Orphan Chemicals in the HPV Challenge: A Status Report

JUNE 2004

ENVIRONMENTAL DEFENSE
finding the ways that work

Orphan Chemicals in the HPV Challenge: A Status Report

AUTHOR
Richard A. Denison, Ph.D.
Senior Scientist

June 2004

ENVIRONMENTAL DEFENSE
finding the ways that work

Acknowledgments

The invaluable assistance of Karen Kenyon and especially of Tracy Andres in producing and managing the flow of correspondence with companies is gratefully acknowledged, as is the assistance of Lauren Butcher and Eben Lichtman in developing our database of names and addresses of company contacts. Karen Florini provided helpful editorial comments on a draft of this report.

Our mission

Environmental Defense is dedicated to protecting the environmental rights of all people, including the right to clean air, clean water, healthy food and flourishing ecosystems. Guided by science, we work to create practical solutions that win lasting political, economic and social support because they are nonpartisan, cost-effective and fair.

The complete report is available online at www.environmentaldefense.org.

Contents

Executive Summary

The genesis of the U.S. HPV Challenge Program dates back to 1997, when Environmental Defense published *Toxic Ignorance*, which suggested that more than 70% of the highest-volume industrial chemicals in U.S. commerce lacked sufficient data on toxicity and environmental fate to conduct even a basic hazard assessment, at least as far as could be determined in the public record.[1] These disturbing findings led both government (the U.S. Environmental Protection Agency) and the chemical industry (the Chemical Manufacturers Association, since renamed the American Chemistry Council) to conduct their own, more extensive studies.[2] Both found that the problem was even worse than Environmental Defense had indicated: More than 90% of the high-production-volume (HPV) industrial chemicals in U.S. commerce lacked sufficient hazard-screening data available in the public record.

Prompted by these findings, Environmental Defense, the U.S. Environmental Protection Agency and the Chemical Manufacturers Association (now the American Chemistry Council) jointly developed a framework for a landmark right-to-know program called the U.S. High Production Volume (HPV) Challenge Program. Under this program, launched in late 1998, chemical producers voluntarily committed to fill gaps in basic screening-level hazard data for HPV chemicals – those produced in the U.S. in amounts of one million pounds or more annually – and to make the data publicly available by no later than 2005.

While the U.S. High Production Volume (HPV) Challenge is driving the development and public release of screening-level hazard data for many HPV chemicals, one area of concern has been that several hundred of the nearly 2800 chemicals originally included in the program were either never sponsored or have had initial sponsorships withdrawn. Currently 532 chemicals from the original program list are not sponsored and are not otherwise exempted. Figure 1 summarizes the results of our assessment in this report of the status of these chemicals among those originally included in the Challenge. The key finding is that at least 156, and perhaps as many as 259, of these unsponsored chemicals, remain true "orphans" that can and should be sponsored.

The concern for HPV chemicals that remain orphans, of course, is that serious gaps in the public availability of screening-level hazard data are likely to persist for such chemicals; after all,

---

Note: This report assumes a fair degree of familiarity with the U.S. HPV Challenge Program. For background on the Challenge, why it was implemented, and how it operates, see the Environmental Defense March 2003 report, *Facing the Challenge: A Status Report on the U.S. HPV Challenge Program*.

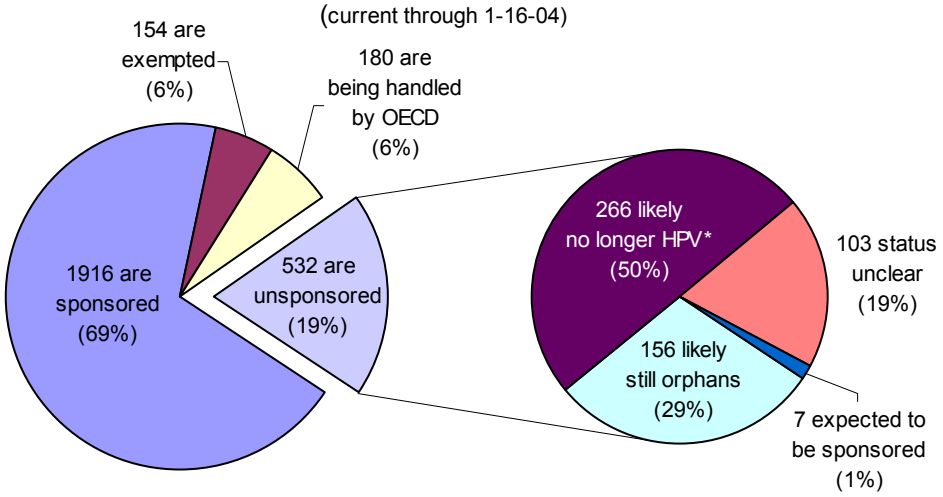
All of the data included in this report also appear in Environmental Defense's HPV Tracker database, available at www.environmentaldefense.org/go/hpvtracker. The HPV Tracker includes links to copies of all company responses to Environmental Defense's letter, and it allows sorting and filtering by chemical and company. The Tracker will also be updated as information on orphan chemicals changes.

1 *Toxic Ignorance* is available online at www.environmentaldefense.org/pdf.cfm?ContentID=243&FileName=toxicignorance.pdf.

2 U.S Environmental Protection Agency, Office of Pollution Prevention and Toxics. Chemical Hazard Data Availability Study: What Do We Really Know About the Safety of High Production Volume Chemicals? (Washington, DC: U.S. Environmental Protection Agency, April 1998) (available online at www.epa.gov/opptintr/chemtest/hazchem.htm); and Public Availability of SIDS-Related Testing Data for U.S. High Production Volume Chemicals. Prepared by ICF Kaiser International for the Chemical Manufacturers Association, Arlington, Virginia, 1998.

more than 90% of HPV chemicals lacked some or all such screening-level data at the outset of the HPV Challenge Program.

Figure 1. Current status of unsponsored chemicals among the 2782 Core List (1990) chemicals in the HPV Challenge
(current through 1-16-04)



* Includes the 227 chemicals that were below HPV levels in both 1998 and 2002, and the nine chemicals that did not appear at all on the 2002 Inventory Update.

