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August 1, 2006

BY HAND AND FACSIMILE (202-501-1450)

Stephen L. Johnson, Administrator  
United States Environmental Protection Agency  
Ariel Rios Building - Mail Code 1101A  
1200 Pennsylvania Avenue  
Washington, DC 20460

**RECEIVED**

**AUG - 1 2006**

**OFFICE OF THE  
EXECUTIVE SECRETARIAT**

Dear Mr. Johnson,

We enclose a petition of New York, Alaska, Arizona, California, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey, New Mexico, Oklahoma, Rhode Island, the United States Virgin Islands and Wisconsin requesting that EPA find that certain chemicals used as "inert" ingredients in pesticides that it has already determined to be hazardous, toxic, pollutants, or the like under other statutes "may pose a hazard to man or the environment" under the Federal Insecticide, Fungicide and Rodenticide Act. The Petition further requests that, based on this finding, EPA initiate a rulemaking to amend its regulations governing the labeling of pesticide products to require that those chemicals included in the finding shall be disclosed as "Hazardous Inert Ingredients" on the label of any pesticide product in which they are formulated.

We look forward to your consideration of this petition and the issuance of a finding within the next 60 days.

Very truly yours,

*Peter Lehner*  
PETER LEHNER  
Chief, Environmental Protection Bureau

*Michael H. Surgen*  
MICHAEL H. SURGAN, Ph.D.  
Chief Scientist

cc: James J. Jones, Director, Office of Pesticide Programs (By Facsimile to 703-308-4776)

**PETITION OF**  
**NEW YORK, ALASKA, ARIZONA, CALIFORNIA, CONNECTICUT, ILLINOIS,**  
**MAINE, MARYLAND, MASSACHUSETTS, NEW JERSEY, NEW MEXICO,**  
**OKLAHOMA, RHODE ISLAND, THE UNITED STATES VIRGIN ISLANDS AND**  
**WISCONSIN**  
**REQUESTING THAT**  
**THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**AMEND ITS RULES GOVERNING**  
**THE DISCLOSURE OF "INERT" INGREDIENTS**  
**ON PESTICIDE PRODUCT LABELS**  
**TO REQUIRE THE DISCLOSURE OF INGREDIENTS**  
**FOR WHICH FEDERAL DETERMINATIONS OF HAZARD**  
**HAVE ALREADY BEEN MADE**

**TO:** Stephen L. Johnson, Administrator  
United States Environmental Protection Agency  
Ariel Rios Building - Mail Code 1101A  
1200 Pennsylvania Avenue  
Washington, D.C. 20460

**Date: August 1, 2006**

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### PRELIMINARY STATEMENT

The Attorneys General of New York, Alaska, Arizona, California, Connecticut, Illinois, Maine, Maryland, Massachusetts, New Jersey, New Mexico, Oklahoma, Rhode Island, United States Virgin Islands and Wisconsin (collectively referred to herein as the "Petitioners"), submit this petition pursuant to section 25 of the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. § 136w, and the Administrative Procedure Act, 5 U.S.C. § 553(e).

Petitioners have identified about 360 substances used as "inert" ingredients in pesticide products, which have been determined to be hazardous by the Administrator of the United States Environmental Protection Agency ("EPA") or the Administrator of the Occupational Safety and Health Administration ("OSHA") under federal regulatory schemes other than the FIFRA program, 40 C.F.R. § 156.10(g). 40 C.F.R. § 156.10(g)(7) authorizes the Administrator to require the name of any inert ingredient(s) to be listed on the ingredient statement "if he determines that such ingredient(s) may pose a hazard to man or the environment." The Petitioners request that EPA issue a determination within 60 days of the filing of this Petition that these substances meet those FIFRA criteria for disclosure on the ingredient statement on pesticide labels. Petitioners further request that, consistent with that determination, the Administrator initiate a rulemaking to amend its regulations governing the labeling of pesticide products to require that those chemical substances identified in the Administrator's determination as posing a hazard to public health or the environment be disclosed on the label of any pesticide product in which they are formulated.

The Petitioners specifically request that the Administrator of EPA require pesticide manufacturers and formulators to reveal on the labels of their products any "inert" ingredients for which determinations of hazard have been made by EPA or OSHA under the following legal authorities:

- FIFRA, 7 U.S.C. § 136, et seq.
- Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11001, et seq.



- Toxic Substances Control Act, 15 U.S.C. § 2601, et seq.
- Resource Conservation and Recovery Act, 42 U.S.C. § 6901, et seq.
- Clean Water Act, 33 U.S.C. § 1251, et seq.
- Clean Air Act, 42 U.S.C. § 7401, et seq.
- Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601, et seq.
- Occupational Safety and Health Act, 29 U.S.C. § 651, et seq.

Should EPA determine that it cannot or will not issue a finding covering all of these chemicals, then Petitioners request that EPA either:

- a. assess as a group the chemicals identified as hazardous under each statutory authority cited in this Petition, and determine which groups of chemicals are sufficiently hazardous to require disclosure on product labels, or
- b. assess individually each of the chemicals included under those authorities and determine specifically which individual hazardous chemicals are sufficiently hazardous to require disclosure on product labels.

### **BACKGROUND**

In a petition to the Administrator of EPA, dated January 16, 1998, the Attorneys General of New York, Alaska, Connecticut, Guam, Massachusetts, Minnesota, New Hampshire and Wisconsin, as well as the Massachusetts Executive Office of Environmental Affairs, requested that the identity of all inert ingredients be listed on pesticide labels. The Attorneys General of Arizona and Illinois subsequently joined that effort. A similar petition was filed by the Northwest Coalition for Alternatives to Pesticides ("NCAP") and about 260 co-petitioners.

EPA rejected the States' request, citing "EPA's statutory inability to grant the specific relief requested (requiring the identities of all inert ingredients to appear on product labels)." Letter from Marcia E. Mulkey, Director of EPA's Office of Pesticide Programs, to Andrew J. Gershon, dated July 12, 2001 (emphasis in original). EPA further explained that "[t]he

determination in [40 C.F.R. §] 156.10(g)(7) that '[the] Administrator may require the name of any inert ingredient(s) to be listed in the ingredient statement if he determines that such ingredient(s) may pose a hazard to man or the environment' is likewise made on a case-by-case basis (cf. List 1 ingredients as an example of a reasonably designed class), and cannot support the listing of all inert ingredients in all products."

NCAP and its co-petitioners subsequently filed a complaint in the United States District Court for the District of Columbia seeking an order that EPA had wrongfully denied their petition. In an oral decision, issued on October 12, 2004, United States District Judge Paul J. Friedman held that EPA could not be ordered to require that all inert ingredients be publicly disclosed on pesticide labels. He noted EPA can and does mandate disclosure of "inert" ingredients when necessary to protect against the risk of injury to human health or the environment. Judge Friedman further commented that EPA clearly has the authority to require the disclosure of "things" when "other sections of EPA or other agencies under this or other statutes find that certain ingredients may be harmful . . . ."

This Petition is guided by the statements of EPA and Judge Friedman. Petitioners have identified more than 360 chemicals that EPA itself or OSHA has identified as hazardous under various statutory authorities but that EPA does not require to be named on product labels. Petitioners request that these hazardous chemicals be disclosed on pesticide labels, consistent with the requirements currently imposed by EPA on other chemicals deemed to be of "Toxicological Concern" (those chemicals on EPA's so called "List 1"). In the event that EPA cannot or will not act on all of those chemicals as a group, Petitioners suggest alternative actions, allowing EPA to act on some subset(s) of those hazardous inert ingredients.

## POINT I

### **HUNDREDS OF "INERT" INGREDIENTS ARE IN FACT HAZARDOUS AND THUS SHOULD BE IDENTIFIED ON PESTICIDE PRODUCTS LABELS.**

Under EPA's pesticide labeling rules, only active ingredients, defined in FIFRA as those chemicals intended to "prevent, destroy, repel or mitigate" the target organism(s), must be listed by name on the label. 7 U.S.C. §136(a). Other chemicals, added to improve the delivery, durability, or other properties of the pesticide product, but which are not "active ingredients" are defined as "inert" ingredients, 7 U.S.C. §136(m), and need not be listed on labels. 40 C.F.R. 156.10(g). In fact, however, hundreds of these so-called "inert" chemicals are inert only within the narrow statutory definition. They are, both as a matter of fact and under other federal laws and regulations, hazardous. To protect public health and the environment, the Administrator should require them to be identified on the label.

#### **A. Many "Inert" Ingredients are Hazardous Substances but are not Disclosed.**

Under its current policy governing label disclosure of chemicals identified as "inerts" by manufacturers, EPA places each "inert" chemical in one of five categories or "lists" (the "FIFRA Inerts Lists"), based on what is known about the chemical's toxicity. Only those on "List 1" or "Inerts of Toxicological Concern" must be identified on the product label. While there are almost 2,900 chemicals included on these five lists (collectively the "FIFRA Inerts"), there are now only eight on List 1 that must be disclosed on product labels. However, EPA or other federal agencies have determined under FIFRA or other statutory schemes that about 360 of these FIFRA Inerts not on List 1, are in fact hazardous. (These chemicals will subsequently be referred to as the "Hazardous Inert Chemicals.") (See Table 1, attached.)<sup>1</sup>

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<sup>1</sup> Table 1 is derived primarily from EPA's Substance Registry System available at <http://www.epa.gov/srs/>. The list of OSHA Toxic and Hazardous Substances that is not included in the Substance Registry List is from <http://www.osha.gov/dts/chemicalsampling/toc/chmcas.html>. The list of chemicals for which  
(continued...)



EPA has long been on notice about the misleading nature of the classification of hazardous chemicals as "inert" ingredients. In a 1975 report to Congress, the General Accounting Office pointed out: "Inert ingredients range from innocuous substances ... to toxic chemicals ...." In further discussion about "inert" ingredients which had been exempted from certain toxicity testing requirements, the Comptroller added:

Some of the exempted inert ingredients are relatively toxic and EPA requires that they be applied a number of days before harvesting to allow the pesticide residue to dissipate. For example, EPA requires that the inert ingredients maleic acid and maleic anhydride be applied no later than 21 days before harvest; some active ingredients have no limitations on when they can be applied and in some cases can be applied after harvest.<sup>2</sup>

As noted in Table 1 of this petition, both maleic acid and maleic anhydride are still used as "inert" ingredients.

