7697372	AB	Nitric acid	(v)
7787555	A	Nitric acid, beryllium salt, trihydrate	(d)
7782867	A	Nitric acid, mercury(1+) salt, monohydrate	(j)
7761888	A	Nitric acid, silver (1+) salt	(m)
10102451	AC	Nitric acid, thallium (1+) salt	(n)
10102439	ABC	Nitric oxide	DL(P)
98953	ABC	Nitrobenzene	0.70
1122607	B	Nitrocyclohexane	[25]
10102440	ABC	Nitrogen dioxide (NO2)	DL(P)
10544726	A	Nitrogen dioxide, di-	[100]
51752	C	Nitrogen mustard	[25]
126852	C	Nitrogen mustard N-oxide	[25]
-99194	C	Nitrogen mustard, hydrochloride salt	[25]
-99193	C	Nitrogen mustard, N-oxide, hydrochloride salt	[25]
10544726	A	Nitrogen oxide	[100]
10102439	ABC	Nitrogen oxide (NO)	DL(P)
10102440	ABC	Nitrogen oxide (NO2)	DL(P)
10102440	ABC	Nitrogen peroxide	DL(P)
10102439	ABC	Nitrogen(II) oxide	DL(P)
55630	AC	Nitroglycerin	DL(P)
25154556	A	Nitrophenols	[1000]
-99326	AC	Nitrosamines, NOS	[25]
1321126	A	Nitrotoluene	[1000]
991424	B	Norbormide	[25]
126681	C	O,O,O-Triethyl phosphorothioate	[25]
297972	ABC	O,O-Diethyl-O-(2-pyrazinyl)phosphorothioate	DL(P)
95487	AB	o-Cresol	3.80
95487	AB	o-Cresylic acid	3.80
95501	AC	o-Dichlorobenzene	25.00
528290	A	o-Dinitrobenzene	205.10
88755	A	o-Nitrophenol	[1000]
88722	A	o-Nitrotoluene	[1000]
119937	AC	o-Tolidine	1.30
95534	AC	o-Toluidine	49.85
636215	AC	o-Toluidine hydrochloride	[1000]
95476	A	o-Xylene	20.00
152169	ABC	Octamethylpyrophosphoramide	DL(P)
2312358	A	Omite	[100]
7778394	AC	Orthoarsenic acid	(a)
7664382	A	Orthophosphoric acid	(v)
20816120	AC	Osmic acid anhydride	DL(P)
20816120	AC	Osmium oxide (OsO4), (T-4)-	DL(P)
20816120	AC	Osmium tetroxide	DL(P)
630604	B	Ouabain	[25]
110009	AB	Oxacyclopentadiene	[1000]

2944674	A	Oxalic acid, ammonium iron(3+) salt (3:3:1)	[1000]
14258492	A	Oxalic acid, ammonium salt	[1000]
23135220	B	Oxamyl	10.00
78717	B	Oxetane, 3,3-Bis(Chloromethyl)-	[25]
75218	ABC	Oxirane	11.73
106898	ABC	Oxirane, (chloromethyl)	DL/.003
765344	AC	Oxiranecarboxyaldehyde	DL/.07
2497076	B	Oxydisulfoton	[25]
10028156	B	Ozone	\$
106514	AC	p-Benzoquinone	[100]
59507	AC	p-Chloro-m-cresol	13.20
106478	AC	p-Chloroaniline	DL(P)
106445	A	p-Cresol	3.80
106467	AC	p-Dichlorobenzene	6.84
60117	AC	p-Dimethylaminoazobenzene	[100]
100254	A	p-Dinitrobenzene	205.10
123911	AC	p-Dioxane	DL/.13
100016	AC	p-Nitroaniline	DL(P)
100027	AC	p-Nitrophenol	3.30
99990	A	p-Nitrotoluene	1.12
106503	A	p-Phenylenediamine	[25]
106490	AC	p-Toluidine	62.97
106423	A	p-Xylene	20.00
30525894	A	Paraform	[1000]
30525894	A	Paraformaldehyde	[1000]
123637	AC	Paraldehyde	[1000]
311455	AC	Paraoxon	DL(P)
1910425	B	Paraquat	10.00
2074502	B	Paraquat Methosulfate	10.00
56382	ABC	Parathion	DL(P)
56382	ABC	Parathion-ethyl	DL(P)
298000	ABC	Parathion-methyl	DL(P)
12002038	AB	Paris green	(a)
12674112	A	PCB-1016	(s)
11104282	A	PCB-1221	(s)
11141165	A	PCB-1232	(s)
53469219	A	PCB-1242	(s)
12672296	A	PCB-1248	(s)
11097691	A	PCB-1254	(s)
11096825	A	PCB-1260	(s)
1336363	A	PCBs	1.55
82688	AC	PCNB	1/BG
87865	AC	PCP	3.30
19624227	B	Pentaborane	[25]
608935	AC	Pentachlorobenzene	25.00
-99195	C	Pentachlorodibenzo-p-dioxins	(t{0.5})
-99196	C	Pentachlorodibenzofurans	(t{0.5})
76017	AC	Pentachloroethane	5.37
82688	AC	Pentachloronitrobenzene	1/BG
87865	AC	Pentachlorophenol	3.30
2570265	B	Pentadecylamine	[25]
7758294	A	Pentasodium triphosphate	[1000]
79210	B	Peracetic Acid	[25]
77474	ABC	Perchlorocyclopentadiene	15.20
127184	AC	Perchloroethylene	0.18
56235	AC	Perchloromethane	0.17
594423	AB	Perchloromethylmercaptan	[1000]
62442	AC	Phenacetin	[1000]
85018	A	Phenanthrene	110.00
108952	ABC	Phenol	50.00
70304	AC	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	25.00
15950660	A	Phenol, 2,3,4-trichloro-	[100]
933788	A	Phenol, 2,3,5-trichloro-	25.00
933755	A	Phenol, 2,3,6-trichloro-	10.05
95954	AC	Phenol, 2,4,5-trichloro-	4.56