Determining the actual magnitude of this problem – that is, how many program chemicals continue to be manufactured[3] at HPV levels but remain unsponsored – is complicated for a variety of reasons. This report explains those complications; how we sought to resolve them by directly contacting producers and importers of unsponsored chemicals; the companies' responses; and our evaluation of those responses. Key aspects and findings of the report include the following.

We identified and sent letters to the CEOs of 202 companies that reported producing or importing one or more unsponsored chemicals. A total of 110 of those companies (54%) responded, and their responses covered 249 unique company-chemical combinations.[4] Of these:

- 71 responses (29%) appeared *sufficient* to justify the company's decision not to sponsor a chemical.
- 131 responses (53%) appeared *insufficient*.
- For 36 responses (14%), we were not able to make a judgment.
- For 11 responses (4%), the company indicated its intent to sponsor the chemical, making any judgment moot.

3 TSCA defines manufacture to include both domestic production and import.
4 Some of the 202 companies sent letters were identified with more than one of these chemicals, while some of the 236 unsponsored chemicals addressed in the letters were identified with more than one company; in all, there were 429 unique company-chemical combinations.

With regard to the 532 currently unsponsored chemicals (see Figure 1):

- 156 chemicals (29%) likely are still "orphans" – i.e., they should be sponsored, but have not been;
- 103 chemicals (19%) have an unclear status; [5]
- 266 chemicals (50%) are likely no longer HPV;[6] and
- 7 chemicals (1%) appear to be in the process of becoming sponsored.

Thus, at least 156 and possibly as many as 259 chemicals are "true orphans:" chemicals for which their producers and importers have not met their responsibility to sponsor chemicals under the program.[7] Given that there are 1916 chemicals on the original program list of candidates that have been sponsored, this is a robust overall sponsorship level of 88-92% [8], for which the industry as a whole deserves commendation.

At the same time, the "deadbeat dads" – companies that continue to produce or import the true orphans and should have sponsored them – deserve criticism. Our designation of apparent "deadbeat dads" is limited to those companies that: a) reported chemicals we have judged likely still to be orphans, and b) either did not respond at all to our letter, or provided a response we judged insufficient to justify non-sponsorship.[9] Below we list the worst apparent offenders – those companies reporting producing the highest number of orphans.

Company	# of orphans	Response
KOPPERS INDUSTRIES, INC.	13	None
UNITED STATES STEEL CORP.	10	None
BASF CORP.	8	Insufficient
THE DOW CHEMICAL COMPANY	8	Insufficient
EXXON MOBIL CHEMICAL COMPANY	6	Insufficient

5 This number includes 80 chemicals that, although they were either not reported or reported at below HPV levels in the 2002 reporting cycle of the Inventory Update, were above HPV levels in the 1998 reporting cycle. Hence, they still meet EPA's definition of an HPV chemical, but the responses we received regarding them included some indications that they may be no longer HPV; for this reason we indicated that their status is unclear.

6 This number includes 227 chemicals that were reported at below HPV levels in both the 1998 and 2002 reporting cycles, and hence no longer meet EPA's definition of an HPV chemical, as well as nine chemicals that did not appear at all on the 2002 Inventory Update. It also includes 30 chemicals that, although they were either not reported or reported at below HPV levels in the 2002 reporting cycle of the Inventory Update, were above HPV levels in the 1998 reporting cycle. Hence, they still meet EPA's definition of an HPV chemical, but the responses we received regarding them, or information already provided to EPA when commitments to these chemicals were withdrawn, indicate they are likely no longer HPV.

7 The chemicals that likely are still orphans and those that have an unclear status are listed in Table 2 of this report.

8 The original core program list of chemicals, derived from the 1990 TSCA Inventory Update, numbered 2782. Of these, 180 are being handled separately by member countries under the Organization for Economic Cooperation and Development (OECD) SIDS Program, while 154 have been exempted by EPA for various reasons. Of the remaining 2448, 1916 are sponsored and 532 are unsponsored. Hence, the 156-259 apparent "true orphans" represent 8-12% of those available for sponsorship: 156/(156+1916) = 8%; 259/(259+1916) = 12%. The overall sponsorship rate, then, is 88-92%.

About 300 chemicals beyond the 1990 core program list have also been sponsored. Some of these are chemicals that have become HPV since 1990, while others are non-HPV chemicals that are included in proposed categories to provide data that support the category. Counting these, more than 2200 chemicals have been sponsored in total.

9 As explained in the text, in addition to those chemicals we judged likely still to be orphans, we designated the orphan status of an additional 103 chemicals as uncertain. Appendix E lists the additional "possible deadbeat dads" – companies reporting these status-uncertain chemicals that either did not respond at all to our letter, or provided a response we judged insufficient to justify non-sponsorship.

Company	# of orphans	Response
LONZA, INC.	6	Insufficient
UNIVAR USA, INC.	6	None
ALBEMARLE CORP.	5	Insufficient
CLARIANT LSM (US) INC.	5	None
ATOFINA CHEMICALS, INC.	4	Insufficient
REILLY INDUSTRIES, INC.	4	Insufficient
SYNGENTA CROP PROTECTION, INC.	4	Insufficient
WHEELING-PITTSBURGH STEEL CORP.	4	None

A list of all of the "deadbeat dads" is shown in Table 3 of the full report, along with each of the chemicals they reported. It should be noted that companies we identify as "deadbeat dads" are so designated for the specific orphan chemicals they have *not* sponsored; many of these same companies *have* sponsored other HPV chemicals they produce.

Among the apparent "deadbeat dads," one sector is especially well-represented: companies producing coal and coke-oven derivatives and extracts. Four such companies are among the worst offenders listed above, including the top two. Many companies in this sector have not participated in the HPV Challenge, and many also chose not to respond to our letters. Their poor showing takes on even more significance when one considers that many of these products are among those industrial chemicals produced in the very largest amounts, often far exceeding the million-pound-per-year threshold defining an HPV chemical.