EPA acknowledges that, notwithstanding their designation as "inert" – a term commonly perceived as meaning innocuous<sup>3</sup> – "some inerts are capable of causing health problems."<sup>4</sup> EPA

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<sup>1</sup>(...continued)

there are ACGIH TLVs is from the 2004 edition of ACGIH's "TLVs and BEIs." The list of chemicals identified by EPA as List 2 inert ingredients can be found at [http://www.epa.gov/opprd001/inerts/inerts\\_list2.pdf](http://www.epa.gov/opprd001/inerts/inerts_list2.pdf). The list of chemicals is current only to the dates of publication of those sources. Since EPA, OSHA and ACGIH continue to make hazard determinations, this Petition is intended to include all substances that are currently on the subject lists or may be added to those lists in the future. To the extent that any chemical currently on one of the lists is not included, Table 1 is only illustrative of the chemicals used as inerts which have been determined to be hazardous under the authorities listed.

<sup>2</sup> United States General Accounting Office, December 1975. "Federal Pesticide Registration Program: Is It Protecting the Public and the Environment Adequately From Pesticide Hazards?" RED-76-42

<sup>3</sup> "Inert," is defined by the American Heritage Dictionary of the English Language (Fourth Edition, 2000) as follows: "1. Unable to move or act. 2. Sluggish in action or motion; lethargic. See synonyms at inactive. 3. *Chemistry* Not readily reactive with other elements; forming few or no chemical compounds. 4. Having no pharmacologic or therapeutic action." <http://www.bartleby.com/61/11/10121100.html>

<sup>4</sup> <http://www.epa.gov/iaq/pesticid.html>. (Last visited July 28, 2006.)

has further acknowledged that an "inert" ingredient "may have biological activity of its own, it may be toxic to humans and it may be chemically active."<sup>5</sup> Indeed, the Hazardous Inert Chemicals are associated with a wide range of adverse health effects. Some are suspected carcinogens, others have been linked to other long-term adverse impacts on fetal development, central nervous system disorders, and damage to vital organs including the liver and kidneys. The so-called "inert" ingredients can also cause short-term health effects such as eye and skin irritation, gastrointestinal disorders, dizziness and respiratory difficulties.

Under EPA's current FIFRA regulation, an ingredient identified as "active" must be disclosed on the label, but the same ingredient need not be disclosed if it is designated as "inert" for any particular product. These so-called inert chemicals can be "active" ingredients in some pesticide formulations and "inert" in others, based simply on whether they are aimed directly at killing the target organism as opposed to performing some other function (such as enhancing deliverability or durability). From the point of view of a non-target organism exposed to the Hazardous Inert Chemical, however, the purpose for which it was added to a pesticide formulation is irrelevant; it remains hazardous.

According to EPA, "interviews demonstrated that many consumers have a misleading impression of the term 'inert ingredient' believing it to mean water or other harmless ingredients."<sup>6</sup> Specifically, EPA has found that "[t]here was also consistency in comments, the literature review and the consumer research in finding that consumers did not understand the

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<sup>5</sup> EPA, the Office of Pesticide Program's Guidance Document on Methodology for Determining the Data Needed and the Types of Assessments necessary to make FFDCA Section 408 Safety Determinations for Lower Toxicity Pesticide Chemicals, (June 7, 2002) available at [http://www.epa.gov/oppfead1/cb/csb\\_page/updates/lowertox.pdf](http://www.epa.gov/oppfead1/cb/csb_page/updates/lowertox.pdf). (last visited May 31, 2006).

<sup>6</sup> EPA, Pesticide Regulation Notice 97-6, Use of Term 'Inert' in the Label Ingredients Statement (Nov. 1, 1997), available at [http://www.epa.gov/opppmsd1/PR\\_Notices/pr97-6](http://www.epa.gov/opppmsd1/PR_Notices/pr97-6). (last visited May 31, 2006).



term “inert ingredients”<sup>7</sup> EPA’s recognition that the terminology they require on pesticide labels often misleads consumers is particularly troubling given EPA’s own definition of false and misleading statements on such labels. Among the statements deemed to constitute misbranding is one “used in such a way as to give a false or misleading impression to the purchaser.” 40 C.F.R. § 156.10(a)(5)(vii). Thus, EPA’s labeling regulations are internally inconsistent; they enable and encourage pesticide registrants to identify hazardous chemicals as “inert” ingredients. By EPA’s own determination such statements mislead consumers.

Often, inerts can constitute more than 99% of a product.<sup>8</sup> Although often hazardous and often the major constituent of pesticide products, fewer than one-half of one percent of the chemicals formulated in pesticide products as “inert” ingredients must be identified on labels under EPA regulations. 40 C.F.R. § 156.10. Unless the hazardous chemical is identified on the label, however, most people think there is no concern.

Prior to 1987, EPA required the identification of only four commonly used “inert” ingredients on pesticide product labels, and toxicity testing of other ingredients labeled as “inert” was very limited. In 1987, EPA announced an “Inerts Strategy” designed to “reduce the potential for adverse effects from the use of pesticide products containing toxic inert ingredients, . . . encourag[e] the use of the least toxic inert ingredients available, . . . and requir[e] the development of data necessary to determine the conditions of safe use of pesticides containing toxic inert ingredients.”<sup>9</sup> The success of that program, however, has been very limited. Central to the 1987 strategy was the classification of “inert” ingredients into five categories:

- List 1: Inerts of Toxicological Concern
- List 2: Potentially Toxic Inerts, High Priority for Testing
- List 3: Inerts of Unknown Toxicity

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<sup>7</sup> EPA, Consumer Labeling Initiative Phase I Report, EPA-700-R-96-001, September 1996

<sup>8</sup> N.Y.S. Attorney General’s Office, *The Secret Ingredients in Pesticides: Reducing the Risk* (May 2000), available at <http://www.oag.state.ny.us/press/reports/inerts/pesticide> (last visited May 31, 2006).

<sup>9</sup> EPA, *Inert Ingredients in Pesticide Products; Policy Statement*, 55 Fed. Reg. 13,305 (April 22, 1987), available at <http://www.epa.gov/opprd001/inerts/fr52.htm>. (last visited May 25, 2006).



List 4A: Minimal Risk Inerts

List 4B: Inerts that will not adversely affect public health or the environment given current use patterns

EPA originally placed almost 60 chemicals on List 1, thus requiring that they be disclosed on product labels. Most of those have now been taken out of use, so there are currently only eight chemicals on List 1. EPA originally placed 66 chemicals on List 2. Despite their "High Priority for Testing," however, 43 of the original 66 chemicals have still not been tested to EPA's satisfaction and remain on List 2. Two of the chemicals were moved to List 3, two to List 4B and the remainder are no longer used as inert ingredients. Since 1987, 55 other chemicals have been added to List 2.

The number of "Inerts of Unknown Toxicity" (List 3) has also increased. In 1998, List 3 contained 1,776 chemicals; today there are 1,863. Altogether, there are 2,891 chemicals identified by EPA as being used as "inert" ingredients.<sup>10</sup> According to EPA's Substance Registry System, about 520 "inert" ingredients are currently or were at one time registered as active ingredients.<sup>11</sup>

The EPA Administrator is expressly authorized to require the name of any inert ingredient(s) to be identified in the ingredient statement "if he determines that such ingredient(s) may pose a hazard to man or the environment." 40 C.F.R. § 156.10(g)(7). See also 7 U.S.C. § 136h(b),(d)(1). However, despite having made determinations under other complementary legal authorities that hundreds of the chemicals now used as "inert ingredients" are hazardous or toxic and may present significant threats to human health or the environment, EPA currently requires only eight of those chemicals to be identified on pesticide labels when part of a

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<sup>10</sup> EPA, Inert (Other) Pesticide Ingredients in Pesticide Products (May 2, 2006), available at <http://www.epa.gov/opprd001/inerts/lists.html> (last visited May 25, 2006).

<sup>11</sup> EPA, Substance Registry System (SRS), available at <http://www.epa.gov/srs> (last visited May 5, 2006).

pesticide's formulation.<sup>12</sup> As a result, whether or not an "inert" ingredient is disclosed on the label is based on the manufacturer's designation of the target pest to be controlled by the product, rather than a reasoned evaluation of its hazards to human health and the environment.

**B. EPA Already Has Made Hazard Determinations for Many of the Chemicals Used as "Inert" Ingredients.**

The Administrators of EPA and OSHA have determined that many chemicals used as "inert" ingredients in pesticides are hazardous to human or environmental health. These determinations, made under complementary statutory schemes, are the functional equivalent of determinations made under FIFRA § 10, 7 U.S.C. § 136h, and are sufficient for EPA to require manufacturers to disclose these chemicals on pesticide labels.

As detailed below, the statutory schemes referred to in this petition each instruct the Administrator of EPA or the Administrator of OSHA to regulate various chemicals that are hazardous and warrant federal control. As part of EPA's effort to comply with the statutes, EPA has identified, in several different contexts, chemicals that are regulated as poisonous, toxic, explosive, flammable, or otherwise hazardous to human or environmental health. The inclusion of a chemical on one or more of these compilations demonstrates that it "may pose a hazard to human health or the environment." Thus, chemicals identified in those contexts which are also used as "inert" ingredients in pesticide formulations meet the standard of the pesticide labeling regulations, 40 C.F.R. § 156.10(g)(7), and should therefore be disclosed.

**1. The Federal Insecticide, Fungicide, and Rodenticide Act**

EPA clearly recognizes that the active ingredients in pesticides pose hazards to humans and the environment. In 1996, pursuant to a provision of FIFRA, 7 U.S.C. § 136w(b), EPA differentiated between certain "minimum risk" active ingredients which were exempted from FIFRA requirements and the remaining active ingredients which remained subject to the registration process. 40 C.F.R. § 152.25. According to EPA, the agency exempted those

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<sup>12</sup> EPA, Inert Ingredients Ordered Alphabetically by Chemical Name - List 1 (2004) available at [http://www.epa.gov/oppprd001/inerts/list1\\_chemname.pdf](http://www.epa.gov/oppprd001/inerts/list1_chemname.pdf). (last visited May 31, 2006).



"minimum risk" ingredients in part to focus its limited resources on the remaining, registered, active ingredients, "*which pose greater risk to humans and the environment.*"<sup>13</sup>

Pursuant to 40 C.F.R. § 156.10(g)(7), the Administrator "may require the name of any inert ingredient(s) to be listed in the ingredient statement if he determines that such ingredient(s) may pose a hazard to man or the environment." The Administrator has already made that determination for all chemicals used as active ingredients in any pesticide product not classified as "minimum risk" and exempt from registration. Thus, all substances registered as active ingredients in any pesticide product are hazardous and should be identified on product labels for any pesticide product in which they are used even if they allegedly function as "inert" ingredients in that particular product. Fourteen chemicals on FIFRA Inerts Lists 2 - 4B have been identified as pesticide active ingredients and thus should be moved to List 1.<sup>14</sup> (See Table 1.)