88062	AC	Phenol, 2,4,6-trichloro-	0.66
131748	A	Phenol, 2,4,6-trinitro-, ammonium salt	DL(P)
120832	AC	Phenol, 2,4-dichloro-	0.96
105679	AC	Phenol, 2,4-dimethyl-	1.51
51285	AC	Phenol, 2,4-dinitro	3.30
87650	AC	Phenol, 2,6-dichloro-	[1000]
88857	ABC	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	0.66
131895	AC	Phenol, 2-cyclohexyl-4,6-dinitro-	DL(P)
534521	ABC	Phenol, 2-methyl-4,6-dinitro-	DL(P)
88755	A	Phenol, 2-nitro-	[1000]
609198	A	Phenol, 3,4,5-trichloro-	19.60
64006	B	Phenol, 3-(1-Methylethyl)-, methylcarbamate	[25]
108394	A	Phenol, 3-methyl-	3.80
315184	AB	Phenol, 4-(di-methylamino)-3,5-dimethyl, methylcarbamate (ester)	10.00
106445	A	Phenol, 4-methyl-	3.80
100027	AC	Phenol, 4-nitro-	3.30
1319773	AC	Phenol, methyl-	3.80
87865	AC	Phenol, pentachloro-	3.30
25167822	A	Phenol, trichloro- (N.O.S.)	[100]
4418660	B	Phenol,2,2'-Thiobis(4-Chloro-6-Methyl)-	[25]
58366	B	Phenoxarsine, 10,10'-Oxydi-	(a)
122098	AC	Phentermine	DL(P)
100470	A	Phenyl cyanide	DL/.17
108985	ABC	Phenyl mercaptan	DL(P)
62533	ABC	Phenylamine	DL/.038
696286	ABC	Phenyldichloroarsine	(a)
25265763	C	Phenylenediamine	[25]
100414	A	Phenylethane	20.00
100425	A	Phenylethylene	14.00
59881	B	Phenylhydrazine Hydrochloride	[25]
62384	ABC	Phenylmercuric acetate	DL/.024
2097190	B	Phenylsilatrane	[25]
103855	ABC	Phenylthiocarbamide	DL(P)
298022	ABC	Phorate	DL(P)
62442	AC	Phorazetim	[1000]
4104147	B	Phosacetim	[25]
947024	B	Phosfolan	[25]
75445	ABC	Phosgene	DL(P)
732116	B	Phosmet	[25]
13171216	B	Phosphamidon	[25]
7803512	ABC	Phosphine	DL(P)
50782699	B	Phosphonothioic acid, methyl-, S-(2-(bis(1-methylethyl)amino)ethyl) O-ethyl ester	[25]
2665307	B	Phosphonothioic acid, methyl-,O-(4-nitrophenyl) O-phenyl ester	[25]
2703131	B	Phosphonothioic acid, methyl-,O-ethyl O-(4-(methylthio)phenyl) ester	[25]
7664382	A	Phosphoric acid	(v)
300765	A	Phosphoric acid, 1,2-dibromo-2,2-dichloroethyl dimethyl ester	[100]
62737	AB	Phosphoric acid, 2,2-dichlorovinyl dimethyl ester	1/BG
311455	AC	Phosphoric acid, diethyl-4-nitrophenyl ester	DL(P)
3254635	B	Phosphoric acid, dimethyl 4-(methylthio) phenyl ester	[25]
7558794	A	Phosphoric acid, disodium salt	[1000]
10039324	A	Phosphoric acid, disodium salt, dodecahydrate	[1000]
10140655	A	Phosphoric acid, disodium salt, hydrate	[1000]
7446277	AC	Phosphoric acid, lead (2+) salt	(i)
7601549	A	Phosphoric acid, trisodium salt	[1000]
10361894	A	Phosphoric acid, trisodium salt, decahydrate	[1000]
10101890	A	Phosphoric acid, trisodium salt, dodecahydrate	[1000]
2104645	B	Phosphorodithioc acid, phenyl-o-ethyl-o-(...	[25]
3288582	AC	Phosphorodithioic acid, O,O-diethyl S-methyl ester	[1000]
298022	ABC	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio) methyl] ester	DL(P)



298044	ABC	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio) ethyl] ester	DL(P)
55914	ABC	Phosphorofluoridic acid, bis(1-methylethyl)ester	DL(P)
297972	ABC	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	DL(P)
298000	ABC	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	DL(P)
2587908	B	Phosphorothioic acid, O,O-dimethyl-S-(2-methylthio) ethyl ester	[25]
7719122	AB	Phosphorus chloride	[1000]
10025873	AB	Phosphorus oxychloride	[1000]
10026138	B	Phosphorus Pentachloride	[25]
1314803	A	Phosphorus pentasulfide	[1000]
1314563	B	Phosphorus Pentoxide	[25]
1314803	A	Phosphorus persulfide	[1000]
1314803	A	Phosphorus sulfide	[1000]
7719122	AB	Phosphorus trichloride	[1000]
7723140	AB	Phosphorus, elemental	10.25
10025873	AB	Phosphoryl chloride	[1000]
121755	A	Phosphothion	1/BG
-99197	AC	Phthalic acid esters, N.O.S.	[25]
85449	AC	Phthalic anhydride	[1000]
117806	A	Phygon	[25]
57476	B	Physostigmine	[25]
57647	B	Physostigmine, Salicylate (1:1)	[25]
124878	B	Picrotoxin	[25]
110894	B	Piperidine	[25]
100754	AC	Piperidine, 1-Nitroso-	[100]
23505411	B	Pirimifos-Ethyl	[25]
1336363	AC	Polychlorinated biphenyls, NOS	(s)
130498292	A	Polynuclear aromatic hydrocarbons	5.00
30525894	A	Polyoxymethylene	[1000]
53467111	A	Poly[oxy(methyl-1,2-ethanediyl)], alpha-[2,4-dichloro-phenoxy]acetyl]-n-butoxy-	[25]
28300745	A	Potassium antimonyl d-tartrate	(b)
7784410	A	Potassium arsenate	(a)
10124502	AB	Potassium arsenite	(a)
7778509	A	Potassium bichromate	(f)
7789006	A	Potassium chromate	(f)
151508	ABC	Potassium cyanide	(r)
7778509	A	Potassium dichromate	(f)
1310583	A	Potassium hydrate	(v)
1310583	A	Potassium hydroxide	(v)
10124502	AB	Potassium metaarsenite	(a)
7722647	A	Potassium permanganate	[1000]
506616	ABC	Potassium silver cyanide	(r)
2631370	B	Promecarb	[25]
23950585	AC	Pronamide	[1000]
2312358	A	Prop-2-ynyl 2-(4-tert-butylphenoxy) cyclohexyl sulfite	[100]
96184	AC	Propane, 1,2,3-trichloro-	0.54
108601	AC	Propane, 2,2'-oxybis[1-chloro-	[1000]
109773	ABC	Propanedinitrile	10.25
107120	ABC	Propanenitrile	DL(P)
75865	ABC	Propanenitrile, 2-hydroxy-2-methyl-	\$
542767	ABC	Propanenitrile, 3-chloro-	DL(P)
79094	A	Propanoic acid	[1000]
123626	A	Propanoic anhydride	[1000]
2312358	A	Propargite	[100]
107197	AC	Propargyl alcohol	DL(P)
106967	B	Propargyl Bromide	[25]
75569	AB	Propene oxide	[1000]
542756	AC	Propene, 1,3-dichloro-	0.20
57578	B	Propiolactone, Beta-	[25]
79094	A	Propionic acid	[1000]
123626	A	Propionic anhydride	[1000]
107120	ABC	Propionitrile	DL(P)
70699	B	Propiophenone, 4-Amino-	[25]