Conclusion

EPA should use all means available to it, including the issuance of test rules, to compel all companies that produce or import these orphan chemicals to live up to the obligation that Congress articulated for chemical producers and importers nearly three decades ago in the Toxic Substances Control Act of 1976 (TSCA):

> It is the policy of the United States that . . . adequate data should be developed with respect to the effect of chemical substances and mixtures on health and the environment and that the development of such data should be the responsibility of those who manufacture and those who process such chemical substances and mixtures.[10]

Finally, this report also reveals that many hundreds of "new HPVs" have emerged since the launch of the HPV Challenge. A total of 735 such chemicals – HPV in 2002 that were not HPV in 1990 – appear on the 2002 TSCA Inventory Update. By agreement at the time of initiating the Challenge, such chemicals are not officially within the scope of the Challenge. However, EPA has noted:

> The 1990 IUR list was selected as the starting point for this program. As subsequent reporting years identify additional chemicals (including inorganics, once the corresponding reporting requirements have been added under the IUR), they will be posted here for information purposes. *EPA expects that, over time, the testing of new HPV chemicals will become routine, and companies may wish to test new HPV chemicals as they appear* [emphasis added].[11]

10 See 15 U.S.C. § 2601(b).
11 See www.epa.gov/chemrtk/hpvchmlt.htm.

As currently conceived and implemented, the Challenge program does not extend to cover these "new HPVs" except insofar as companies independently elect to sponsor them. To date, of the 735 "new HPVs," 112 have been sponsored, leaving 623 unsponsored. For context, this number is about one-quarter of the number of HPV chemicals that were available for sponsorship within the scope of the original HPV Challenge program.

Means need to be identified by the interested parties – industry, EPA and other stakeholders – to address these "new HPVs." Going forward, the clear expectation needs to be that manufacturers of essentially all chemicals produced at HPV levels, as a matter of course, develop and make publicly available at least the base set of screening-level data called for under the HPV Challenge.

Introduction. The "orphans" problem

The genesis of the U.S. HPV Challenge Program dates back to 1997, when Environmental Defense published *Toxic Ignorance*, which suggested that more than 70% of the highest-volume industrial chemicals in U.S. commerce lacked sufficient data on toxicity and environmental fate to conduct even a basic hazard assessment, at least as far as could be determined in the public record.[12] These disturbing findings led both government (the U.S. Environmental Protection Agency) and the chemical industry (the Chemical Manufacturers Association, since renamed the American Chemistry Council) to conduct their own, more extensive studies.[13] Both found that the problem was even worse than Environmental Defense had indicated: More than 90% of the high-production-volume (HPV) industrial chemicals in U.S. commerce lacked sufficient hazard-screening data available in the public record.

Prompted by these findings, Environmental Defense, the U.S. Environmental Protection Agency and the Chemical Manufacturers Association (now the American Chemistry Council) jointly developed a framework for a landmark right-to-know program called the U.S. High Production Volume (HPV) Challenge Program. Under this program, launched in late 1998, chemical producers voluntarily committed to fill gaps in basic screening-level hazard data for HPV chemicals – those produced in the U.S. in amounts of one million pounds or more annually – and to make the data publicly available by no later than 2005.

While the U.S. High Production Volume (HPV) Challenge is driving the development and public release of screening-level hazard data for many HPV chemicals, one area of concern has been that several hundred of the nearly 2800 chemicals originally included in the scope of the program were either never sponsored or have had initial sponsorships withdrawn.[14] Currently, there are 532 unsponsored chemicals from the original program list that are not otherwise exempted.

The concern for those HPV chemicals that remain orphans, of course, is that serious gaps in the public availability of screening-level hazard data are likely to persist for such chemicals; after

---

Note: This report assumes a fair degree of familiarity with the U.S. HPV Challenge Program. For background on the Challenge, why it was implemented, and how it operates, see the Environmental Defense March 2003 report, *Facing the Challenge: A Status Report on the U.S. HPV Challenge Program*.

All of the data included in this report also appear in Environmental Defense's HPV Tracker database, available at www.environmentaldefense.org/go/hpvtracker. The HPV Tracker includes links to copies of all company responses to Environmental Defense's letter, and it allows sorting and filtering by chemical and company. The Tracker will also be updated as information on orphan chemicals changes.

12 *Toxic Ignorance* is available online at www.environmentaldefense.org/pdf.cfm?ContentID=243&FileName=toxicignorance.pdf.

13 U.S Environmental Protection Agency, Office of Pollution Prevention and Toxics. Chemical Hazard Data Availability Study: What Do We Really Know About the Safety of High Production Volume Chemicals? (Washington, DC: U.S. Environmental Protection Agency, April 1998) (available online at www.epa.gov/opptintr/chemtest/hazchem.htm); and Public Availability of SIDS-Related Testing Data for U.S. High Production Volume Chemicals. Prepared by ICF Kaiser International for the Chemical Manufacturers Association, Arlington, Virginia, 1998.

14 The original Challenge list of 2782 HPV chemicals consisted of those industrial chemicals with manufacturing volumes aggregated across all producers and importers that met or exceeded the HPV threshold of one million pounds annually, as reported in the 1990 reporting cycle of the TSCA Inventory Update.

all, more than 90% of HPV chemicals lacked some or all such screening-level data at the outset of the HPV Challenge Program.

1. Identifying putative orphans

Determining the actual magnitude of the "orphan" problem – that is, how many program chemicals continue to be manufactured[15] at HPV levels but are not sponsored – is complicated. Chemicals can be removed from the original program list[16] if their aggregate manufacturing volumes after 1990 have fallen consistently below the HPV level. In general, EPA operationally defines a chemical to be "no longer HPV" if the aggregate amount reported in two consecutive reporting cycles under the TSCA Inventory Update is less than one million pounds.[17] Based on data from the 1994 and 1998 inventory updates, EPA has to date designated 65 chemicals from the original program list as "no longer HPV." Data from the 2002 inventory update reporting cycle have recently become available, and these data will likely lead to many additional chemicals being designated "no longer HPV."