## **2. The Emergency Planning and Community Right-to-Know Act of 1986**

### **a. Section 302(a) Extremely Hazardous Substances.**

Congress enacted the Emergency Planning and Community Right-to-Know Act ("EPCRA"), also known as Title III of the Superfund Amendments and Reauthorization Act, 42 U.S.C. § 11001, *et seq.*, to help communities protect public health and the environment from hazardous substances. Pursuant to EPCRA § 302(a)(2), EPA is required to publish a list of "extremely hazardous substances" and establish threshold planning quantities for each of the substances on the list. 42 U.S.C. § 11002(a). Thirteen chemicals appear both on one of the FIFRA Inert Lists 2 - 4B and the EPCRA § 302(a) list, as "extremely hazardous substances," and should thus be moved to List 1. (See Table 1.)

### **b. Section 313 Toxic Substances.**

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<sup>13</sup> Pesticide Registration Notice 2000-6, "Minimum Risk Pesticides Exempted Under FIFRA Section 25(b) - Clarification of Issues" (emphasis added), available at [http://www.epa.gov/opppmsd1/PR\\_Notices/pr2000-6.pdf](http://www.epa.gov/opppmsd1/PR_Notices/pr2000-6.pdf) (Last visited June 21, 2006).

<sup>14</sup> In conjunction with the Clean Water Act, §304, EPA prepared a list of organic pesticide active ingredients. The fourteen pesticide active ingredients in Table 1 are those that are included in the §304 list.



Under EPCRA § 313, EPA is also required to regulate the manufacturing, processing, or use of toxic substances. EPCRA, 42 U.S.C. § 11023. Pursuant to § 313, EPA established the Toxics Release Inventory ("TRI").<sup>15</sup> The TRI is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. A chemical is regulated under § 313 when:

(A) The chemical is known to cause or can be reasonably anticipated to cause significant adverse acute human health effects at concentration levels that are reasonably likely to exist beyond facility site boundaries as a result of continuous, or frequently recurring, releases.

(B) The chemical is known to cause or can reasonably be anticipated to cause in humans-

(i) cancer or teratogenic effects, or

(ii) serious or irreversible-

(I) reproductive dysfunctions,

(II) neurological disorders,

(III) heritable genetic mutations, or

(IV) other chronic health effects.

(C) The chemical is known to cause or can reasonably be anticipated to cause, because of-

(i) its toxicity,

(ii) its toxicity and persistence in the environment, or

(iii) its toxicity and tendency to bioaccumulate in the environment, a significant adverse effect on the environment . . . .

42 U.S.C. § 11023(d)(2). Ninety-three chemicals both appear on one of the FIFRA Inert Lists 2 - 4B and are regulated under EPCRA § 313. These chemicals should be moved to List 1. (See Table 1.)

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<sup>15</sup> Available at [http://iaspub.epa.gov/srs/srs\\_proc\\_qry.navigate?P\\_REG\\_AUTH\\_ID=1&P\\_DATA\\_ID=11668&P\\_VERSION=1](http://iaspub.epa.gov/srs/srs_proc_qry.navigate?P_REG_AUTH_ID=1&P_DATA_ID=11668&P_VERSION=1) (last visited May 5, 2006).

### 3. The Toxic Substances Control Act

The Toxic Substances Control Act ("TSCA") establishes a mechanism for EPA to track the thousands of industrial substances and mixtures being channeled through and into the United States. 15 U.S.C. § 2601. Under TSCA § 6, EPA has identified a group of substances that "present[] or will present an unreasonable risk of injury to health or the environment." 15 U.S.C. § 2605(a). EPA refers to this group of substances as the "TSCA Section 6 Unreasonable Risk" list.<sup>16</sup> In pursuit of this objective, the Administrator may implement protective measures including banning or limiting the manufacture, processing, or distribution of any hazardous substance appearing on this unreasonable risk list, requiring the placement of adequate warning labels and instructions for use on articles containing such hazardous substances, and publicizing the risk of injury associated with use of the hazardous substance or mixture. 15 U.S.C. §§ 2605(a)(2),(3),(7). Two chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and the TSCA section 6 list; as "chemicals" found to pose an "unreasonable risk" they should also be found to be of "toxicological concern" and moved to List 1. (See Table 1.)

### 4. The Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act ("RCRA") gives EPA broad authority to regulate hazardous and non-hazardous wastes from their point of origin to their point of disposal. Under RCRA, a hazardous waste is a solid waste that can "cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment." 42 U.S.C. § 6903(5). Hazardous wastes under RCRA are classified either as listed wastes, 40 C.F.R. § 261.31-.33, or by the characteristics their constituents exhibit, 40 C.F.R. § 261.20. EPA has organized listed wastes into four categories: the F-list, the K-list, the P-list, and the U-list.<sup>17</sup>

<sup>16</sup> Available at [http://iaspub.epa.gov/srs/SEARCH\\$.STARTUP#3](http://iaspub.epa.gov/srs/SEARCH$.STARTUP#3) (last visited June 1, 2006).

<sup>17</sup> According to EPA, the F-list identifies wastes from common manufacturing and industrial processes, such as solvents that have been used in cleaning or degreasing operations. Because the processes producing these wastes can occur in different sectors of industry, the F-listed  
(continued...)

Listed wastes are hazardous wastes regardless of the concentration of hazardous constituents in them.<sup>18</sup> Eight chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and RCRA F Waste lists. Two chemicals appear on both the FIFRA Inerts Lists 2 - 4B and RCRA P Waste lists. Thirty-seven chemicals appear on both one of the FIFRA Inerts 2 - 4 b and the RCRA U Waste list. All 47 such chemicals should be moved to FIFRA Inerts List 1. (See Table 1.)

A chemical or waste must also be identified as a hazardous waste if the constituents of these wastes exhibit at least one of the following characteristics: "toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics." 42 U.S.C. § 6921(a). Wastes that meet any of these characteristics are listed at 40 C.F.R. Part 261 Appendices VII and VIII. These appendices also contain hazardous substances whose constituents have been identified as carcinogens, mutagens, or teratogens, and dangerous to human health. 42 U.S.C. § 6921(b). Sixteen chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and RCRA Appendix VII lists. Thirty-one chemicals appear on both one of the FIFRA Inerts Lists 2- 4B and RCRA Appendix VIII list. These 47 chemicals should be moved to List 1 and disclosed on pesticide labels. (See Table 1.)

## **5. The Clean Water Act**

Congress enacted the Clean Water Act ("CWA"), also known as the Federal Water

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<sup>17</sup>(...continued)

wastes are known as wastes from non-specific sources. F-list wastes are found in the regulations at 40 C.F.R. § 261.31. The K-list, also known as source specific wastes, refers to wastes from specific industries, such as petroleum refining or pesticide manufacturing. Certain sludges and wastewaters from treatment and production processes in these industries are examples of source specific wastes. These wastes are found at 40 C.F.R. § 261.32. EPA has also classified discarded commercial chemical products into two lists: the P-list and the U-list. Examples of substances on these lists include some pesticides and some pharmaceutical products which become hazardous waste when discarded. P-list and U-list wastes are found at 40 C.F.R. § 261.33 available at: <http://www.epa.gov/epaoswer/osw/hazwaste.htm>. (last visited June 14, 2006).

<sup>18</sup> Available at <http://www.epa.gov/osw/hazwaste.htm> (last visited May 31, 2006).



Pollution Control Act, which sets forth a framework for EPA to "restore and maintain the chemical, physical, and biological, integrity of the Nation's waters." 33 U.S.C. § 1251(a). To accomplish that objective, CWA § 311 requires EPA to compile a list of hazardous substances which, when discharged in any quantity to navigable waters or adjoining shorelines, present an imminent and substantial danger to the public health or welfare. 33 U.S.C. § 1321(b)(2)(a). This includes danger to fish, shellfish, wildlife, and beaches. Id. The chemicals and chemical substances compiled by EPA pursuant to CWA § 311 are listed in Tables A and B of 40 C.F.R. § 116.4. Isomers, hydrates, solutions, and mixtures that contain the listed substances are also included. Seventy-eight chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and CWA § 311 lists. (See Table 1.)

EPA is also mandated to promulgate pretreatment standards for indirect dischargers whose waste water passes through publicly owned treatment plants. CWA § 307, 33 U.S.C. § 1317. These pollutants, because of their hazardous properties, require pretreatment so they do not either pass through the system unchanged, and thus directly endanger human health or the environment, or disrupt the operation of the sewage treatment system thereby allowing other pollutants to pass through untreated. In the latter instance, absent pretreatment, the subject pollutant indirectly endangers human health or the environment. Id. Seventy-nine chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and the Pretreatment Standards / Paragraph 4-C list.<sup>19</sup> (See Table 1.)

#### 6. The Clean Air Act

Congress enacted the Clean Air Act ("CAA") to safeguard the public health and welfare from the harmful effects of air pollution. 42 U.S.C. § 7401. Pursuant to CAA § 112, EPA maintains and periodically reviews a list of hazardous substances that have been determined to

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<sup>19</sup> The Paragraph-4(c) list, is a list of 423 pretreatment pollutants identified in paragraph 4(c) of a Consent Decree which was the result of a lawsuit brought by the National Resources Defense Council and other environmental groups against EPA.

contribute to air pollution. 42 U.S.C. §§ 7412(b)(2), 7412(b)(3). That list includes all "pollutants which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects." 42 U.S.C. § 7412(b)(2). In furtherance of that objective, Congress included a list of hazardous pollutants in the Act. 42 U.S.C. § 7412(r)(3). There are twenty-seven chemicals on that list that are also on the FIFRA Inerts 2 - 4B lists. The Act also directed the Administrator to develop a list of 100 substances "known to cause death, injury, or serious adverse effects to human health or the environment." The latter list is found at 40 C.F.R. § 68.130 and includes 16 chemicals that also are on one of the FIFRA Inerts Lists 2 - 4B. (See Table 1.)

CAA § 202 requires EPA to develop standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines which contribute to air pollution and which "may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7521(a). Three chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and the CAA § 202(a) list. (See Table 1.)

**7. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980.**

The Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") sets forth a comprehensive regulatory scheme designed to address the widespread problem of chemical releases and threatened releases. The term "hazardous substance" is defined in CERCLA § 101(14) by reference to various federal environmental statutes, including the CAA, CWA, TSCA and RCRA.<sup>20</sup> 42 U.S.C. § 9601(14). Pursuant to CERCLA § 104, EPA and

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<sup>20</sup> One hundred and thirteen chemicals, including Phenol, Ethylbenzene, Allyl Alcohol, and Sodium Chromate, appear on both the FIFRA Inerts and CERCLA §101 (14) lists.



the Agency for Toxic Substances and Disease Registry are required to develop and periodically revise a priority list of hazardous substances. 42 U.S.C. § 9604(i)(2)(A). This priority list includes substances that have been determined to pose a "significant potential threat to human health due to [their] known or suspected toxicity to humans." *Id.* The most recent version of the priority list contains 275 hazardous substances. Fifty-one chemicals appear on both one of the FIFRA Inerts Lists 2 - 4B and the CERCLA § 104(i)(2) priority hazardous substance list. One hundred nine chemicals appear on both the FIFRA Inerts 2 - 4B and CERCLA § 101(14) lists. (See Table 1.) All these chemicals should be disclosed on product labels.