109615	B	Propyl Chloroformate	[25]
4170303	ABC	Propylene aldehyde	[1000]
26638197	AC	Propylene dichloride	[1000]
78875	AC	Propylene dichloride	0.02
75569	AB	Propylene oxide	[1000]
51525	C	Propylthiouracil	[25]
2275185	B	Prothoate	[25]
74908	ABC	Prussic acid	(r)
129000	AB	Pyrene	500.00
121211	A	Pyrethrin I	10.00
121299	A	Pyrethrin II	10.00
8003347	A	Pyrethrins and Pyrethroids	10.00
8003347	A	Pyrethrum	10.00
121211	A	Pyrethrum I	10.00
110861	AC	Pyridine	DL/.038
109068	AC	Pyridine, 2-methyl-	[1000]
140761	B	Pyridine, 2-Methyl-5-Vinyl-	[25]
91805	AC	Pyridine, 2-[(2-(dimethylamino)ethyl)-2-thienylamino]-	[1000]
504245	ABC	Pyridine, 4-amino-	DL(P)
1124330	B	Pyridine, 4-Nitro-, 1-Oxide	[25]
100754	AC	Pyridine, hexahydro-N-nitroso-	[100]
53558251	B	Pyriminil	[25]
98011	A	Pyromucic aldehyde	DL/.012
107493	ABC	Pyrophosphoric acid, tetraethyl ester	DL(P)
8014957	A	Pyrosulfuric acid	(v)
930552	AC	Pyrrole, tetrahydro-N-nitroso-	DL/.14
930552	AC	Pyrrolidine, 1-nitroso-	DL/.14
91225	A	Quinoline	DL/.51
106514	AC	Quinone	[100]
82688	AC	Quintozene	1/BG
-99198	A	Radionuclides	(y)
7723140	AB	Red phosphorus	10.25
50555	AC	Reserpine	[1000]
108463	AC	Resorcin	DL/.030
108463	AC	Resorcinol	DL/.030
2303164	AC	S-(2,3-Dichloroallyl) diisopropyl-thiocarbamate	196.13
81072	AC	Saccharin (and salts)	\$
94597	AC	Safrole	[1000]
14167181	B	Salcomine	[25]
107448	B	Sarin	[25]
626380	A	sec-Amyl acetate	[1000]
94791	A	sec-Butyl 2,4-dichlorophenoxyacetate	[1000]
105464	A	sec-Butyl acetate	[1000]
13952846	A	sec-Butylamine	[1000]
513495	A	sec-Butylamine, (S)-	[1000]
7783008	ABC	Selenious acid (H <sub>2</sub> SeO <sub>3</sub> )	(L)
10102188	AB	Selenious acid (H <sub>2</sub> SeO <sub>3</sub> ), disodium salt	(L)
12039520	AC	Selenious acid, dithallium(1+) salt	DL(P)
7782823	A	Selenious acid, monosodium salt	(L)
7782492	AC	Selenium	36.00
-99199	AC	Selenium compounds, N.O.S.	(L)
7446084	A	Selenium dioxide	(L)
7488564	AC	Selenium disulfide	(L)
7446084	A	Selenium oxide	(L)
7791233	B	Selenium Oxychloride	(L)
630104	AC	Selenourea	DL(P)
7783008	ABC	Selenous acid	(L)
563417	B	Semicarbazide Hydrochloride	[25]
63252	A	Sevin	1/BG
3037727	B	Silane, (4-Aminobutyl)Diethoxymethyl-	[25]
7440224	AC	Silver	10/BG
-99200	AC	Silver compounds, N.O.S.	(m)
506649	AC	Silver cyanide (AgCN)	(r)
7761888	A	Silver nitrate	(m)
93721	AC	Silvex	10.00

1310732	A	Soda lye	(v)
7440235	A	Sodium (elemental)	\$
7631905	A	Sodium acid sulfite	[1000]
7631892	AB	Sodium arsenate	(a)
7784465	AB	Sodium arsenite	(a)
26628228	AB	Sodium azide (Na(N3))	DL(P)
10588019	A	Sodium bichromate	(f)
1333831	A	Sodium bifluoride	[1000]
7631905	A	Sodium bisulfite	[1000]
124652	B	Sodium cacodylate	(a)
7775113	A	Sodium chromate	(f)
143339	ABC	Sodium cyanide (NaCN)	(r)
10588019	A	Sodium dichromate	(f)
25155300	A	Sodium dodecylbenzene sulfonate	[1000]
7681494	A	Sodium fluoride	[1000]
62748	ABC	Sodium fluoroacetate	DL(P)
10124568	A	Sodium hexametaphosphate	[1000]
16721805	A	Sodium hydrogen sulfide	[1000]
7631905	A	Sodium hydrogen sulfite	[1000]
16721805	A	Sodium hydrosulfide	[1000]
1310732	A	Sodium hydroxide	(v)
7681529	A	Sodium hypochlorite	[1000]
10022705	A	Sodium hypochlorite pentahydrate	[1000]
7784465	AB	Sodium metaarsenite	(a)
124414	A	Sodium methoxide	[1000]
124414	A	Sodium methylate	[1000]
7632000	A	Sodium nitrite	[1000]
10101890	A	Sodium phosphate dodecahydrate	[1000]
7558794	A	Sodium phosphate, dibasic	[1000]
10039324	A	Sodium phosphate, dibasic, dodecahydrate	[1000]
10140655	A	Sodium phosphate, dibasic, hydrate	[1000]
7601549	A	Sodium phosphate, tribasic	[1000]
7758294	A	Sodium phosphate, tribasic	[1000]
10124568	A	Sodium phosphate, tribasic	[1000]
7785844	A	Sodium phosphate, tribasic	[1000]
10101890	A	Sodium phosphate, tribasic, dodecahydrate	[1000]
13410010	B	Sodium Selenate	(L)
10102188	AB	Sodium selenite, disodium salt	(L)
7782823	A	Sodium selenite, monosodium salt	(L)
10102202	B	Sodium Tellurite	[25]
7785844	A	Sodium trimetaphosphate	[1000]
7758294	A	Sodium tripolyphosphate	[1000]
900958	B	Stannane, Acetoxytriphenyl-	[25]
56531	AC	Stilbestrol	DL
18883664	AC	Streptozocin	[25]
18883664	AC	Streptozotocin	[25]
7789062	A	Strontium chromate	(f)
57249	ABC	Strychnidin-10-one	DL(P)
357573	AC	Strychnidin-10-one, 2,3-dimethoxy-	DL(P)
57249	ABC	Strychnine and salts	DL(P)
60413	B	Strychnine sulfate	[25]
100425	A	Styrene	14.00
7773060	A	Sulfamic acid monoammonium salt	[1000]
3689245	ABC	Sulfotep	DL(P)
3569571	B	Sulfoxide, 3-Chloropropyl Octyl	[25]
12771083	A	Sulfur chloride	[1000]
7446095	B	Sulfur Dioxide	(v)
7783064	ABC	Sulfur hydride	[1000]
12771083	A	Sulfur monochloride	[1000]
1314803	A	Sulfur phosphide	[1000]
7488564	AC	Sulfur selenide	(L)
7783600	B	Sulfur Tetrafluoride	[25]
7446119	B	Sulfur Trioxide	(v)
7664939	AB	Sulfuric acid	(v)
7446186	ABC	Sulfuric acid, dithallium (1+) salt	(n)