Of course, many new chemicals have become HPV (i.e., have begun being produced at HPV levels) since 1990. A total of 735 such chemicals – HPV in 2002 that were not HPV in 1990 – appear on the 2002 TSCA Inventory Update.[18] By agreement at the time of initiating the Challenge, such chemicals are not officially within the scope of the Challenge. However, EPA has noted:

> The 1990 IUR list was selected as the starting point for this program. As subsequent reporting years identify additional chemicals (including inorganics, once the corresponding reporting requirements have been added under the IUR), they will be posted here for information purposes. *EPA expects that, over time, the testing of new HPV chemicals will become routine, and companies may wish to test new HPV chemicals as they appear* [emphasis added].[19]

As currently conceived and implemented, however, the Challenge program does not extend to these "new HPVs" except insofar as companies independently elect to sponsor them. To date, 112 of the 735 "new HPVs" have been sponsored,[20] leaving 623 unsponsored – one-quarter as many as were available for sponsorship within the scope of the original HPV Challenge program.

---

15 TSCA defines manufacture to include both domestic production and import.

16 In order to increase predictability to industry sponsors with respect to which chemicals were to be included in the program, it was agreed at the outset of the Challenge that chemicals that began to be produced at HPV levels after the 1990 reporting cycle would not be added to the program list, although they could be voluntarily sponsored.

17 EPA can also find a chemical to be "no longer HPV" based on information submitted by all reporting producers and importers of a chemical. See www.epa.gov/chemrtk/nolohpv8.htm.

18 The 735 "new HPV" chemicals were identified as follows: 1) HPV in the 2002 inventory update; 2) not on the original core list for the HPV Challenge program; and 3) not HPV in 1990. The last step removed 76 chemicals that were HPV in 1990, but were not on the original program list, having been removed prior to establishment of that list; among these chemicals are asbestos, water, lignin, steelmaking slags, nitrogen, hydrochloric acid, etc. These chemicals were removed from the scope of the program at its outset because it was apparent that they were already well-studied, were inorganic chemicals (and thus erroneously reported under then-applicable regulations), were not made up of discrete chemicals, or were otherwise inappropriate for inclusion.

19 See www.epa.gov/chemrtk/hpvchmlt.htm.

20 Most of these additional sponsored chemicals are included in chemical categories that have been proposed in test plan submissions to the HPV Challenge program, or those submitted or identified for submission to the OECD SIDS program under the International Council of Chemical Associations (ICCA) Initiative. For background on this initiative, see the Environmental Defense March 2003 report, *Facing the Challenge: A Status Report on the U.S. HPV Challenge Program*.

In order to determine which chemicals still within the scope of the Challenge were putative orphans, we began with the full list of the 2782 original program chemicals – the so-called "1990 HPV Challenge Program Chemical List." We used the version of this list posted by EPA on its website on January 22, 2004, which reflected all information received by the agency through November 21, 2003. We first excluded those chemicals that were sponsored, tentatively sponsored or exempted, leaving 522 unsponsored chemicals.[21] We then evaluated this list using the data on production volumes included in the public version of the database for the 2002 reporting cycle of the TSCA Inventory update.[22] Using these data, we excluded the following chemicals that are likely no longer HPV:

- 227 program chemicals whose aggregate production volumes were below the HPV threshold (or not reported) for both the 2002 and the 1998 reporting cycles of the inventory update; and
- Nine program chemicals that did not appear at all on the 2002 inventory database.

The remaining 286 chemicals constituted our list of putative orphans. For each of these, we sought to identify companies that reported producing or importing each of them, using data from the publicly available versions of the 2002 and 1998 inventory update databases. However, companies were publicly identified as producing or importing only a subset of these chemicals.[23] Of the 286 chemicals:

- for 190, one or more companies had reported producing or importing the chemical in the 2002 database;
- for 61, one or more companies had reported producing or importing the chemical in the 1998 (but not the 2002) database; and
- for 35, no company match was found in either the 2002 or 1998 databases.

For 15 of the chemicals, companies had already sent EPA letters indicating that they no longer produced the chemicals in question. Since either they were the only company having reported the chemicals, or no companies had reported them, we decided we did not need to contact these companies to determine the chemicals' status. For one chemical, the reporting company had recently added it to a category of chemicals it had already sponsored, effectively sponsoring it. For one of the chemicals that no company had reported in the inventory databases, EPA had received a letter indicating that the

---

21 The current version of the 1990 HPV Challenge Program Chemical List can be downloaded at www.epa.gov/chemrtk/hpvchmlt.htm. In the time since our first list (based on EPA's 11-22-03 HPV list) was developed, one of the chemicals has been sponsored and an additional 11 chemicals have become unsponsored, yielding the current total of 532 unsponsored chemicals cited earlier.

22 We obtained the public version of the 2002 TSCA Inventory Update from EPA in December, 2003 (Version 1.1), in the form of two database files. All data claimed to be confidential business information (CBI) had been removed from these files. One file (named cusagg.dbf) lists CAS numbers and their respective U.S. manufacturing volume ranges – aggregated across all reporting producers and importers – for each of the last five reporting cycles, 2002, 1998, 1994, 1990 and 1986. The other file (named cu02ncbi.dbf) lists companies and the associated CAS numbers they reported under the 2002 Inventory Update.

Online versions of these databases are available at www.epa.gov/oppt/iur/iur02/index.htm.