**8. FIFRA EPA Inert Ingredients, List 2 - Potentially Toxic Other Ingredients/High Priority For Testing<sup>21</sup>**

Ingredients that EPA has placed on the FIFRA Inerts List 2 are those that EPA "believes are potentially toxic and should be assessed for effects of concern . . . . [While] [m]any of these inert ingredients are structurally similar to chemicals known to be toxic[, others] have data suggesting a basis for concern about the toxicity of the chemical."<sup>22</sup> As discussed in section I.A above, EPA has been remiss in completing the tests needed to process the chemicals on Inert Ingredients List 2. Many compounds on Inert Ingredients List 2 have remained there without a decision to move them for decades. Failing any meaningful effort to obtain testing deemed necessary and any decision based on available information as an appropriate precaution, EPA should at least disclose these chemicals on labels so consumers can make their own informed decisions.

Some substances included on Inert Ingredients List 2 are mixtures for which EPA has determined that one or more of the constituents are hazardous to public health or the environment. For example, light aromatic solvent naphtha (CAS No. 64742-95-6), heavy aromatic solvent naphtha (CAS No. 64742-94-5), and medium aliphatic solvent naphtha (CAS

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<sup>21</sup> Available at <http://www.epa.gov/opprd001/inerts/fr52.htm> (last visited May 31, 2006).

<sup>22</sup> 52 Fed. Reg. 13306



No. 64742-88-7) are mixtures of one or more chemicals. Since 1,2,4-trimethylbenzene, a hazardous substance under EPCRA §§ 302(a) and 313, is an essential component of these ingredients, all three mixtures are often considered hazardous.<sup>23</sup> There are 96 “inert” ingredients on Inert Ingredients List 2.

## **9. The Occupational Safety and Health Act**

In 1970, Congress passed the Occupational Safety and Health Act (“OSH Act”) to protect workers from work place hazards, including those posed by hazardous chemicals. OSHA, a division of the Department of Labor, implements the Act. Since 1983, OSHA has determined that the chemicals on its list of toxic and hazardous substances at 29 C.F.R. § 1910, subpart Z (“Toxic and Hazardous Substance List”), and the chemicals listed in the latest edition of the American Conference of Governmental Industrial Hygienists’ (“ACGIH”) Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment (“TLV”) are hazardous to workers’ health. See 29 C.F.R. § 1910.1200 (2005); 48 Fed. Reg. 53280 (Nov. 25, 1983) (adopting a hazard communication standard that, among other things, defined the chemicals listed on the Toxic and Hazardous Substance List and in TLV as hazardous chemicals). Although the OSHA and ACGIH lists do not reflect an EPA determination, EPA should incorporate OSHA’s hazard determinations into its pesticide inerts determination under 40 C.F.R. § 156.10(g)(7) because that sister agency also has a mandate to protect humans from hazardous substances and the substantive standard for OSHA’s “hazardous chemical” determination is higher than the standard for EPA under 40 C.F.R. § 156.10(g)(7).<sup>24</sup> One

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<sup>23</sup> Shell Chemical LP. 2005. “Material safety data sheet: solvent naphtha (petroleum), heavy aromatic,” “Material safety data sheet: solvent naphtha (petroleum), medium aliphatic” and “Material safety data sheet: solvent naphtha (petroleum), light aromatic.”

<sup>24</sup> Under OSHA’s regulations, the “hazardous chemicals” at 29 C.F.R. § 1910, subpart Z, are chemicals that are “a physical hazard” or a “health hazard.” Each of those terms is defined in a manner that would compel a finding that the chemical “may pose a hazard to man or the environment,” EPA’s operative standard under 40 C.F.R. § 156.10(g)(7). See 29 C.F.R. § 1910.1200(c)(2005). EPA and OSHA also are both responsible for protecting humans and the

(continued...)

hundred fifteen chemicals appear on both the FIFRA Inerts 2 - 4B and OSHA's Toxic and Hazardous Substance lists. One hundred seventy-seven chemicals appear on both one of the FIFRA Inerts 2- 4B and the ACGIH TLV list, (See Table 1) and should be moved to List 1.

**10. There is substantial overlap on the statutory source lists which comprise the Hazardous Inerts List (Table 1).**

Many chemicals are deemed hazardous by several different statutes. This reflects repeated independent determinations of hazard or toxicity. For example, 211 chemicals are on at least two of the statutory source lists for Table 1 and 50 chemicals are on at least five of those statutory source lists. Eleven chemicals identified as "inerts" are on ten or more statutory source lists, and two of the inerts are on 12 different statutory source lists. (See Table 1.) The appearance of a chemical on multiple lists makes the basis for label disclosure all the more compelling and justified.

**C. Toxicological Profiles of Six Chemicals Identified on the Hazardous Inerts List (Table 1) as Hazardous to Human Health**

The "inert" ingredients included in the various source lists compiled as the Hazardous Inerts List in Table 1 have a wide variety of short-term (acute) and long-term (chronic) human health effects. Some are suspected carcinogens, while others have been linked to chronic effects on fetal development, the central nervous system and other vital organs including the liver and kidneys. Eye and skin irritation, gastrointestinal disorders, dizziness and respiratory difficulties are among the acute effects that may result from exposure to some of these so-called "inert" ingredients.

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<sup>24</sup>(...continued)

environment from accidental chemical releases. In discharging that duty, both agencies are authorized to rely on reports produced by the other agency in responding to such accidents. Strategy for Coordinated EPA/OSHA Implementation of the Chemical Accident Prevention Requirements of the Clean Air Act Amendments of 1990, available at <http://www.epa.gov/compliance/resources/policies/civil/caa/stationary/chemaccprev.pdf> (last visited June 1, 2006), EPA / DOL Memorandum of Understanding: Chemical Accident Investigation, available at <http://www.epa.gov/compliance/resources/policies/civil/caa/stationary/moadolepa.pdf> (last visited June 1, 2006). See also [http://www.osha.gov/OshDoc/data\\_General\\_Facts/FarmFactS2.pdf](http://www.osha.gov/OshDoc/data_General_Facts/FarmFactS2.pdf).



The variety of toxic effects that may arise from exposure to "inert" ingredients is illustrated by a consideration of the toxicity of just a few chemicals chosen from the list of Hazardous Inerts attached hereto as Table 1.

**1. Naphthalene (CAS 91-20-3).**

Naphthalene appears on 11 of the source lists identifying the Hazardous Inert Chemicals.<sup>25</sup> According to EPA, naphthalene has a variety of adverse health effects in humans and animals. EPA classifies naphthalene as a possible human carcinogen. Short-term human exposure has resulted in hemolytic anemia, damage to the liver, cataracts, convulsions, and coma. Infants may suffer neurological damage. Some long-term effects include, retinal hemorrhage, cataracts, inflammation of the lungs and nasal passages. Gastrointestinal effects, including vomiting, diarrhea, and malaise also occur as a result of exposure to this substance.

Animals exposed to naphthalene have also exhibited reduced maternal weight gain and increased maternal mortality, fetotoxicity and offspring born with hemolytic anemia.<sup>26</sup> Animal studies have also demonstrated that chronic inhalation of this substance damages the central nervous systems, kidney, liver, respiratory, and cardiovascular system.

**2. Ethylbenzene (CAS 100-41-4).**

Ethylbenzene appears on ten of the source lists identifying the Hazardous Inerts Chemicals.<sup>27</sup> The International Agency for Research on Cancer classifies ethylbenzene as

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<sup>25</sup> EPCRA § 313 (TRI), OSHA Toxic and Hazardous Substances, ACGIH, CERCLA § 101(14), CERCLA § 104(1)(2), RCRA U Waste, RCRA Appendix VII, RCRA Appendix VIII, CWA § 307, CWA § 311, CAA § 112(b).

<sup>26</sup> EPA, Naphthalene Hazard Summary, Created in April 1992; Revised January 2000, available at <http://www.epa.gov/ttn/atw/hlthef/naphthal.html> (Original citations omitted) (last visited June 30, 2006).

<sup>27</sup> EPCRA § 313 (TRI), OSHA Toxic and Hazardous Substances, CERCLA § 101(14), CERCLA § 104(1)(2), RCRA F Waste, CWA § 307, CWA § 311, CAA § 112(b), EPA List 2 Inerts.



"possibly carcinogenic to humans."<sup>28</sup> According to EPA, ethylbenzene has a variety of adverse health effects on humans and animals. Humans exposed to this substance have experienced irritation of the eyes, neurological effects such as dizziness and respiratory effects such as throat irritation and chest constriction. Studies of animals exposed to ethylbenzene have shown signs of central nervous system toxicity and effects on the liver, kidneys, eyes, and lungs. Developmental effects such as fetal resorptions, retardation of skeletal development, and an increased incidence of extra ribs have also been reported in animals exposed to ethylbenzene via inhalation.<sup>29</sup>

### 3. 2-Propen-1-ol (Allyl Alcohol) (CAS 107-18-6).

Allyl Alcohol appears on nine of the source lists identifying the Hazardous Inerts Chemicals.<sup>30</sup> According to EPA, "allyl alcohol is an intense irritant to the skin, eyes, nose and throat. It causes burns on contact and may cause pulmonary edema if inhaled. It is poisonous in small quantities."<sup>31</sup> EPA estimates that the probable oral lethal dose for a 150 pound person could be as low as one teaspoonful.<sup>32</sup>

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<sup>28</sup> International Agency for Research on Cancer, "Agents Reviewed by the IARC Monographs Volumes 1 - 88" available at <http://monographs.iarc.fr/ENG/Classification/Listagentsalphorder.pdf> (last visited May 30, 2006).

<sup>29</sup> Ethylbenzene Hazard Summary, Revised January 2000, available at <http://www.epa.gov/ttn/atw/hlthef/ethylben.html>. (Original citations omitted.) (Last visited May 8, 2006).

<sup>30</sup> EPCRA § 302(a), EPCRA § 313(TRI), OSHA Toxic and Hazardous Substances, CERCLA § 101(14), RCRA P Waste, RCRA Appendix III, CWA § 311, CAA § 212(r).

<sup>31</sup> Allyl Alcohol - EPA Chemical Profile, Revised November 30, 1987, available at <http://yosemite.epa.gov/oswer/ceppoEHS.nsf/Profiles/107-18-6?opendocument> (last visited May 3, 2006).