7782630	A	Sulfuric acid, iron(2+) salt (1:1), heptahydrate	[1000]
7446142	A	Sulfuric acid, lead(2+) salt (1:1)	(i)
8014957	A	Sulfuric acid, mixture with sulfur trioxide	(v)
10031591	AB	Sulfuric acid, thallium(I) salt	(n)
7790945	A	Sulfuric chlorohydrin	[1000]
121755	A	Sumitox	1/BG
99354	AC	sym-Trinitrobenzene	DL/.07
77816	B	Tabun	[25]
14307438	A	Tartaric acid ammonium salt	[1000]
1746016	AC	TCDD, 2,3,7,8-	8.0E-5
79016	AC	TCE	0.13
72548	AC	TDE	0.66
13494809	B	Tellurium	[25]
7783804	B	Tellurium Hexafluoride	[25]
116063	ABC	Temik	DL(P)
107493	ABC	TEPP	DL(P)
13071799	B	Terbufos	12.82
82688	AC	Terraclor	1/BG
625161	A	tert-Amyl acetate	[1000]
540885	A	tert-Butyl acetate	[1000]
75649	A	tert-Butylamine	[1000]
-99201	C	Tetrachlorodibenzo-p-dioxins	(t)
-99202	C	Tetrachlorodibenzofurans	(t{0.1})
72548	AC	Tetrachlorodiphenylethane	0.66
25322207	C	Tetrachloroethane, N.O.S.	[1000]
127184	AC	Tetrachloroethene	0.18
127184	AC	Tetrachloroethylene	0.18
56235	AC	Tetrachloromethane	0.17
3689245	ABC	Tetraethyldithiopyrophosphate	DL(P)
78002	ABC	Tetraethyllead	DL(P)
107493	ABC	Tetraethylpyrophosphate	DL(P)
597648	B	Tetraethyltin	[25]
109999	A	Tetrahydrofuran	DL/.014
75741	B	Tetramethyllead	(i)
509148	ABC	Tetranitromethane	DL(P)
757584	AC	Tetraphosphoric acid, hexaethyl ester	DL(P)
1314325	AC	Thallic oxide (Tl2O3)	(n)
7440280	AC	Thallium	10/BG
563688	AC	Thallium (I) acetate	(n)
6533739	ABC	Thallium (I) carbonate	(n)
7791120	ABC	Thallium (I) chloride	(n)
10102451	AC	Thallium (I) nitrate	(n)
7446186	ABC	Thallium (I) sulfate	(n)
1314325	AC	Thallium (III) oxide	DL(P)
-99203	AC	Thallium compounds, N.O.S.	(n)
12039520	AC	Thallium selenite	DL(P)
10031591	AB	Thallium sulfate	(n)
12039520	AC	Thallium(I) selenide	DL(P)
7791120	ABC	Thallos chloride	(n)
2757188	B	Thallos Malonate	(n)
10031591	AB	Thallos sulfate	(n)
7446186	ABC	Thallos sulfate	(n)
298022	ABC	Thimet	DL(P)
62555	AC	Thioacetamide	[100]
2231574	B	Thiocarbazine	[25]
1762954	A	Thiocyanic acid ammonium salt	[1000]
115297	ABC	Thiodan	3.30
39196184	ABC	Thiofanox	DL(P)
541537	ABC	Thioimidodicarbonic diamide	DL(P)
74931	ABC	Thiomethanol	[1000]
297972	ABC	Thionazin	DL(P)
137268	AC	Thioperoxydicarbonic diamide, tetramethyl	10.00
108985	ABC	Thiophenol	DL(P)
1314803	A	Thiophosphoric anhydride	[1000]
3689245	ABC	Thiopyrophosphoric acid [(HO)2P(S)]2O), tetraethyl ester	DL(P)

79196	ABC	Thiosemicarbazide	DL(P)
62566	AC	Thiourea	[100]
5344821	ABC	Thiourea, (2-chlorophenyl)-	DL(P)
614788	B	Thiourea, (2-Methylphenyl)-	[25]
86884	ABC	Thiourea, 1-naphthalenyl-	DL(P)
103855	ABC	Thiourea, phenyl-	DL(P)
137268	AC	Thiram	10.00
137268	AC	Thiuram	10.00
7550450	B	Titanium Tetrachloride	[25]
75503	A	TMA	[1000]
509148	ABC	TNM	DL(P)
108883	AC	Toluene	14.40
91087	AB	Toluene diisocyanate	[1000]
95807	AC	Toluene, 2,4-diamino-	3.74
26471625	AC	Toluene-1,3-diisocyanate	[1000]
584849	AB	Toluene-2,4-diisocyanate	[1000]
25376458	AC	Toluenediamine	[100]
8001352	ABC	Toxaphene	10.88
57749	ABC	Toxichlor	9.20
156605	AC	trans-1,2-Dichloroethene	0.53
110178	A	trans-1,2-Ethylenedicarboxylic acid	[1000]
110576	B	Trans-1,4-Dichlorobutene	[25]
1031476	B	Triamiphos	[25]
24017478	B	Triazofos	[25]
75252	AC	Tribromomethane	1.0
7778441	AB	Tricalcium orthoarsenate	(a)
52686	A	Trichlorfon	10.00
1558254	B	Trichloro(Chloromethyl)Silane	[25]
27137855	B	Trichloro(Dichlorophenyl)Silane	[25]
75876	AC	Trichloroacetaldehyde	[1000]
76028	B	Trichloroacetyl Chloride	[25]
79016	AC	Trichloroethene	0.13
79016	AC	Trichloroethylene	0.13
115219	B	Trichloroethylsilane	[25]
75694	AC	Trichlorofluoromethane	0.70
67663	ABC	Trichloromethane	0.68
594423	AB	Trichloromethanesulfenyl chloride	[1000]
75707	C	Trichloromethanethiol	DL(P)
327980	B	Trichloronate	[25]
25167822	A	Trichlorophenol, N.O.S.	[100]
98135	B	Trichlorophenylsilane	[25]
25735299	C	Trichloropropane, N.O.S.	[25]
27323417	A	Triethanolamine dodecylbenzenesulfonate	[1000]
998301	B	Triethoxysilane	[25]
121448	A	Triethylamine	[1000]
75503	A	Trimethylamine	[1000]
75774	B	Trimethylchlorosilane	[25]
824113	B	Trimethylolpropane Phosphite	[25]
1066451	B	Trimethyltin Chloride	[25]
639587	B	Triphenyltin Chloride	[25]
7758294	A	Triphosphoric acid, pentasodium salt	[1000]
52244	C	Tris(1-aziridinyl)phosphine sulfide	[25]
126727	AC	Tris(2,3-dibromopropyl)phosphate	25.00
555771	B	Tris(2-Chloroethyl)Amine	[25]
7601549	A	Trisodium phosphate	[1000]
10361894	A	Trisodium phosphate decahydrate	[1000]
7785844	A	Trisodium trimetaphosphate	[1000]
72571	AC	Trypan blue	[100]
57147	ABC	UDMH	4.60
66751	AC	Uracil mustard	[100]
66751	AC	Uracil, 5-[bis(2-chloroethyl)amino]-	[100]
36478769	A	Uranium, bis(nitrato-O,O')dioxo-	[1000]
541093	A	Uranyl acetate	[1000]
10102064	A	Uranyl nitrate	[1000]
36478769	A	Uranyl nitrate, 1,1'-dioxo-	[1000]