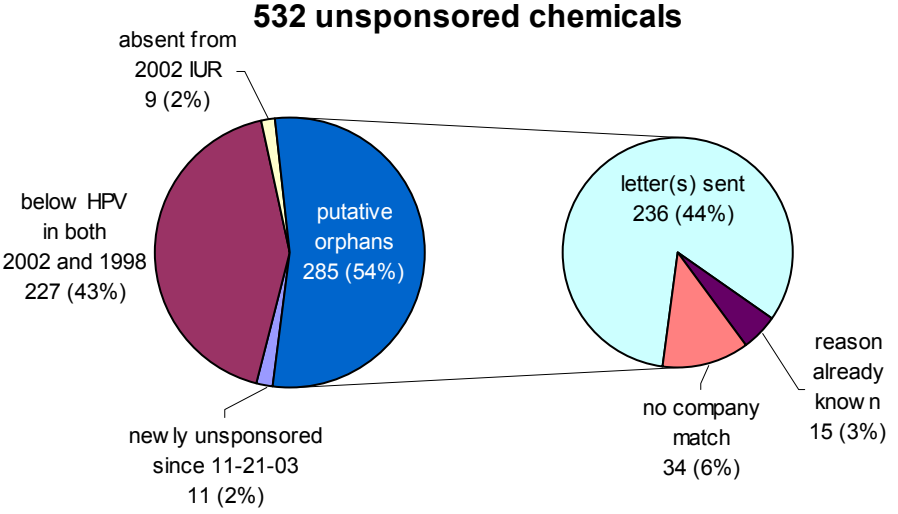
23 One or more companies must have reported each of the chemicals listed in the Inventory Update, but where no company names appear in the public version of the database, presumably the companies claimed association with the chemical to be CBI, and hence their names were excluded.

company that had sponsored it was withdrawing because it had sold its business unit to another company; it identified the other company, so we added that company to the list of companies to contact.

2. Gathering information from producers or importers of unsponsored chemicals

In order to shed light on the current production or import status of the unsponsored chemicals and why they have not been sponsored, Environmental Defense contacted as many of the companies as possible that reported producing or importing such chemicals in the 2002 reporting cycle. Figure 2 summarizes the results of our parsing of the list of 532 unsponsored chemicals to determine the list of 236 chemicals whose manufacturers we would directly contact.

Figure 2. Our parsing of the list of the 532 unsponsored chemicals



In mid-February 2004, Environmental Defense sent letters to the CEOs of each company, or its successor or parent,[24] that had reported producing or importing one or more of the putative orphan chemicals. (A generic sample of the letter is shown in Appendix A.) Wherever possible, letters were also copied to an appropriate contact in the company's toxicology or environmental, heath and safety department. A total of 202 companies received letters, which together addressed the 236 chemicals. Some of these companies were identified with more than one of these chemicals, while some of the chemicals were identified with more than one company; in all, there were 430 unique company-chemical combinations.

Note the following important limitation to our effort: Because of the exclusion of confidential business information (CBI) from the public databases we used, there are likely to be additional

---

[NOTE: Environmental Defense's HPV Tracker database, at www.environmentaldefense.org/go/hpvtracker, includes summaries of all company responses to Environmental Defense's letter, as well as links to scanned copies of the original response letters.]

24 In quite a few cases, our effort to identify contact information for a given company revealed that the reporting company had subsequently been acquired by, had merged with, or was a subsidiary of or otherwise associated with another company, in which case the letter was directed to the associated company.

companies beyond those we contacted that reported producing or importing these 237 chemicals. Likewise, we were not able to identify any companies regarding 34 of the putative orphans. It is not clear whether or under what circumstances a company's association with production or import of a chemical is legitimately claimed as CBI. We urge EPA to aggressively challenge any such CBI claims that are not legitimate, and to use its own access to CBI to identify those additional producers and importers of potential orphan chemicals we have been unable to pursue.

Each letter we sent listed the chemical(s) identified with the company, and requested clarification as to

- whether the company still produces or imports the chemical(s), and if so,
- why the company is not sponsoring the chemical(s) under the HPV Challenge Program.

The letter noted that we had sent similar requests to other reporting companies and that we intended to make the responses (or lack thereof) public. It emphasized our desire to be as accurate as possible by using the most recent information available, acknowledging that even the data companies had reported in the 2002 reporting cycle might have changed. We also recognized that there may be legitimate reasons why a company has chosen not to sponsor a given chemical, and urged companies to describe such circumstances and to send us copies of any correspondence they had provided to EPA.

3. The companies' responses

The extent of response to our letters was as follows:

- Of the 202 companies to which we sent letters, 110 (54%) responded, while 91 (45%) did not;[25] our letters to three companies were not deliverable.
- Of the 429 unique company-chemical combinations, the responses received addressed 249 (58%) of them, while 175 (41%) had no response.
- Of the 236 chemicals about which we inquired, for 179 (76%) we received at least one response, while for 57 (24%) no response was received.

Appendix B lists each unsponsored program chemical, and indicates whether we sent letters regarding it; if not, why not; and if so, how many companies we contacted and how many responses we received. Appendices C and D list companies that replied and those that failed to reply, respectively, along with the chemicals they reported manufacturing in 2002 (or in some cases, 1998).

While a broad range of responses was received, they could be placed into one or more of 10 basic categories of rationales for non-sponsorship. The categories are listed in Table 1, in order of prevalence. The percentage of responses invoking a given argument is also indicated (note that, because companies often provided more than one rationale, the percentages total more than

25 Of the companies that chose not to reply to our letter, one sector is especially well-represented: companies producing coal and coke-oven derivatives and extracts (see Appendix D). Their poor showing, which extends to participation in the HPV Challenge as well, takes on even more significance when one considers that many of these products are among those industrial chemicals produced in the very largest amounts, often far exceeding the million-pound-per-year threshold for defining an HPV chemical.

100%). As discussed below, Environmental Defense regards some of these rationales to be (at least potentially) legitimate, and others insufficient, to justify non-sponsorship.

TABLE 1
COMPANY RATIONALES FOR NON-SPONSORSHIP

The company …	Prevalence
1. does not, does no longer, or soon no longer will produce or import the chemical.	26%
2. is only one of several or is a minor producer or importer.	20%
3. believes the chemical (or its use) is safe or it does not need testing.	17%
4. wants or is willing to work with others or accept a test rule.	15%
5. believes the chemical is exempt from or not subject to program.	13%
6. believes the chemical is, or could be, covered by another sponsored chemical or category.	12%
7. believes the chemical is or may be no longer HPV.	9%
8. intends to sponsor or provide needed data for the chemical.	6%
9. produces the chemical for another company, which it believes should be responsible for it.	2%
10. believes the chemical cannot or should not be tested.	2%

For 17% of the responses, the company noted that it had also informed (or plans to inform) EPA of its rationale(s).