<sup>32</sup> *Id.*

#### 4. Ethoxyquin (CAS 91-53-2).

Ethoxyquin is an active ingredient in many EPA-registered pesticides; it appears on one of the statutory source lists. EPA has registered and reregistered ethoxyquin as a pesticide active ingredient even though "... the ethoxyquin toxicology database is not complete...."<sup>33</sup> With the data available to EPA, it found that ethoxyquin is a skin irritant and sensitizer and causes contact dermatitis.<sup>34</sup> EPA-approved labels for products containing as little as 0.1% ethoxyquin warn that they may "irritate eyes, nose, throat and skin."<sup>35</sup> In a product with a higher concentration of ethoxyquin, EPA adds: "Do not apply directly to lakes, streams or ponds."<sup>36</sup> Although EPA identifies ethoxyquin as a chemical that can be used as an "inert" ingredient in pesticide formulations, the reregistration eligibility decision does not mention its use as an "inert" ingredient and does not consider exposures and health effects that might result from such use.

Reporting health effects similar to those identified by EPA, the National Institutes of Health also reports that the probable oral lethal dose for a 150 pound person might be as low as one ounce.<sup>37</sup>

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<sup>33</sup> EPA, EPA 738-R-04-011, Registration Eligibility Decision (RED) - Ethoxyquin, available at <http://www.epa.gov/REDs/0003red>

<sup>34</sup> *Id.*

<sup>35</sup> Labels for Pear Wrap I (EPA Reg. No. 61718-4) and Pear Wrap III (EPA Reg. No. 61718-1), available at <http://oaspub.epa.gov/pestlabl/ppls.home>.

<sup>36</sup> Label for Deccoquin® 305 Concentrate (EPA Reg. No. 2792-38) available at <http://oaspub.epa.gov/pestlabl/ppls.home>.

<sup>37</sup> National Library of Medicine, Hazardous Substances Data Bank, Ethoxyquin, available at <http://toxnet.nlm.nih.gov/cgi-bin/sis/search/r?dbs+hsdb:@term+@rn+91-53-2> (last visited May 10, 2006).

#### 5. Sodium Chromate (CAS 7775-11-3).

Sodium Chromate appears on three of the source lists identifying the Hazardous Inerts Chemicals.<sup>38</sup> Sodium chromate was formerly used as an active ingredient in various pesticide products (wood preservatives), but according to EPA, it is no longer an active ingredient in any registered pesticide product.<sup>39</sup> The Agency for Toxic Substances and Disease Registry ("ATSDR") has assessed the toxicity of chromium and its compounds and notes that the chromium in sodium chromate may exist in several forms; chromium (III) and chromium (VI) are the forms most commonly used in wood preservatives.<sup>40</sup> ATSDR concludes that chromium (VI) is generally more toxic than chromium (III). Some people are extremely sensitive to chromium (III) and (VI) and experience allergic reactions consisting of severe redness and swelling of the skin. Exposures to these forms of chromium in sufficient quantities have caused asthmatic attacks and nasal irritation ranging in severity from a runny nose to nasal ulceration and septal perforation. If ingested, these forms of chromium can cause stomach upsets and ulcers, convulsions, kidney and liver damage, and even death.<sup>41</sup> The International Agency for Research on Cancer (IARC) classifies chromium (VI) compounds as "carcinogenic to humans."<sup>42</sup>

#### 6. Chloroacetic Acid (CAS 79-11-8)

Chloroacetic acid appears on four of the statutory source lists identifying into the Hazardous Inerts Chemicals.<sup>43</sup> According to EPA, chloroacetic acid is "very toxic." Ingestion of as little as one teaspoon of chloroacetic acid could be lethal to a 150 pound person. It depresses

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<sup>38</sup> TSCA § 6, CERCLA § 101(14), CWA § 311.

<sup>39</sup> <http://ppis.ceris.purdue.edu/htbin/cnamlist.com> (last visited May 10, 2006).

<sup>40</sup> Agency for Toxic Substances and Disease Registry, Public Health Statement for Chromium (Sep. 2000), available at <http://www.atsdr.cdc.gov/toxprofiles/phs7> (last visited May 30, 2006).

<sup>41</sup> *Id.*

<sup>42</sup> <http://monographs.iarc.fr/ENG/Classification/crthgr01.php> (last visited May 8, 2006).

<sup>43</sup> EPCRA § 302(a), EPCRA § 313-TRI, CERCLA § 101(14) and CAA § 112(b).



the function of both the nervous and respiratory systems. Chloroacetic acid causes burns and is irritating to the skin and mucous membranes. Burns to the skin result in marked fluid and electrolyte loss, which may be fatal if more than 3% of the skin is exposed to the chloroacetic acid. Ingestion may interfere with essential enzyme systems and cause perforation of the gastrointestinal walls and peritonitis.<sup>44</sup>

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In sum, the so-called "inert" ingredients are often far from toxicologically inert; rather they are often extremely hazardous. Indeed, EPA or OSHA has already found about 360 such chemicals to be "hazardous," and thus clearly should also find that "they may pose a hazard to man or the environment." To protect public health and the environment, these chemicals should be disclosed on product labels.

#### **D. Research Demonstrates Adverse Health and Environmental Effects of "Inert" Ingredients**

Recent research on the health effects of pesticides has demonstrated adverse effects attributable to chemicals used as "inert" ingredients. For example, both the active ingredient glyphosate and a commercial formulation containing glyphosate and "inert" ingredients were toxic to human placental cells in culture. However, the median lethal dose for the formulated product, with both active and "inert" ingredients was half that of the active ingredient alone. In other words, the mixture of "inert" and active ingredient was twice as lethal as the active ingredient alone.<sup>45</sup> A formulation containing the active ingredient atrazine and accompanying

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<sup>44</sup> EPA Chemical Profile for Chloroacetic Acid available at <http://yosemite.epa.gov/oswer/ceppoehs.nsf/Profiles/79-11-8?OpenDocument>. (last visited June 13, 2006.)

<sup>45</sup> Richard S, Moslemi S, Sipahutar H, Benachour N, Serlini G-E, 2005. Differential effects of glyphosate and Roundup on human placental cells and aromatase. *Environ Health Perspect* 113:716-720.

"inert" ingredients increased damage to the DNA of human lymphocytes while atrazine alone did not.<sup>46</sup>

Similarly, research on the environmental effects of pesticides has demonstrated the adverse impacts of "inert" ingredients. Exposure of tadpoles to environmentally relevant concentrations of glyphosate formulations including "inert" ingredients reduced tadpole size at time of metamorphosis, increased time to metamorphosis and increased the frequency of tail damage and of abnormal gonads. Glyphosate alone did not have these effects.<sup>47</sup> Microorganisms which constitute the broad base of natural food chains are affected dramatically by some "inert" ingredients. A formulation of the insecticide propetamphos was 100 times more toxic to the microbial flora in sediments than propetamphos itself.<sup>48</sup>

## POINT II

### **TO PROTECT THE PUBLIC AND THE ENVIRONMENT, AND TO FULFILL ITS DUTIES UNDER FIFRA, EPA SHOULD REQUIRE MANUFACTURERS TO DISCLOSE HAZARDOUS "INERT" INGREDIENTS IN THEIR PRODUCTS.**

#### **A. There is a Compelling and Urgent Need for EPA to Require Disclosure of Hazardous "Inert" Ingredients.**

EPA should require that pesticide product labels disclose the identity of all hazardous ingredients used in the formulation of the product, for whatever purpose they are used in that product, in order to adequately protect the public and fulfill the purposes of FIFRA. As noted,

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<sup>46</sup> Zeljezic D, Garaj-Vrhovac V, Perkovic P. Evaluation of DNA damage induced by atrazine and atrazine-based herbicide in human lymphocytes in vitro using a comet and DNA diffusion assay. *Toxicol In Vitro* doi:10.1016/j.tiv.2006.01.017.

<sup>47</sup> Howe CM. 2004. Toxicity of glyphosate-based pesticides to four North American frog species. *Environ Toxicol Chem* 23:1928-1938.

<sup>48</sup> Garcia-Ortega S, Holliman PJ, Jones, DL. In press. Toxicology and fate of Pestenal® and commercial propetamphos formulations in river and estuarine sediment. *Sci Total Environ*. Available online 19 September 2005.

however, under current practice, pesticide manufacturers are required to identify only those ingredients that the manufacturer considers to be the "active" ingredients in pesticide formulations, leaving consumers uninformed and unable to make informed decisions about the health risks of exposure to a particular product they might purchase or use. Absent full label disclosure and given that so-called "inert" ingredients often constitute more than 99% of a product, consumers may now be misled to believe that the bulk of the product is harmless. That can lead to overuse or misuse of the product, or insufficient protections during use.

Full disclosure of all hazardous chemicals would be consistent with EPA's general recognition of the public's right to full disclosure of the product ingredients. According to EPA, "a database that is inadequate to support risk assessment deprives people who are exposed to a chemical of their *right to know* the hazards/risks that may be posed by that product."<sup>49</sup>

(Emphasis added.) While complete pesticide formulations – the identity of all included chemicals – may at times be found through searches of scientific journals, material safety data sheets,<sup>50</sup> or ingredient profiles from manufacturers, these mechanisms are, at best, cumbersome and laborious, and do not provide the full list of product ingredients at the point of purchase or use. Nor would they likely be quickly accessible in the event of a medical or environmental emergency.

EPA's failure to require the identification of hazardous "inert" ingredients on pesticide product labels is inconsistent with the labeling requirements for other consumer products such as non-prescription drugs, foods and cosmetics which require complete disclosure of all ingredients. For example, pursuant to the Food, Drug, and Cosmetic Act ("FDCA"), 21 U.S.C. §§ 301 - 307,

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<sup>49</sup> Chemical Information Collection and Data Development (Testing), available at <http://www.epa.gov/oppintr/chemtest/mtlintro.htm> (last visited June 1, 2002).

<sup>50</sup> Material Safety Data Sheets ("MSDSs"), for example, are required by the EPCRA, 42 U.S.C. § 11021, and OSHA's Hazard Communication Standards, 29 C.F.R. § 1910.1200(g), and are available to the public under 42 U.S.C. §§ 11021(c)(2), 11044. The identities of "inert" ingredients are frequently disclosed on these MSDSs.



all "inert" ingredients in non-prescription drugs must be listed in alphabetical order on the product label. 21 U.S.C. §352(e)(1)(A)(iii). Also pursuant to the FDCA, all ingredients in food are required to be identified in descending order of percent composition by weight. Ingredients that comprise less than 2% of the total weight can be listed at the end of the ingredient list with a statement stipulating that all ingredients in the identified group are present as less than 2% of the total product weight. See 21 U.S.C. § 343(i); 21 C.F.R. § 101.4(a)(1)-(2). Similarly, all ingredients in cosmetics must be listed on the label in descending order of weight in the product, subject to an exception that the manufacturer may obtain only by petitioning FDA. See 21 C.F.R. § 720.8(a) -(b).