759739	AC	Urea, N-ethyl-N-nitroso-	DL
684935	AC	Urea, N-methyl-N-nitroso-	[25]
51796	AC	Urethane	[1000]
2001958	B	Valinomycin	[25]
1314621	ABC	Vanadic acid anhydride	(p)
7803556	AC	Vanadic acid, ammonium salt	(p)
1314621	ABC	Vanadic anhydride	(p)
27774136	A	Vanadic sulfate	(p)
1314621	ABC	Vanadium oxide (V2O5)	(p)
1314621	ABC	Vanadium pentoxide	(p)
27774136	A	Vanadium sulfate	(p)
-99000		Vanadium {reference only, not regulated substance}	100/BG
27774136	A	Vanadyl sulfate	(p)
7681494	A	Villaumite	[1000]
108054	AB	Vinyl acetate	0.51
107186	ABC	Vinyl carbinol	DL(P)
75014	AC	Vinyl chloride	0.04
107131	ABC	Vinyl cyanide	1.37
4549400	AC	Vinylamine, N-methyl-N-nitroso-	DL(P)
100425	A	Vinylbenzene	14.00
75354	AC	Vinylidene chloride	0.36
7723140	AB	Violet phosphorus	10.25
81812	ABC	Warfarin and salts	DL(P)
129066	B	Warfarin Sodium	10.00
7723140	AB	White phosphorus	10.25
1330207	A	Xylene (total)	20.00
1330207	A	Xylenes	20.00
1300716	A	Xylenol	307.64
28347139	B	Xylylene Dichloride	[25]
1303339	A	Yellow arsenic sulfide	(a)
7723140	AB	Yellow phosphorus	10.25
7440666	A	Zinc	2800.00
557346	A	Zinc acetate	(q)
14639986	A	Zinc ammonium chloride	(q)
14639975	A	Zinc ammonium chloride	(q)
52628258	A	Zinc ammonium chloride	(q)
-99206	A	Zinc and compounds	(q)
1332076	A	Zinc borate	(q)
7699458	A	Zinc bromide	(q)
3486359	A	Zinc carbonate	(q)
7646857	A	Zinc chloride	(q)
557211	AC	Zinc cyanide	(r)
7783495	A	Zinc fluoride	(q)
16871719	A	Zinc fluosilicate	(q)
557415	A	Zinc formate	(q)
7779864	A	Zinc hydrosulfite	(q)
7779886	A	Zinc nitrate	(q)
127822	A	Zinc p-phenolsulfonate	(q)
1314847	ABC	Zinc phosphide (Zn3P2)	DL(P)
16871719	A	Zinc silicofluoride	(q)
7733020	A	Zinc sulfate	(q)
127822	A	Zinc sulfocarbonate	(q)
7733020	A	Zinc vitriol	(q)
58270089	B	Zinc, dichloro(4,4-dimethyl-5(((methylamino) carbonyl)oxy)imino)pentanenitrile)-, (T-4)-.	[25]
14639975	A	Zincate(2-), tetrachloro-, diammonium, (T-4)-	(q)
14639986	A	Zincate(3-), pentachloro-, triammonium	(q)
297972	ABC	Zinophos	DL(P)
13746899	A	Zirconium nitrate	[1000]
16923958	A	Zirconium potassium fluoride	[1000]
14644612	A	Zirconium sulfate	[1000]
10026116	A	Zirconium tetrachloride	[1000]

LEGEND:

*aE-b* Scientific notation for a number, e.g. "4E-5" means  $4 \times 10^{-5}$ , which equals 0.00004.

[ ] Default value based on federal reportable quantities from Sources A and B.

DL An NC for the substance shall be the detection limit as defined in this chapter.

DL(P) An NC for the substance shall be the detection limit as defined in this chapter because the substance is elsewhere classified as an acute hazardous waste.

DL/ The detection limit as defined in this chapter shall be an NC, unless the detection limit is lower than the number following the slash, in which case the numerical value shall supplant the detection limit as an NC.

/BG The numerical value preceeding the slash shall be an NC, unless the background concentration is greater, in which case the background value shall supplant the numerical value as an NC.

§ An NC for this substance has not been established either because a hazard of exposure to the substance is improbable from a contaminated soil context or because a hazard exists only in the contexts covered by Rule 391-3-19-.04(3)(c).

(a)-(q) Applicable NCs shall be the NC for the elemental form of each metal given below. For those substances which are compounds meeting more than one listing (e.g., lead arsenate) or which are not specifically listed in the table but which are described by one or more general categories (e.g., mercuric dichromate → "mercury compounds, n.o.s." and "chromium compounds, n.o.s."), all applicable NCs must be considered.

(a) arsenic 41 (mg/kg)

(b) antimony 10/BG

(c) barium 500/BG

(d) beryllium 3/BG

(e) cadmium 39

(f) chromium 1200

(g) cobalt 25/BG

(h) copper 1500

(i) lead 400

(j) mercury 17

(k) nickel 420

(L) selenium 36

(m) silver 10/BG

(n) thallium 10/BG

(p) vanadium 100/BG

(q) zinc 2800

(r) NCs shall be that for "Cyanides {CN<sup>-</sup> anion}" and that for any other applicable listing.

(s) The NC for this substance shall be that given for "PCBs".

(t) The NC for this substance shall be the 2,3,7,8-TCDD Toxic Equivalent, which is the NC for 2,3,7,8-TCDD divided by the Toxic Equivalency Factor shown in braces.

(u) Releases shall be reported if the concentration of the substance in the soil is such that the soil meets the ignitability criteria of 40 CFR 261.21(a)(2).

(v) Releases shall be reported if the concentration of this substance in the soil is such that the soil exhibits a pH less than 2 or greater than 12.5, respectively.

(w) Releases shall be reported if a contaminated soil has any of the properties by which solid wastes are determined to exhibit the characteristic of reactivity in 40 CFR 261.23(a).

(x) An NC shall be that for the substance in parentheses.

(y) For radionuclides, releases shall be reported if the direct ionizing radiation (exposure rate), as measured one (1) meter above the soil surface, is greater than fifty (50) microrentgens per hour (μR/hr) above the local background level, or the measured radionuclide concentration in soil is sufficient to deliver a dose to any individual of 25 millirem per year (mrem/yr) Committed Effective Dose Equivalent (CEDE) or 75 mrem/yr Committed Dose Equivalent (CDE) to any organ.

(z) NCs for this hazardous waste shall be all NCs for each hazardous constituent which is a basis for listing the waste, as defined by 40 CFR Part 261 Appendix VII.

APPENDIX II  
REPORTABLE QUANTITIES SCREENING METHOD

This Appendix describes the method that will be used by the Director to determine if a release exceeds a reportable quantity. If the Reportable Quantities Screening Method (RQSM) indicates that a release exceeds a reportable quantity, the property owner will be required to report the release in accordance with Rule 391-3-19-.05 and the site will be listed on the Hazardous Site Inventory.

Sites that exceed a threshold score for either or both of the two pathways are considered to have had a release that exceeds a reportable quantity. The threshold score for the "groundwater" pathway is 10.0 and the threshold score for the "on-site exposure" pathway is 20.0.

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GEORGIA ENVIRONMENTAL PROTECTION DIVISION

REPORTABLE QUANTITIES SCREENING METHOD

FOR

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(Name of Site)

---

(City)

(State)

SCORED BY: \_\_\_\_\_ ON: \_\_\_\_\_

Threshold

GROUND WATER PATHWAY SCORE(     )     10

ON-SITE PATHWAY SCORE     (     )     20



## GROUND WATER

- | A. | Has a release to ground water occurred? | <u>Known</u><br>(45) | <u>Suspected</u><br>(10) | <u>Potential Future</u><br>(5) |
|----|---|----------------------|--------------------------|--------------------------------|
|----|---|----------------------|--------------------------|--------------------------------|

If  $A=45$ , then go to D

### B. ROUTE CHARACTERISTICS

- |     |                        |                      |                       |                     |
|-----|------------------------|----------------------|-----------------------|---------------------|
| 1b. | Susceptibility Rating: | <u>Higher</u><br>(6) | <u>Average</u><br>(3) | <u>Lower</u><br>(0) |
|-----|------------------------|----------------------|-----------------------|---------------------|

- |     |                 |                               |                                 |                              |                                      |
|-----|-----------------|-------------------------------|---------------------------------|------------------------------|--------------------------------------|
| 2b. | Physical State: | Stable<br><u>Solid</u><br>(0) | Unstable<br><u>Solid</u><br>(1) | Powder,<br><u>Ash</u><br>(2) | Liquid, Gas,<br><u>Sludge</u><br>(3) |
|-----|-----------------|-------------------------------|---------------------------------|------------------------------|--------------------------------------|

- | C. | CONTAINMENT | <u>Very Good</u><br>(0) | <u>Good</u><br>(1) | <u>Fair</u><br>(2) | <u>Poor</u><br>(3) |
|----|-------------|-------------------------|--------------------|--------------------|--------------------|
|----|-------------|-------------------------|--------------------|--------------------|--------------------|