For a number of the putative orphans, companies' responses indicated either that the chemical would likely be sponsored in the near future, or that the companies were otherwise willing to develop data for them, either voluntarily or under a test rule:

- For nine chemicals, the responses indicated that the chemical can be expected to be sponsored shortly.
- For 29 chemicals, companies indicated they have tried unsuccessfully, are trying and/or would be willing to try to form a consortium to cosponsor the chemical.
- For 11 chemicals, companies indicated that they believe a test rule is appropriate or needed to facilitate burden-sharing.

4. Our evaluation of companies' rationales for non-sponsorship

Environmental Defense evaluated the arguments provided by respondents to determine whether they provided a sufficient reason for the company not to sponsor a given chemical. *For this purpose, we largely accepted at face value any assertions of fact made by the respondent*. We limited our evaluation to the question of whether we found the facts, or a company's interpretation of them, sufficient to justify its decision not to sponsor a chemical, in light of the Challenge program framework. Given its access to the reports filed by companies under the Inventory Update, including any information claimed as CBI, and its authorities under TSCA, we defer to EPA the task of verifying assertions of fact made by the responding companies.

Factors we considered in each of the 10 categories of rationales listed in Table 1 are as follows:

1. The company does not, does no longer, or soon no longer will produce or import the chemical. This argument was generally straightforward, and while the program framework does not actually address this situation, it appears reasonable not to expect a company that does not produce a chemical to undertake data development for it. Hence, we accepted it as legitimate reason not to

sponsor a chemical in nearly all cases. The exception was in those cases where the timeframe provided by the company was judged excessive (e.g., "within two years").

2. The company is only one of several or is a minor producer or importer. The program provides for cost- and burden-sharing through consortia formation or other means. A number of respondents noted their unsuccessful efforts to form consortia, and in some cases even their desire to see or their willingness to accept a test rule. We also recognize the commercial difficulties a company may face if its competitors are unwilling to cooperate in sponsorship. Indeed, as noted by some respondents, such instances point to the limitations inherent in a voluntary program like the HPV Challenge. While a company may well view its business interests as overriding, in our view the public's right-to-know is paramount. Thus, we did not regard this argument as a legitimate reason not to sponsor a chemical.

3. The company believes the chemical (or its use) is safe or it does not need testing. This argument is not legitimate in our view: The purpose of the Challenge program is to make available to the public screening-level hazard data that can help determine whether a chemical, or its use, is safe. If data already exist for a chemical, then companies should face little burden in making them available; if they do not exist, we must question the basis on which the companies assert that their products are safe. We did not regard this argument as a legitimate reason not to sponsor a chemical.

4. The company wants or is willing to work with others and/or accept a test rule. Many companies making this argument also made argument number two above. For those indicating a willingness to co-sponsor heretofore unsponsored chemicals, that sentiment is welcome (even where belated, given that the Challenge program was initiated in 1999), and we urge them to do so. For those indicating a test rule is needed or desirable, we urge them to communicate this perspective to EPA and encourage the Agency to act. However, we did not consider this argument a legitimate reason not to have sponsored a chemical by this late date in the program.

5. The company believes the chemical is exempt from or not subject to program. This category actually included a number of different arguments, and it was difficult for us to evaluate the legitimacy of some of them. We made our evaluation on a case-by-case basis, and for many such cases assigned a "?" rather than a yes or no. Specific considerations are as follows:

a) Many companies indicated that the chemical in question is already registered and regulated under the Federal Insecticide, and Fungicide Registration Act (FIFRA), or is in the process of being registered. It was not always made clear, however, whether all of a company's production of the chemical is solely for FIFRA-regulated uses; given that the quantity of a chemical produced for such uses is exempt from TSCA reporting, its having reported the chemical under the TSCA Inventory Update suggests other industrial uses. If all of a company's production is for FIFRA-regulated uses, then its decision not to sponsor would appear justified; if not, then any other industrial uses regulated under TSCA ought to have led to sponsorship under the Challenge. Because FIFRA requires that extensive data be submitted when a pesticide is registered or re-registered, it is likely that the data called for under the Challenge will already exist and be available to EPA, although it may not be publicly available. For proprietary reasons, companies that generated such data may be unwilling to make them public, or to share them with other companies absent compensation; hence, companies producing the same chemicals for TSCA-regulated uses may not have access to them. Wherever possible, we think companies with access to such data ought to have committed, or should now commit, to submit the data under

the Challenge so that they can be made public. As with other situations in which a company may view its business interests as overriding, in our view the public's right-to-know is paramount. Hence, we did not regard this argument as a legitimate reason not to sponsor a chemical.

b) Other companies argued that their use of the chemical was restricted to use as a food additive (which is regulated by the Food and Drug Administration). As with FIFRA-regulated compounds, FDA-regulated compounds are exempt from TSCA reporting, so this raises the question as to why these companies reported their production under the TSCA Inventory Update. As above, if all of a company's production is for food additive uses, then its decision not to sponsor would appear justified; if not, then any other industrial uses regulated under TSCA ought to have led to sponsorship under the Challenge, and in such cases we did not regard this argument as a legitimate reason not to sponsor a chemical.

c) Some companies stated that their chemicals are eligible for established exemptions from TSCA reporting because they are non-isolated intermediates, impurities, reaction by-products, polymers, or solely produced for their fuel value or burned for energy recovery.[26] Here again, questions arose in some cases as to whether the characterization applies to all of a company's production, is a permanent or temporary characteristic of its production, and why companies reported such production under the TSCA Inventory Update. Where the response indicated EPA's concurrence that a material is exempt or cited other specific documentation supporting the exemption, we generally accepted it as a legitimate basis for the company not sponsoring the chemical; otherwise, we chose to defer to EPA.

d) Numerous responses indicated that the chemical is a site-limited intermediate or closed-system intermediate, and hence that it need not be sponsored. However, the Challenge program provides for no such exemption, although it does provide lesser data requirements for such chemicals. Hence, we did not consider this argument to be a legitimate reason not to have sponsored a chemical in the Challenge program.

e) Some companies indicated a chemical is being tested under another EPA program (specifically the Clean Air Act's fuel additives program). These respondents did not, however, indicate whether the data being developed under the fuel-additives program would include all data elements called for under the Challenge, or when those data would be generated and become publicly available. Hence, we did not consider this argument to be a legitimate reason not to have sponsored a chemical in the Challenge program.