EPA's registration of a pesticide product is not an assurance of safety and thus no substitute for disclosure. Rather, EPA registers a pesticide if, among other requirements, the pesticide will not "generally cause unreasonable adverse effects on the environment" when used in accordance with "widespread and commonly used practice," and "it will perform its intended function without unreasonable adverse effects on the environment." 7 U.S.C. § 136a(c)(5). Absent an assurance of safety, it falls to the general public to assess those risks and their willingness to accept them. Such assessments are foiled by the absence of full disclosure of the identity of ingredients. Disclosure is particularly important when the ingredients are known to be hazardous, as are those subject to this Petition.

Because regulation of pesticide label content is reserved exclusively for EPA, see 7 U.S.C. § 136v(b), the States cannot mandate additional label disclosure of hazardous chemicals formulated in pesticides as "inert" ingredients. The States must therefore await action by EPA before their citizens have the information they need to make informed decisions regarding exposure to particular chemicals.

**B. EPA Has Ample Authority to Require Disclosure of Hazardous "Inert" Chemicals**

FIFRA mandates that EPA require on a pesticide product label the name and percentage of every "active" ingredient, 7 U.S.C. § 136(q)(2)(A), and authorizes EPA to require disclosure of an "inert" ingredient if necessary to prevent any label statement regarding ingredients to be misleading or if otherwise necessary to protect health and the environment. See id. § 136(q)(1)(A), (F) and (G) (defining a misbranded pesticide). EPA regulations that implement this statutory authority provide that the Administrator "may require the name of any inert ingredient(s) to be listed in the ingredient statement [on the product label] if he determines that such ingredient(s) may pose a hazard to man or the environment." 40 C.F.R. § 156.10 (g)(7). Since EPA (or OSHA) has in fact determined that the Hazardous "Inert" Chemicals listed in Table 1 "pose a hazard to man or the environment," EPA indisputably has the legal authority to require their disclosure on labels.

Indeed, when EPA first required that List 1 ingredients be identified on pesticide labels in 1987, there were almost 60 chemicals subject to that requirement. In other words, EPA used its authority to require the disclosure of almost 60 chemicals even though the manufacturers claimed they were being used in pesticide formulations as "inert" ingredients. As noted above, since that time, many chemicals have been taken out of use entirely and there are now eight chemicals on List 1 which EPA requires to be disclosed on product labels. EPA's action regarding these chemicals demonstrates that EPA has – and recognizes that it has – the authority discussed here, and that EPA further recognizes that it must take action with respect to hazardous chemicals used as "inert" ingredients.<sup>51</sup>

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<sup>51</sup> EPA's exercise of its legal authority to require the disclosure on pesticide labels of hazardous "inert" ingredients is consistent with Congress's action in the Food Quality Protection Act of August 3, 1996 (FQPA), P.L. 104-170, 110 Stat. 1514 (Oct. 30, 1998), to provide consumers with additional point of purchase information regarding pesticides. In addressing pesticide chemical residues on food, the FQPA amended Section 408 of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301-397 to include a new subsection (o) which requires EPA to publish and distribute to large grocery stores specific information regarding pesticide chemical  
(continued...)



While some manufacturers may assert that disclosure of "inert" ingredients could disclose trade secrets or confidential business information, FIFRA protects from disclosure only such information that "in the Administrator's judgment contains or relates to trade secrets or commercial or financial information . . . ." 7 U.S.C. § 136h(b). However, disclosure of the chemicals alone would not require disclosure of potentially secret manufacturing processes or even product formulae and is therefore not an infringement on trade secrets. Indeed, the identity of such chemicals can be determined through reverse engineering. Moreover, even if such a trade secret claim could be made, EPA regulations provide that EPA may require the name of an "inert" ingredient to be listed on the product label whenever it has determined that such an "inert" ingredient "may pose a hazard to man or the environment." 40 C.F.R. § 156.10(g)(1). Thus any claim that disclosing the presence of a hazardous "inert" ingredient would disclose a trade secret cannot trump EPA's disclosure-mandating authority. Phrased differently, where the Administrator makes a determination that the presence of an "inert" ingredient must be disclosed, that decision necessarily entails a finding that the public's interest in disclosure of a hazardous ingredient overrides any commercial interest in preserving confidentiality.<sup>52</sup> Thus purported

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<sup>51</sup>(...continued)

residues in or on food purchased by consumers and recommendations to consumers for reducing dietary exposure to those residues. See 21 U.S.C. § 346a(o). The action requested of EPA here is consistent with that "consumer right to know" action by Congress.

<sup>52</sup> EPA is afforded broad latitude to disclose even trade secrets "when necessary to carry out the provisions of [FIFRA]," including the label disclosure requirements. FIFRA Section 10(b) provides that:

Notwithstanding any other provision of this Act and subject to the limitations in subsections (d) and (e) of this section, the Administrator shall not make public information which in the Administrator's judgment contains or relates to trade secrets or commercial or financial information obtained from a person and privileged or confidential, except that, *when necessary to carry out the provisions of this Act*, information relating to formulas of products acquired by authorization of this Act may be revealed to any Federal agency consulted and may be revealed at a public hearing or in findings of fact issued by the Administrator.

7 U.S.C. § 136h(b) (emphasis added).



claims of trade secrets should pose no bar to the action requested here. In short, EPA has the authority to act and should do so.

### CONCLUSION

Petitioners request that, within 60 days of the filing of this Petition, the Administrator of EPA issue a finding that the Hazardous "Inert" Chemicals, as defined in I.A. above as those identified by EPA or OSHA under FIFRA, EPCRA, TSCA, RCRA, CWA, CAA, CERCLA or OSH Act "may pose a hazard to man or the environment," and thus should be moved to List 1.

Should the Administrator determine that he cannot or will not issue a finding covering all of those chemicals, then Petitioners request that EPA either:

(i) assess as a group the chemicals identified as hazardous under each authority cited in this Petition, and determine which groups of chemicals are sufficiently hazardous to require disclosure on product labels, or

(ii) assess individually each of the chemicals included under those authorities and determine specifically which individual hazardous chemicals are sufficiently hazardous to require disclosure on product labels.

The Petitioners further request that, concurrent with the Administrator's finding, EPA initiate a rulemaking to amend its regulations governing the labeling of pesticide products to require that those chemicals included in the Administrator's finding shall be disclosed as "Hazardous Inert Ingredients" on the label of any pesticide product in which they are formulated.<sup>53</sup>

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<sup>53</sup> For example, EPA could modify 40 C.F.R. § 156.10(g) Labeling Requirements regulation as follows (proposed changes of 40 C.F.R. § 156.10(g) are in bold):

(g) Ingredients statement—

(1) (i) General. The label of each product must bear a statement which contains the name and percentage by weight of each active ingredient, **the common chemical name and percentage by weight of each inert ingredient determined to pose a hazard to human health or the environment**, the total percentage by weight of all other inert ingredients; and if the pesticide contains arsenic in any form, statement of the percentages of total and water-soluble arsenic calculated as elemental arsenic. The active ingredients

(continued...)

### CERTIFICATION

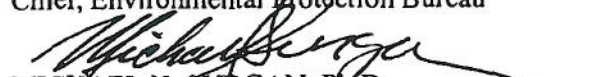
The undersigned certify that, to the best of their knowledge and belief, the information presented in this Petition is true and correct.

Respectfully submitted,

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<sup>53</sup>(...continued)

must be designated by the term "active ingredients" the inert ingredients determined to pose a hazard to human health or the environment must be designated by the term "hazardous inert ingredients," and all other ingredients must be designated by the term "other inert ingredients," or the singular forms of these terms when appropriate. All terms shall be in the same type size, be aligned to the same margin and be equally prominent. The statement "Inert Ingredients, none" is not required for pesticides which contain 100 percent active ingredients. Unless the ingredient statement is a complete analysis of the pesticide, the term "analysis" shall not be used as a heading for the ingredient statement.

(ii) An inert ingredient shall be considered to have been determined to pose a hazard to human health or the environment if it has been registered as an active ingredient in a pesticide or listed on the EPCRA § 302(a) list, EPCRA § 313-TRI list, TSCA section 6 list, CERCLA § 101(14) list, CERCLA § 104(i)(2) list, RCRA F Waste list, RCRA P Waste list, RCRA U Waste list, RCRA Appendix VII list, RCRA Appendix VIII list, CWA Pretreatment Standards/ Paragraph 4-C list, CWA § 311 list, CAA § 112b list, CAA 112r list, CAA § 202(a) list, FIFRA Inert Ingredients - List 2, the OSHA Toxic and Hazardous Substance list, or the ACGIH TLV list.

\* \* \*

(7) Inert ingredients. The Administrator shall require the name of any additional inert ingredient(s) to be listed in the ingredient statement as a "hazardous inert ingredient" if he determines that such ingredient(s) may pose a hazard to man or the environment.



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Table 1. Hazardous Inert Chemicals \*

## Chemical Identity

## Source Lists

Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) 302A	TRJ	TSCA	CERCLA 101(14)	CERCLA 104(1)(2)	RCRA 110 (SARA 110)	RCRA F	RCRA P	RCRA U	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	CAA 202A	EPA List 2 Inerts	OSHA Toxic Hazardous	ACGIH TLVs	Total # of Lists
1-(3-Chloroallyl)-3,5,7-Triaza-1-azoniaadamantane chloride	4080-31-3	X			X																		2
1,1,1-Trichloroethane	71-55-6				X		X	X			X	X	X		X		X			X	X	X	11
1,1,2,2-Tetrachloroethane	79-34-5				X		X	X			X	X	X		X		X				X	X	9
1,2-Butylene oxide	106-88-7				X		X										X						4
1,3-Cyclohexadiene, 1-methyl-4-(1-methylethyl)-	99-86-5														X								1
1,3-Pentadiene	504-60-9						X				X							X					3
1-Bromo-1-(bromomethyl)-1,3-propanediacarbonitrile	35691-65-7				X																		1
1-Butanol	71-36-3				X		X			X					X						X		8
1-Dodecanol	112-53-8														X								1
1H-Benzotriazole	95-14-7																						1
1H-Benzotriazole, 4(or 5)-methyl-	29385-43-1																			X			1
1H-Benzotriazole, 4(or 5)-methyl-, sodium salt	64665-57-2																			X			1
1-Hexadecanol	36653-82-4																						1
1H-Indole-5-sulfonic acid, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-,	860-22-0																			X			1
1-Octadecanol	112-92-5														X								1
1-Propanol	71-23-8																			X	X		2
2,3-Dichloropropene	78-88-6				X		X									X							3
2,6-Di-tert-butyl-p-cresol	128-37-0														X						X		2
2-Butanol	78-92-2				X															X			3
2-Butanone, oxime	96-29-7																						1
2-Butoxyethyl acetate	112-07-2										X										X	X	1
2-Ethoxyethanol	110-80-5				X																X	X	8
2-ethylhexanoic acid	149-57-5						X								X						X	X	1
2-Heptanone	110-43-0																				X	X	2
2-Hexanone, 5-methyl-	110-12-3																				X	X	2
2-Mercaptobenzothiazole	149-30-4				X																		1
2-Methyl-3(2H)-isothiazolone	2682-20-4														X					X	X		1
2-Naphthalenol	135-19-3																				X		1
2-Propanol, 1-(2-butoxyethoxy)-	124-16-3																						1
2-Propanol, 1-(2-methoxy-1-methylethoxy)-1-methylethoxy-	20324-33-8														X								2
2-Propanol, 1-butoxy-	5131-66-8																			X	X		1
2-Propen-1-ol	107-18-6				X		X			X													9
2-Propenoic acid, 2-methyl-, butyl	97-88-1																			X			1
3-Iodo-2-propynyl butylcarbamate	55406-53-1	X					X																3
4,4'-Methylenedi(phenyl isocyanate)	101-68-8				X		X														X	X	4

Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) TRI	TSCA 6	CERCLA 101(14) (SARA 110)	CERCLA 104(I)(2) (SARA 110)	RCRA F Waste	RCRA P Waste	RCRA U Waste	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	CAA 202A	EPA List 2 Inerts	OSHA Toxic Hazardous	ACGIH TLVs	Total # of Lists
4-Chloro-3,5-dimethylphenol	88-04-0																				1
4-Hydroxy-4-methyl-2-pentanone	123-42-2																				4
8-Quinololinol sulfate	134-31-6	X																			1
9,12-Octadecadienoic acid (9Z,12Z)-, methyl ester	112-63-0																				1
9-Octadecenoic acid (9Z)-, methyl	112-62-9																				1
Acetic acid	64-19-7					X															5
Acetic acid, phenylmethyl ester	140-11-4																				2
Acetic anhydride	108-24-7					X															4
Acetone	67-64-1		X			X															7
Acetonitrile	75-05-8		X			X															9
Acetophenone	98-86-2		X			X															7
Acetylene [Ethyne]	74-86-2					X															2
Adipic acid	124-04-9					X															3
Alkanes, Iso-	64365-06-6																				1
alpha-Pinene	80-56-8																				2
alpha-Terpineol	98-55-5																				1
Aluminum	7429-90-5		X																		4
Aluminum oxide	1344-28-1		X																		3
Aluminum sulfate	10043-01-3					X															2
Ammonium acetate	631-61-8					X															2
Ammonium bicarbonate	1066-33-7					X															2
Ammonium carbonate	1111-78-0					X															2
Ammonium chloride	506-87-6					X															2
Ammonium hydroxide	12125-02-9					X															3
Ammonium nitrate	1336-21-6					X															2
Ammonium nitrate	6484-52-2					X															1
Ammonium silicofluoride	16919-19-0					X															2
Ammonium sulfate	7783-20-2		X			X															1
Ammonium thiocyanate	1762-95-4					X															2
Antimony potassium tartrate	28300-74-5					X															3
Antimony trioxide	1309-64-4					X															1
Argon	7440-37-1																				3
Asphalt (Bitumen) fume	8052-42-4																				1
Barium sulfate	7727-43-7																				3
Benzaldehyde	100-52-7																				1
Benzenamine, 4,4'-	2465-27-2																				1
carbamimidoylbis[N,N-dimethyl-, Benzene, 1,4-dimethoxy-	150-78-7																				1
Benzeneethanol	60-12-8																				1
Benzethonium chloride	121-54-0	X																			1
Benzoic acid	65-85-0					X															4
Benzophenone	119-61-9																				1
Benzoyl peroxide	94-36-0																				3
Benzyl alcohol	100-51-6																				2
Benzyl benzoate	120-51-4																				1
Bicyclo[2.2.1]heptan-2-ol, 1,3,3-bis(2-ethylhexyl)phthalate (DEHP)	1632-73-1	X																			1
Borax	117-81-7																				2
	1303-96-4																				1



Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA TRI	TSCA 6	CERCLA 101(14) (SARA 110)	CERCLA 104(1)(2) (SARA 110)	RCRA F Waste	RCRA P Waste	RCRA U Waste	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112c	EPA List 2 Inerts	OSHA Toxic & Hazardous	ACGIH TLVs	Total # of Lists
Boric acid, disodium salt, Boric oxide	12179-04-3																		X	1
Bronopol	52-51-7		X															X	X	2
Butane	106-97-8			X															X	1
Butyl acrylate	141-32-2		X																X	2
Butyl benzyl phthalate	85-68-7		X																X	2
Butyric acid	107-92-6					X	X													6
C.I. Acid Blue 9, diammonium salt	2650-18-2		X																	4
C.I. Acid Blue 9, disodium salt	3844-45-9		X																	1
C.I. Basic Red 1	989-38-8		X																	1
C.I. Pigment Blue 15	147-14-8		X																	1
C.I. Pigment Green 36	14302-13-7		X																	1
C.I. Pigment Green 7	1328-53-6		X																	1
C.I. Solvent Orange 7	3118-97-6		X																	1
C12-30-Aromatic distillates	68602-80-2																			1
Calcium Carbonate	471-34-1																			1
Calcium dodecylbenzenesulfonate	26264-06-2					X													X	2
Calcium hydroxide	1305-62-0					X													X	3
Calcium hypochlorite	7778-54-3					X													X	3
Calcium oxide	1305-78-8																		X	2
Calcium sulfate	7778-18-9																		X	3
Camphor	76-22-2																		X	2
Carbon black	1333-86-4																		X	2
Carbon dioxide	124-38-9																		X	2
Cellulose	9004-34-6																		X	2
CFC-11	75-69-4			X															X	9
CFC-113	76-13-1			X															X	6
CFC-12	75-71-8			X															X	8
Chlorine dioxide	10049-04-4			X															X	4
Chloroacetic acid	79-11-8			X															X	4
Chlorpicrin	76-06-2	X																		
Chlorothalonil	1897-45-6	X																		
Coal tar	8007-45-2			X																
Colchicine	64-86-8																			
Cresol	1319-77-3		X																	
Cristobalite (SiO2)	14464-46-1																			
Cumene	98-82-8			X																
Cupric acetate	142-71-2					X	X													
Cupric nitrate	3251-23-8					X	X													
Cupric sulfate	7758-98-7					X	X													
Cyclohexane	110-82-7			X															X	3
Cyclohexanol	108-93-0			X															X	7
Cyclohexanone	108-94-1					X	X												X	3
Cyclohexene, 1-methyl-4-(1-methylethylidene)-	586-62-9																			
Dazomet	533-74-4	X																		
Decanoic acid	334-48-5																			
Di(2-ethylhexyl) adipate	103-23-1																			
Diallyl phthalate	131-17-9																			

Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) TRI	TSCA 6	CERCLA 101(14) (SARA 110)	CERCLA 104(1)(2) (SARA 110)	RCRA F Waste	RCRA P Waste	RCRA U Waste	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	CAA 202a	EPA List 2 Inerts	OSHA Toxic Hazardous	ACGIH TLVs	Total # of Lists
Diammonium citrate	3012-65-5																				2
Diethyl phthalate	84-74-2		X	X		X	X						X	X	X				X	X	12
Dichloroaniline	27134-27-6																				1
Dichlorophene	97-23-4	X		X																	3
Diethanolamine	111-42-2			X		X															5
Diethyl phthalate	84-66-2			X		X	X						X								8
Diethylamine	109-89-7					X															4
Diethylene glycol monobutyl ether	112-34-5																				2
Diethylene glycol monoethyl ether	111-90-0																				2
Diethylene glycol monomethyl ether	111-77-3																				2
Disobutyl ketone	108-83-8																				2
Dimethyl phthalate	131-11-3		X	X		X	X						X	X	X						11
Dimethyl sulfoxide	67-68-5																				1
Dimethylamine	124-40-3			X		X															7
Di-n-octyl phthalate	117-84-0		X	X		X	X														7
Diethyl adipate	123-79-5																				2
Dipropylene glycol monomethyl ether	34590-94-8																				3
Disodium phosphate	7558-79-4					X								X	X						2
Disodium selenite	10102-18-8					X															3
Disodium Tetraborate	1330-43-4		X																		1
Distillates (petroleum), acid-treated	64742-14-9																				1
Distillates (petroleum), heavy arom.	67891-79-6																				1
Distillates (petroleum), heavy	64741-53-3																				1
Distillates (petroleum), heavy	64741-51-1																				1
Distillates (petroleum), hydrotreated	64742-47-8																				1
Distillates (petroleum), hydrotreated	64742-46-7																				1
Distillates (petroleum), light arom.	67891-80-9																				1
Distillates (petroleum), light catalytic	64741-59-9																				1
Distillates (petroleum), light	64741-52-2																				1
Distillates (petroleum), light	64741-50-0																				1
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0																				1
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9																				1
Dodecanic acid, methyl ester	111-82-0																				1
Dodecyl mercaptan	112-55-0																				2
Dodecylbenzenesulfonic acid	27176-87-0																				2
Ethane	74-84-0																				3
Ethanol	64-17-5																				3
Ethanol, 2-(diethylamino)-	100-37-8																				1
Ethanolamine	141-43-5																				1
Ethoxyquin	91-53-2																				2
Ethyl acetate	141-78-6																				1
Ethyl Ether	60-29-7																				6
Ethyl methacrylate	97-63-2			X																	2
Ethylbenzene	100-41-4																				3

Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) TRI	TSCA 6	CERCLA 101(14)	CERCLA 104(1)(2)	RCRA F	RCRA P	RCRA U	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	CAA 202a	EPA List 2 Inerts	OSHA Toxic & Hazardous	ACGIH TLVs	Total # of Lists
Ethylene glycol	107-21-1																				4
Ethylene glycol monobutyl ether	111-76-2																				4
Ethylendiamine	107-15-3																				6
Ethylendiaminetetraacetic acid	60-00-4																				2
Ferric chloride	7705-08-0																				2
Ferric oxide	1309-37-1																				2
Ferric sulfate	10028-22-5																				2
Ferrous ammonium sulfate	10045-89-3																				2
Ferrous sulfate	7720-78-7																				2
Ferrous sulfate heptahydrate	7782-63-0																				2
Formaldehyde	50-00-0																				11
Formic acid	64-18-6																				8
Fuel oil no. 2	68476-30-2																				2
Fuel oil no. 4	68476-31-3																				2
Fuel oil no. 6	68553-00-4																				2
Fuel oil, residual	68476-33-5																				1
Fuels, diesel	68334-30-5																				1
Fumaric acid	110-17-8																				2
Glutaraldehyde	111-30-8																				2
Glycerine	56-81-5																				1
Glyoxal	107-22-2																				2
Graphite	7782-42-5																				2
Gypsum	13397-24-5																				1
HCFC-142b	75-68-3																				2
HCFC-21	75-43-4																				5
HCFC-22	75-45-6																				4
Heavy aromatic solvent naphtha (petroleum)	64742-94-5																				1
Helium	7440-59-7																				1
Heptane	142-82-5																				3
Hexadecanoic acid	57-10-3																				1
Hexadecanoic acid, methyl ester	112-39-0																				1
Hexanoic acid	142-62-1																				1
Hexylene glycol	107-41-5																				2
HFC-152a	75-37-6																				2
Hi-Sol 10	64427-33-4																				1
Hydrochloric acid	7647-01-0																				9
Hydrogen peroxide	7722-84-1																				3
Hydrotreated heavy paraffinic petroleum distillates	64742-54-7																				1
Hydrotreated light paraffinic petroleum distillates	64742-55-8																				1
Indole	120-72-9																				4
Isomyl acetate	123-92-2																				6
Isobutanol	78-83-1																				4
Isobutyl acetate	110-19-0																				1
Isodecanol	25339-17-7																				1
Isocetyl alcohol	26952-21-6																				1
Isopentane [Butane, 2-methyl-]	78-78-4																				2



Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA TRI	EPCRA (SARA) TRI	TSCA 6	CERCLA 101(14)	CERCLA 104(1)(2)	RCRA F	RCRA P	RCRA U	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	CAA Inerts	EPA List 2	OSHA Toxic Hazardous	ACGIH TLVs	Total # of Lists
Isopropanol	67-63-0			X				X												X	X	4
Isopropyl acetate	108-21-4																			X	X	2
Isopropylamine	75-31-0																			X	X	3
Kaolin	1332-58-7																			X	X	2
Kerosene	8008-20-6																			X	X	1
Kerosine (petroleum),	64742-81-0																			X	X	2
Kieselguhr	61790-53-2																			X	X	2
Lauric acid	143-07-7																					1
Light aliphatic solvent	64742-89-8																			X		1
naphtha (petroleum)	64742-95-6																			X		1
Light aromatic solvent	1317-65-3																			X		1
Limestone	138-86-3																					1
Limonene	554-13-2																					1
Low-boiling catalytic																						
reformer fractionator residue																						
distillates (petroleum)	68477-31-6																					1
Magnesium carbonate	546-93-0																			X	X	2
Magnesium oxide	1309-48-4																			X	X	2
Maleic acid	110-16-7																					2
Maleic anhydride	108-31-6																			X	X	9
Medium aliphatic solvent																						
naphtha (petroleum)	64742-88-7																					1
Menthol	1490-04-6																					1
Mesityl oxide	141-79-7																			X	X	4
Methacrylic acid	79-41-4																			X	X	2
Methanol	67-56-1																			X	X	9
Methyl Ether [Methane, oxybis-]	115-10-6																			X	X	1
Methyl ethyl ketone	78-93-3																			X	X	9
Methyl isobutyl ketone	108-10-1																			X	X	10
Methyl methacrylate	80-62-6																			X	X	10
Methylnaphthalene	1321-94-4																			X	X	1
Mica-group minerals	12001-26-2																			X	X	2
Morpholine	110-91-8																			X	X	2
n-Amyl acetate	628-63-7																			X	X	4
Naphtha	8030-30-6																			X	X	2
Naphtha (petroleum), heavy alkylate	64741-65-7																			X	X	1
Naphtha (petroleum), heavy straight-	64741-41-9																			X	X	1
Naphtha (petroleum), light steam-																						
cracked arom.																						
Naphthalene	68527-23-1																					1
Naphthalene	91-20-3																			X	X	11
Naphthenic acids	1338-24-5																					2
Natural rubber latex	9006-04-6																			X	X	1
n-Butyl acetate	123-86-4																			X	X	5
n-Butyl lactate	138-22-7																			X	X	1
Nitric acid	7697-37-2																			X	X	2
Nitrotriethylacetic acid	139-13-9																					1
Nitroethane	79-24-3																			X	X	3

Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) TRI	TSCA 6	CERCLA 101(14)	CERCLA 104(I)(2)	RCRA F	RCRA P	RCRA U	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	EPA CAA 202A	EPA List 2 Inerts	OSHA Toxic & Hazardous	ACGIH TLVs	Total # of Lists
Nitrogen	7727-37-9																	X		X	1
Nitromethane	75-52-5																	X		X	3
Nitrous Oxide	10024-97-2																			X	1
N-Methyl-2-pyrrolidone	872-50-4		X																		2
Nonanoic acid	112-05-0																				2
Normal C5-20 paraffins (petroleum)	64771-72-8																				1
N-Vinyl-2-pyrrolidone	88-12-0																				1
o-Chlorotoluene	95-49-8		X																		1
o-Cresol	95-48-7					X															1
Octadecanoic acid, methyl ester	112-61-8																				3
Octanoic acid	124-07-2																				9
Oxalic acid	144-62-7																				1
Paraffin oils	8012-95-1																				1
Paraffin wax fume	8002-74-2																				1
Pentaerythritol	115-77-5																				2
Pentanoic acid	109-52-4																				1
Perlite	93763-70-3																				1
Phenol, (1,1-dimethylethyl)-4-	25013-16-5																				1
Phenol, 2-(1-methylethyl)-	88-69-7																				2
Phenol, 3-(1-methylethyl)-	618-45-1																				2
Phenol, 4-(1-methylethyl)-	99-89-8																				2
Phenol, 4-methoxy-	150-76-5																				1
Phenol, nonyl-	25154-52-3																				1
Phosphoric acid	7664-38-2		X			X															1
Phosphoric acid, triethyl ester	78-40-0																				6
Phthalic anhydride	85-44-9		X			X															1
Picric acid	88-89-1		X																		4
Piperonyl butoxide	51-03-6	X																			2
p-Nitrophenol	100-02-7		X			X															8
Polymeric diphenylmethane diisocyanate	9016-87-9																				1
Portland cement	65997-15-1		X																		1
Potassium bromate	7758-01-2																				1
Potassium hydroxide	1310-58-3					X															3
Potassium permanganate	7722-64-7					X															2
Propane	74-98-6																				3
Propanol, (2-ethoxymethylethoxy)-methoxymethylethoxy	30025-38-8																				1
Propanol, 1(or 2)-butoxy-	25498-49-1																				1
Propargyl alcohol	29387-86-8																				1
Propionaldehyde	107-19-7		X																		5
Propionic acid	123-38-6					X															4
Propylene glycol 1-methyl ether	79-09-4					X															6
p-tert-Butylphenol	107-98-2	X																			2
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	98-54-4																				1
	68424-85-	X																			1

Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) TRI	TSCA 6	CERCLA 101(14) (SARA 110)	CERCLA 104(1)(2) (SARA 110)	RCRA F	RCRA P	RCRA U	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112c	EPA List 2 Inerts	OSHA Toxic & Hazardous	ACGIH TLVs	Total # of Lists
Residues (petroleum), catalytic reformer fractionator																			
Resorcinol	64741-67-9																		1
Rhodamine B	108-46-3																		5
Rosin core solder thermal decomposition products	81-88-9		X																1
Rotenone	8050-09-7																		1
Saccharin	83-79-4	X																	2
Salicylic acid	81-07-2																		3
Silane, triethoxypentyl-	69-72-7																		1
Silica gel, ppd., cryst.-free	2761-24-2																		1
Silica, vitreous	112926-00-8																		2
Silicic acid, calcium salt	60676-86-0																		2
Sodium bisulfite	1344-95-2																		2
Sodium chromate(VI)	7631-90-5																		3
Sodium dodecylbenzenesulfonate	7775-11-3																		3
Sodium fluoride	25155-30-0																		2
Sodium hexametaphosphate	7681-49-4																		3
Sodium hydroxide	10124-56-8																		2
Sodium metabisulfate	1310-73-2																		1
Sodium nitrite	7681-57-4																		3
Sodium o-phenylphenoxide	7632-00-0																		1
Sodium sulfate	132-27-4																		1
Sodium tripolyphosphate	7757-82-6																		2
Starch	7758-29-4																		1
Stearic acid	64742-96-7																		2
Stoddard solvent	9005-25-8																		1
Subtilisins	57-11-4																		3
Sucrose	8052-41-3																		1
Sulfur	9014-01-1																		2
Sulfur chloride (S2Cl2)	57-50-1																		1
Sulfuric acid	7704-34-9																		4
Talc (Mg3H2(SiO3)4)	10025-67-9																		7
Tert-Butanol	7664-93-9																		2
Tetradecanoic acid	14807-96-6																		3
Tetradecanoic acid, methyl ester	75-65-0																		1
Tetrahydrofuran	544-63-8																		1
Titanium dioxide	124-10-7																		5
Toluene	109-99-9																		3
Triethanolamine	7722-88-5																		12
Triethanolamine	13463-67-7																		1
Triethylamine	108-88-3																		2
Trimellitic anhydride	15468-32-3																		9
Trimethyl benzene	102-71-6																		1
Triphenyl phosphite	27323-41-7																		1
Tripoli	121-44-8																		1
	552-30-7																		1
	25551-13-7																		1
	115-86-6																		1
	1317-95-9																		1



Chemical Name	CAS number	Pesticide Active Ingredients	EPCRA (SARA) 302A	EPCRA (SARA) 302A TRI	TSCA 6	CERCLA 101(14) (SARA 110)	CERCLA 104(I)(2) (SARA 110)	RCRA F Waste	RCRA P Waste	RCRA U Waste	RCRA Appendix VII	RCRA Appendix VIII	CWA 307	CWA 311	CAA 112b	CAA 112r	CAA 202A	EPA List 2 Inerts	OSHA Toxic Hazardous	ACGIH TLVs	Total # of Lists
Trisodium phosphate	7601-54-9					X														X	2
Turpentine, oil	8006-64-2																		X		2
Vanillin	121-33-5												X								1
Vinyltoluene	25013-15-4																		X		2
VM & P Naphtha	8032-32-4																		X		1
Xylene	1330-20-7			X		X	X	X						X	X			X	X		10
Zinc	7440-66-6			X	X	X	X														4
Zinc chloride	7646-85-7													X					X		4
Zinc oxide	1314-13-2					X													X		2
Zinc stearate	557-05-1																		X		1

• Table 1 is derived primarily from EPA's Substance Registry System (<http://www.epa.gov/srs/>). The list of OSHA Toxic and Hazardous Substances that is not included in the Substance Registry List is available at <http://www.osha.gov/dts/chemicalsampling/toc/chemcas.html>. The list of chemicals identified by EPA as list 2 inert ingredients can be found at [http://www.epa.gov/opprd001/inerts/inerts\\_list2.pdf](http://www.epa.gov/opprd001/inerts/inerts_list2.pdf). The list of ACGIH TLV chemicals is from the 2004 edition of "TLVs and BEIs" published by the American Conference of Governmental Industrial Hygienists.