#### D. RELEASE CHARACTERISTICS

- 1d. Regulated Substance:

- 2d. Toxicity:      None   (0)   Low   (1)   (2)   (4)   (8)   (16)   High

- 3d. Quantity: Threshold (1) (2) (3) (4) (5) (6) (7) (8) Very Large

## E. TARGETS

- 1e. Exposure to ground water release:

Known release > MCL, and known human exposure  $\geq$  MCL..... (25)

Known release  $\geq$  MCL, and suspected human exposure ..... (20)

Known release, no MCL exists, and known human exposure ..... (18)

Known release  $\geq$  MCL, and known human exposure  $<$  MCL..... (15)

Known release, no MCL exists, and suspected human exposure ..... (12)

Suspected release and human exposure suspected ..... (8)

Known release  $\geq$  MCL, but no human exposure suspected ..... (4)

Known release, no MCL exists, and no human exposure suspected ..... (3)

Suspected release but no human exposure suspected..... (2)

Potential future release ..... (1)

Known release less than MCL ..... (0)

(only one choice allowed)

- |     |                                    |                     |                                 |                               |                               |                  |
|-----|------------------------------------|---------------------|---------------------------------|-------------------------------|-------------------------------|------------------|
| 2e. | Distance to well or spring (miles) | $\frac{<1/2}{(16)}$ | $\frac{1/2 \text{ to } 1}{(9)}$ | $\frac{1 \text{ to } 2}{(4)}$ | $\frac{2 \text{ to } 3}{(1)}$ | $\frac{>3}{(0)}$ |
|-----|------------------------------------|---------------------|---------------------------------|-------------------------------|-------------------------------|------------------|

THE GROUND WATER PATHWAY SCORE ( $S_{gw}$ ) IS CALCULATED AS FOLLOWS:

$$S_{gw} = M \times (2d + 3d) \times (1e + 2e) / 442.8$$

$$\text{where: } M = A + ((1b + 2b) \times C)$$

$$\text{If } A = 45 \text{ then } M = 45$$

$$\text{If } 2d \text{ is unknown, then } 2d=4$$

$$\text{If } 3d \text{ is unknown, then } 3d=4$$

$$\text{If } 1e \text{ includes known or suspected human exposure, } 2e = 16$$

$$\text{If } 1e = 0 \text{ then } 2e = 1$$

Note: The denominator of 442.8 normalizes the ground water score to a value between 0 and 100.

## ON-SITE EXPOSURE

A.	ACCESS TO SITE:	<u>Inaccessible</u> (0)	<u>Limited Access</u> (2)	<u>Unlimited Access</u> (4)
B.	HAS THERE BEEN A RELEASE?	<u>Yes</u> (25)	<u>Suspected</u> (15)	<u>No</u> (0)
C.	CONTAINMENT			
		<u>Very Good</u>		<u>Poor</u>
	Soil Releases:	(0)	(1)	(2)
	or			(3)
	Aboveground releases:	(0)	(1)	(2)
				(3)
D.	RELEASE CHARACTERISTICS			
1d.	Regulated Substance:	_____		
2d.	Toxicity:	<u>None</u> (0)	<u>Low</u> (1)	(2)
			(4)	(8)
			(16)	<u>High</u>
3d.	Quantity:	<u>Threshold</u> (1)	(2)	(3)
			(4)	(5)
			(6)	(7)
			(8)	<u>Very Large</u>
E.	TARGETS			
1e.	Distance (feet) to nearest resident individual	<u>&lt;300</u> (8)	<u>301 to 1000</u> (6)	<u>1001 to 3000</u> (4)
			<u>3001 to 5280</u> (2)	<u>&gt;1 mile</u> (1)
2e.	Is there an on-site sensitive environment?	<u>Yes</u> (1)	<u>No</u> (0)	

---

THE ON-SITE PATHWAY SCORE ( $S_o$ ) IS CALCULATED AS FOLLOWS:

$$S_o = A \times (B + C) \times (2d + 3d) \times (1e + 2e) / 259.2$$

If A or B = 0, then  $S_o = 0$

If 2d is unknown, then 2d = 4

If 3d is unknown, then 3d = 4

Note: The denominator of 259.2 normalizes the score to a value between 0 and 100.

**APPENDIX III**  
**MEDIA TARGET CONCENTRATIONS AND STANDARD EXPOSURE ASSUMPTIONS**

Table 1. Groundwater Criteria

CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
83329	Acenaphthene	2
67641	Acetone	4
75058	Acetonitrile	0.2
98862	Acetophenone	4
107028	Acrolein	0.7
79061	Acrylamide	0.0001 (a)
107131	Acrylonitrile	0.0006 (a)
116063	Aldicarb	0.007
309002	Aldrin	0.00002 (a)
7664417	Ammonia	30
62533	Aniline	0.006 (a)
7440360	Antimony	0.006 (a)
140578	Aramite	0.001 (a)
7440382	Arsenic	0.05
1332214	Asbestos [fibers longer than 10 $\mu$ m]	7 million/liter
7440393	Barium	2
56553	Benz(a)anthracene	0.0001
71432	Benzene	0.005
92875	Benzidine	0.0000002 (a)
50328	Benzo(a)pyrene	0.0002
205992	Benzo(b)fluoranthene	0.0002
100447	Benzyl chloride	0.0002 (a)
7440417	Beryllium	0.004
111444	Bis(2-chloroethyl) ether	0.00003 (a)
75252	Bromoform	see Trihalomethanes
85687	Butyl benzyl phthalate	0.1
7440439	Cadmium	0.005

CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
63252	Carbaryl	0.7
1563662	Carbofuran	0.04
75150	Carbon disulfide	4
56235	Carbon tetrachloride	0.005
57749	Chlordane	0.002
126998	Chloro-1,3-butadiene, 2-	0.7
106478	Chloroaniline, p-	0.1
108907	Chlorobenzene	0.1
510156	Chlorobenzilate	0.7
124481	Chlorodibromomethane	see Trihalomethanes
67663	Chloroform	see Trihalomethanes
95578	Chlorophenol, 2-	0.04
107051	Chloropropene, 3-	0.002
2921882	Chlorpyrifos	0.02
7440473	Chromium	0.1
218019	Chrysene	0.0002 (a)
7440508	Copper	1.3
57125	Cyanide	0.2
72548	DDD	0.0001
72559	DDE	0.0001
50293	DDT	0.0001
75990	Dalapon	0.2
117840	Di-n-octyl phthalate	0.7
2303164	Diallate	0.0006 (a)
333415	Diazinon	0.0006
53703	Dibenz(a,h)anthracene	0.0003
96128	Dibromochloropropane	0.0002
84742	Dibutyl phthalate	4
1918009	Dicamba	0.2
541731	Dichlorobenzene, m-	0.6
95501	Dichlorobenzene, o-	0.6

CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
106467	Dichlorobenzene, p-	0.075
91941	Dichlorobenzidine, 3,3'-	0.00008 (a)
75274	Dichlorobromomethane	see Trihalomethanes
75718	Dichlorodifluoromethane	1
75343	Dichloroethane, 1,1-	4
107062	Dichloroethane, 1,2-	0.005
75354	Dichloroethylene, 1,1-	0.007
156605	Dichloroethylene, trans-1,2-	0.1
108601	Dichloroisopropyl ether	0.3
120832	Dichlorophenol, 2,4-	0.02
94757	Dichlorophenoxyacetic acid, 2,4-	0.07
78875	Dichloropropane, 1,2-	0.005
542756	Dichloropropene, 1,3-	0.002
60571	Dieldrin	0.00002 (a)
84662	Diethyl phthalate	5
123911	Diethylene dioxide, 1,4-	0.07 (a)
117817	Diethylhexyl phthalate	0.006
60515	Dimethoate	0.007
119904	Dimethoxybenzidine, 3,3'-	0.003 (a)
131113	Dimethyl phthalate	400
57976	Dimethylbenz(a)anthracene, 7,12-	0.000001 (a)
119937	Dimethylbenzidine, 3,3'-	0.000004 (a)
105679	Dimethylphenol, 2,4-	0.7
99650	Dinitrobenzene, m-	0.001 (a)
51285	Dinitrophenol, 2,4-	0.07
121142	Dinitrotoluene, 2,4-	0.00005 (a)
88857	Dinoseb	0.007
122394	Diphenylamine	0.2
122667	Diphenylhydrazine, 1,2-	0.00004 (a)
2764729	Diquat [di-cationic form]	0.02
85007	Diquat dibromide	0.02

CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
298044	Disulfoton	0.0003
115297	Endosulfan (mixed isomers)	0.002
145733	Endothall	0.1
72208	Endrin	0.002
106898	Epichlorohydrin	0.04
110805	Ethoxyethanol, 2-	10
60297	Ethyl ether	7
97632	Ethyl methacrylate	3
62500	Ethyl methanesulfonate	0.000001 (a)
100414	Ethylbenzene	0.7
106934	Ethylene dibromide	0.00005
52857	Famphur	0.001
22224926	Fenamiphos	0.002
206440	Fluoranthene	1
86737	Fluorene	1
16984488	Fluoride	4
944229	Fonofos	0.01
50000	Formaldehyde	1
64186	Formic acid	70
76448	Heptachlor	0.0004
1024573	Heptachlor epoxide	0.0002
118741	Hexachlorobenzene	0.001
87683	Hexachlorobutadiene	0.001 (a)
319846	Hexachlorocyclohexane (alpha)	0.000006 (a)
319857	Hexachlorocyclohexane (beta)	0.00002 (a)
77474	Hexachlorocyclopentadiene	0.05
67721	Hexachloroethane	0.001 (a)
70304	Hexachlorophene	0.01
193395	Indeno(1,2,3-cd)pyrene	0.0004
78831	Isobutyl alcohol	10
78591	Isophorone	0.1

CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
143500	Kepone	0.000002 (a)
7439921	Lead	0.015
58899	Lindane	0.0002
121755	Malathion	0.2
7439976	Mercury (inorganic)	0.002
126987	Methacrylonitrile	0.004 (a)
67561	Methanol	20 (a)
16752775	Methomyl	0.2
72435	Methoxychlor	0.04
74839	Methyl bromide	0.01
74873	Methyl chloride	0.003
78933	Methyl ethyl ketone	2
80626	Methyl methacrylate	3
298000	Methyl parathion	0.002
74953	Methylene bromide	0.4
75092	Methylene chloride	0.005
108101	Methylisobutylketone	2
924163	N-Nitrosodi-n-butylamine	0.000006 (a)
621647	N-Nitrosodi-n-propylamine	0.000005 (a)
55185	N-Nitrosodiethylamine	0.0000002 (a)
62759	N-Nitrosodimethylamine	0.0000007 (a)
10595956	N-Nitrosomethylethylamine	0.000002 (a)
100754	N-Nitrosopiperidine	0.000008 (a)
930552	N-Nitrosopyrrolidine	0.00002 (a)
91203	Naphthalene	0.02
91598	Naphthylamine, 2-	0.00004 (a)
7440020	Nickel	0.1
98953	Nitrobenzene	0.02
100027	Nitrophenol, p-	0.06
1336363	PCBs	0.0005
1910425	Paraquat	0.03



CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
56382	Parathion	0.2
608935	Pentachlorobenzene	0.03
82688	Pentachloronitrobenzene	0.0001
87865	Pentachlorophenol	0.001
108952	Phenol	4
298022	Phorate	0.007
7723140	Phosphorus, elemental	0.0001
23950585	Pronamide	0.05
129000	Pyrene	1
110861	Pyridine	0.04
94597	Safrole	0.0001 (a)
7782492	Selenium	0.05
7440224	Silver	0.1
93721	Silvex	0.05
100425	Styrene	0.1
1746016	TCDD, 2,3,7,8- [Dioxin]	$3 \times 10^{-8}$ (a)(b)
13071799	Terbufos	0.0009
95943	Tetrachlorobenzene, 1,2,4,5-	0.01
630206	Tetrachloroethane, 1,1,1,2-	0.07
79345	Tetrachloroethane, 1,1,2,2-	0.0002 (a)
127184	Tetrachloroethylene	0.005
58902	Tetrachlorophenol, 2,3,4,6-	1
3689245	Tetraethyldithiopyrophosphate	0.02
7440280	Thallium	0.002 (a)
108883	Toluene	1
95534	Toluidine, o-	0.0001 (a)
106490	Toluidine, p-	0.0002 (a)
8001352	Toxaphene	0.003
76131	Trichloro-1,2,2-trifluoroethane, 1,1,2-	1000
120821	Trichlorobenzene, 1,2,4-	0.07

CAS Number	Regulated Substance/Analyte	Concentration (mg/L)
71556	Trichloroethane, 1,1,1-	0.2
79005	Trichloroethane, 1,1,2-	0.005
79016	Trichloroethylene	0.005
75694	Trichlorofluoromethane	2
95954	Trichlorophenol, 2,4,5-	4
88062	Trichlorophenol, 2,4,6-	0.03
93765	Trichlorophenoxyacetic acid, 2,4,5-	0.07
96184	Trichloropropane, 1,2,3-	0.04
	Trihalomethanes, total	0.1
99354	Trinitrobenzene, 1,3,5-	0.002 (a)
126727	Tris(2,3-dibromopropyl)phosphate	0.00003 (a)
7440622	Vanadium	0.2
75014	Vinyl chloride	0.002
1330207	Xylenes (total)	10
7440666	Zinc	2

(a) The health-based drinking water criterion for this substance/analyte is lower than the lowest currently achievable and available detection limit. According to Rule 391-3-19-.07(4)(e), the detection limit or background will be the Type 1 groundwater concentration criterion for this substance/analyte.

(b) For the purposes of Rule 391-3-19-.07, all polychlorinated dibenzodioxins and dibenzofurans are collectively considered as one substance, expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), based on the Toxicity Equivalency Factor approach described in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans," U.S. Environmental Protection Agency, March 1989. Where concentrations only of homologous groups are known (isomer-specific data are not available), the Director must be consulted to determine an appropriate method for determining 2,3,7,8-TCDD equivalents.