6. The company believes the chemical is, or could be, covered by another sponsored chemical or category. This category also included a number of different arguments that were often difficult for us to evaluate. We made our evaluation on a case-by-case basis, and for many such cases assigned a "?" rather than a yes or no. Where companies indicated that they believe their chemical is already actually directly covered by a sponsored chemical or category, or indicated their specific intent to add their chemical to a sponsored category, we designated such chemicals as "possibly sponsored" using the entry "Sp?" Other considerations are as follows:

a) Some companies argued that their chemicals are better described by different CAS numbers than those under which they were reported, which are sponsored under the program, or that the CAS numbers under which they were reported had been – or should be – changed to that for a sponsored chemical. We largely defer to EPA to address these arguments, as they relate to Inventory listing conventions and similar issues, and designate such rationales as "?" (i.e., not clear).

b) Some companies indicate that their chemicals are isomers or salts of, structurally related to, or components of commercial forms of, sponsored chemicals. They further argue that their

26 The regulations governing these exemptions are found at 40 C.F.R. sections 710.3, 710.26, 710.29 and 720.30.

chemicals should therefore be sufficiently characterized by data being developed for the sponsored chemicals. These "grey-area" issues are difficult to assess in the absence of more information. In most cases, however, the described circumstances might well serve as a basis for using data from a sponsored substance to characterize a company's chemical, or for including it in a sponsored category. In light of this apparent ease of sponsorship, such arguments do not suffice as a basis for not having sponsored a chemical in the first place.

7. The company believes the chemical is or may be no longer HPV. This response presumes that a company has knowledge of the full extent of production and import of a chemical in the United States. While this may be so in some cases, in others it is not. Over the course of the Challenge program, EPA has received numerous requests to designate chemicals as "no longer HPV", based on one or a few companies' knowledge of a chemical's extent of commerce. In many cases, EPA has declined to make this designation, apparently based on information available to the Agency but not made public due to confidential business information (CBI) claims, that indicates continued production or import at HPV levels. Unless *aggregate* production falls below the HPV level, an individual company's belief that it need not sponsor a chemical is not warranted – even if its own production or import has declined or is well below the HPV level. For these reasons, we have generally not accepted a "no longer HPV" claim – by itself – as a legitimate reason for a company not to sponsor a chemical; we made exceptions where information gleaned from all of the responses we received regarding a particular chemical, or information already provided to EPA when commitments to the chemical were withdrawn, was consistent and sufficient to indicate the chemical is likely no longer HPV.

8. The company intends to sponsor or provide needed data for the chemical. This response is, from our perspective, the most desirable one. If we viewed the statement of intent to be strong and specific, we designated such chemicals as "possibly sponsored" using the entry "Sp?" Otherwise, however, we did not consider this argument to be a legitimate reason not to have sponsored a chemical by this late date in the program.

9. The company produces the chemical for another company, which it believes should be responsible for sponsoring the chemical. Several companies indicated that they are "toll" manufacturers of or contractually produce a chemical for other companies, apparently exclusively. While this may well raise questions from a business perspective as to who should bear the cost burden of data development, TSCA clearly indicates that the responsibility to develop data lies with *manufacturers*. Hence we did not consider this argument to be a legitimate reason for the manufacturing company not to have sponsored a chemical or to have reached agreement with the contracting company that resulted in the latter's sponsorship.

10. The company believes the chemical cannot or should not be tested. A few companies argued that the explosive or unstable nature of a chemical precluded or warranted that it not be tested, and hence they chose not to sponsor it. The Challenge program provides opportunity for sponsors to justify why particular tests are not needed or cannot be performed, and it is not clear why the companies have not made these arguments in the context of a sponsorship commitment. In one case, the chemical in question is actually among those included in EPA's test rule proposed in December 2000, indicating that EPA believed that some testing could and should be conducted; the company and its trade association submitted comments arguing otherwise, and state they have not yet received a response from the Agency. In general, while certain tests may well be precluded by a chemical's properties, we think a company ought to make such arguments in a test

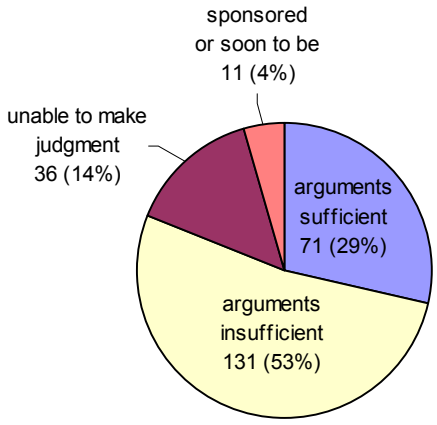
plan submitted under the Challenge program, rather than making a blanket assertion that no testing is possible. Hence, we did not consider this argument to be a legitimate reason not to have sponsored a chemical.

Below we summarize the results of our assessment as to whether the arguments provided by respondents[27] warranted companies' decisions not to sponsor the chemicals they had reported manufacturing. Of the 249 unique company-chemical combinations represented among the responses we received

- 71 responses (29%) *appeared sufficient* to justify the company's decision not to sponsor a chemical;
- 131 responses (53%) *appeared insufficient*;
- For 36 responses (14%), we were not able to make a judgment;
- For 11 responses (4%), the company indicated its intent to sponsor the chemical, making our judgment moot.

Figure 3 summarizes our overall assessment of the responses we received. Appendix C provides our individual assessments of the arguments provided for each company-chemical combination for which we received a response.

Figure 3. Were companies' reasons sufficient to justify non-sponsorship?
(of the 249 unique company-chemical responses)



5. Determining which unsponsored chemicals are likely still orphans

Finally, we assessed all 532 currently unsponsored chemicals to determine which ones appear still to be "orphans," that is, chemicals that are still: a) within the scope of the Challenge program, b) likely manufactured at HPV levels, and c) unsponsored. In making this assessment, we used the following criteria.