Table 2. Type 1 Soil Criteria

<b>Regulated Substance/Analyte</b>	<b>Concentration (mg/kg)</b>
Antimony	4
Arsenic	20
Barium	1000
Beryllium	2
Cadmium	2
Chromium	100
Cobalt	20
Copper	100
Lead	75
Mercury	0.5
Nickel	50
Selenium	2
Silver	2
Thallium	2
Vanadium	100
Zinc	100

Table 3: Parameters, Definitions and Standard Assumptions\*, to be used in Equations 1, 2, 6, and 7 in RAGS, Part B

Parameters	Definitions (Units)	Values
C	Concentration in soil (mg/kg) or water (mg/L)	chemical-specific
TR	Target excess individual lifetime cancer risk (unitless)	10 <sup>-5</sup> for Class A and B carcinogens; 10 <sup>-4</sup> for Class C carcinogens
THI	Target hazard index (unitless)	1
SF <sub>o</sub> **	Oral cancer slope factor ((mg/kg-day) <sup>-1</sup> )	chemical-specific
SF <sub>i</sub> **	Inhalation cancer slope factor ((mg/kg-day) <sup>-1</sup> )	chemical-specific
RfD <sub>o</sub> **	Oral chronic reference dose (mg/kg-day)	chemical-specific
RfD <sub>i</sub> **	Inhalation chronic reference dose (mg/kg-day)	chemical-specific
BW	Adult body weight (kg)	70 kg
AT	Averaging time (yr)	70 yr carcinogens (Equals ED for systemic toxicants)
EF	Exposure frequency (days/yr)	350 days/yr residential 250 days/yr non-residential
ED	Exposure duration (yr)	30 yr residential 25 yr non-residential
IR <sub>w</sub>	Daily water ingestion rate (liter/day)	2 L/day residential 1 L/day non-residential
IR <sub>soil</sub>	Soil ingestion rate (mg/day)	114 mg/day residential 50 mg/day non-residential
IR <sub>air</sub>	Daily inhalation rate (m <sup>3</sup> /day)	15 m <sup>3</sup> /day residential 20 m <sup>3</sup> /day non-residential
PEF	Particulate emission factor (m <sup>3</sup> /kg)	4.63 X 10 <sup>9</sup> m <sup>3</sup> /kg
VF	Soil-to-air volatilization factor (m <sup>3</sup> /kg)	see derivation below
K	Water-to-air volatilization factor (L/m <sup>3</sup> )	0.5 L/m <sup>3</sup>

\*Standard assumptions are required for Type 1 and Type 3 risk reduction standards.

\*\*Values are to be taken from the current version of IRIS or, if not listed in IRIS, from the current version of HEAST. Where data are not available from IRIS or HEAST and appropriate, peer-reviewed data are otherwise available, values may be derived using the procedures described in RAGS, Part A and in consultation with the Director. If a value for only one of the two variables in a variable pair (RfD<sub>o</sub>/RfD<sub>i</sub> or SF<sub>o</sub>/SF<sub>i</sub>) is not available for a particular chemical, the term containing that variable in an equation can be ignored or equated to zero. If neither value is available for a variable pair, a concentration cannot be calculated with the equation.

[Continuation of Table 3]

### Derivation of VF values (Soil-to-Air Volatilization Factor)

$$VF(m^3/kg) = \frac{(LS \times V \times DH)}{A} \times \frac{(\pi \times \alpha \times T)^{1/2}}{(2 \times D_{ei} \times E \times K_{as} \times 10^{-3} \text{ kg/g})}$$

WHERE:

LS	length of side of contaminated area (m)	= 45
V	wind speed in mixing zone (m/s)	= 2.25
DH	diffusion height (m)	= 2
A	area of contamination (cm <sup>2</sup> )	= 2.03 x 10 <sup>7</sup> (= 0.5 acre)
π	pi	= 3.14
α	(cm <sup>2</sup> /s)	$= \frac{(D_{ei} \times E)}{E + (\rho_s)(1 - E)/K_{as}}$
T	exposure interval (s)	= 7.9 x 10 <sup>8</sup> (= 25 yr)
ρ <sub>s</sub>	density of soil solids (g/cm <sup>3</sup> )	= 2.65
OC	soil organic carbon content fraction (unitless)	= 0.02
D <sub>ei</sub>	effective diffusivity (cm <sup>2</sup> /s)	= $D_i \times E^{0.33}$
D <sub>i</sub>	molecular diffusivity (cm <sup>2</sup> /s)	(chemical-specific)
E	total soil porosity (unitless)	= 0.35
K <sub>as</sub>	soil/air partition coefficient (g soil/cm <sup>3</sup> air)	= $(H/K_d) \times 41$
H	Henry's law constant (atm-m <sup>3</sup> /mol)	(chemical specific)
K <sub>d</sub>	soil-water partition coefficient (cm <sup>3</sup> /g)	= $K_{oc} \times OC$ (or chemical specific)
K <sub>oc</sub>	organic carbon partition coefficient (cm <sup>3</sup> /g)	(chemical specific)

## APPENDIX IV GEORGIA ADULT LEAD MODEL

The “Georgia Adult Lead Model” established by this appendix applies to the protection of workers or other adults at nonresidential sites at which it can be demonstrated that children are not now exposed, nor will become exposed, to lead in soil or soil-derived dust at the site. This lead model attempts to protect against elevated blood lead levels in the unborn fetus of women who spend considerable time at the site. Protection of the blood lead of a hypothetical fetus ensures that any other human receptor at the site will be adequately protected.

The Georgia model ultimately involves only two equations. Equation 1 establishes the average adult blood level that is protective of the fetus, which is an input to Equation 2. Equation 2 calculates the soil cleanup level, the concentration that would generate the average adult blood level indicated in Equation 1.

$$PbB = \frac{PbB_{fetal}}{R \bullet GSD^{1.645}}$$

$$C_s = \left[ \frac{PbB - PbB_b}{BSF \bullet (EF / AT)} - (C_w \bullet I_w \bullet A_w) \right] [I_s \bullet A_s]^{-1}$$

All terms found in the above equations are described in Table 1 on the following page.

TABLE 1. Parameters, Definitions, and Default Values to be used in Equations 1 and 2

Parameters	Definitions (Units)	Defaults
PbB <sub>b</sub>	Typical blood lead concentration in adults, specifically women of child-bearing age, in the absence of exposures to the site that is being assessed (µg/dL) [baseline]	1.38
PbB <sub>fetal</sub>	The blood lead goal for the unborn fetus, defined as the concentration which will have a 95% probability of not being exceeded (µg/dL)	10.0
GSD	Geometric standard deviation of blood lead concentration among the exposed adult population, specifically women of child-bearing age (unitless)	2.04
1.645	Value of the exponent used to estimate the 95th percentile from a lognormal distribution	1.645
R	Constant of proportionality between fetal blood lead concentration at birth and maternal blood lead concentration (unitless)	0.9
BSF	Biokinetic slope factor relating (quasi-steady state) increase in typical adult blood lead concentration to average daily lead uptake (µg/dL per µg/day)	0.4
EF	Exposure frequency for contact with assessed soils and/or dust derived in part from these soils (number of days of exposure during the year) (days/yr)	219
AT	Averaging time for continuing longterm exposures (days/yr)	365
C <sub>s</sub>	Soil target concentration; i.e., concentration of lead in soil that is goal for the site (mg/kg)	to be determined by Eq.2
I <sub>s</sub>	Intake rate of soil, predominantly occupational exposures to indoor soil-derived dust rather than outdoor soil (g/day)	0.05
A <sub>s</sub>	Absolute gastrointestinal absorption fraction for ingested lead in soil and in dust derived from soil (unitless)	0.12
C <sub>w</sub>	Concentration of lead in ground water at site (µg/L); provided, however, when taken together with concentrations of lead in soil shall not exceed a PbB of 10 µg/dL	see HSRA 391-3-19.07(9)(c)
I <sub>w</sub>	Intake rate of water from on-site ground water (L/day)	1
A <sub>w</sub>	Absolute gastrointestinal absorption fraction for lead ingested in drinking water (unitless)	0.20