27 Note that where companies provided multiple arguments in their responses, our assessment took into account all such arguments.

1. For chemicals regarding which we did not have information from manufacturers.

- Chemicals that were reported at below HPV levels in both the 1998 and 2002 TSCA Inventory Update reporting cycles were judged "no longer HPV" and hence are not considered orphans.
- Chemicals that did not appear on the 2002 Inventory Update were also judged "no longer HPV" and hence are not considered orphans.

2. For chemicals for which we had no company match.

- 2002 level not reported or reported but below 1M: unclear ("?")[28]
- 2002 level reported and above 1M: likely still an orphan ("Y")

3. For chemicals for which we did not send letters because no or only one company publicly reported manufacturing it and a clear reason for non-sponsorship had already been provided.

- 2002 level not reported or reported but below 1M: unclear ("?")[29] unless reason provided indicates that production has ceased, in which case likely not an orphan ("N")
- 2002 level reported and above 1M: unclear ("?")[30]
- 2002 level reported and above 100M: likely still an orphan ("Y")

4. For chemicals for which we sent letters to reporting manufacturers, but did not receive responses.

- 2002 level not reported or reported but below 1M: unclear ("?")[31]
- 2002 level reported and above 1M: likely still an orphan ("Y")

5. For chemicals for which we received responses.

- 2002 level not reported or reported but below 1M: unclear ("?")[32] unless all reporting companies responded and responses indicate no or only very low aggregate production, in which case likely not an orphan ("N")
- 2002 level reported and above 1M: likely still an orphan ("Y") unless responses indicate reduction in production, an exemption claim, a claim of coverage under another sponsored chemical or category, or a change in the CAS number used for reporting, in which case unclear ("?")

---

28 Those chemicals that were not HPV in 2002 were necessarily HPV in 1998, in order for them to have been included among the chemicals we identified as putative orphans. Recall that EPA operationally defines "no longer HPV" to be aggregate production below HPV levels in both 1998 and 2002; hence, our designation of these chemicals' orphan status as "unclear" is reasonable, despite their production being less than HPV in 2002.

29 See note 28.

30 While for each of these chemicals the withdrawing company's reasons were deemed legitimate with respect to their non-sponsorship, and no other companies were publicly identified as manufacturing the chemical, the exclusion of CBI from the publicly available Inventory Update database means that other companies may also have reported as CBI their manufacture of the same chemical. Coupled with the fact that the reported 2002 aggregate production level for these chemicals was at an HPV level, we have designated these chemicals' orphan status as "unclear."

31 See note 28.

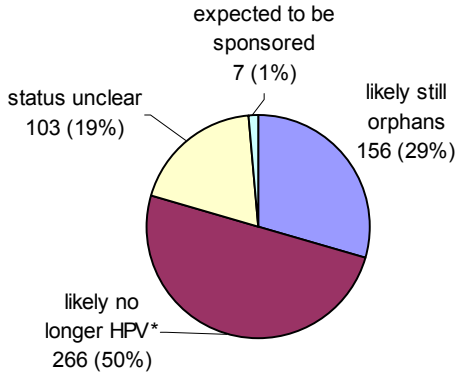
32 See note 28.

Based on our assessment, of the 532 currently unsponsored chemicals, we find that

- 156 chemicals (29%) likely are still orphans – i.e., they could and, in our view, should be sponsored, but have not been;
- 103 chemicals (19%) have an unclear status;[33]
- 266 chemicals (50%) are likely no longer HPV;[34]
- 7 chemicals (1%) appear to be in the process of becoming sponsored.

Figure 4 summarizes our overall assessment of the orphan status of the 532 currently unsponsored program chemicals. Table 2 lists the 156 chemicals that likely are still orphans, and the additional 103 chemicals that may still be orphans. Appendix B provides our individual assessments of the orphan status for each of the 532 unsponsored chemicals.

Figure 4. How many of the 532 unsponsored chemicals are likely still orphans?



* Includes the 227 chemicals that were below HPV levels in both 1998 and 2002, and the nine chemicals that did not appear at all on the 2002 Inventory Update.

33 This number includes 80 chemicals that, although they were either not reported or reported at below HPV levels in the 2002 reporting cycle of the Inventory Update, were above HPV levels in the 1998 reporting cycle. Hence, they still meet EPA's definition of an HPV chemical, but the responses we received regarding them included some indications that they may be no longer HPV; for this reason we indicated that their status is unclear.

34 This number includes 227 chemicals that were reported at below HPV levels in both the 1998 and 2002 reporting cycles, and hence no longer meet EPA's definition of an HPV chemical, as well as nine chemicals that did not appear at all on the 2002 Inventory Update. It also includes 30 chemicals that, although they were either not reported or reported at below HPV levels in the 2002 reporting cycle of the Inventory Update, were above HPV levels in the 1998 reporting cycle. Hence, they still meet EPA's definition of an HPV chemical, but the responses we received regarding them, or information already provided to EPA when commitments to these chemicals were withdrawn, indicate they are likely no longer HPV.

Conclusion

Of the 2782 chemicals on the initial list of chemicals available for sponsorship, between 156 and 259 chemicals now appear to qualify as true "orphans" – ones that in our view should have been sponsored. This is an overall sponsorship rate of 88-92%[35] – indicating that, overall, the chemical industry has done a good job of meeting its commitments under the Challenge.

At the same time, the "deadbeat dads" – companies that continue to produce orphans – deserve criticism. Our lists of apparent "deadbeat dads" are limited to those companies that: a) reported chemicals we have judged likely still to be orphans, and b) either did not respond at all to our letter, or provided a response we judged insufficient to justify non-sponsorship. Below we list the worst apparent offenders – those companies reporting producing the highest number of orphans.

Company	# of orphans	Response
KOPPERS INDUSTRIES, INC.	13	None
UNITED STATES STEEL CORP.	10	None
BASF CORP.	8	Insufficient
THE DOW CHEMICAL COMPANY	8	Insufficient
EXXON MOBIL CHEMICAL COMPANY	6	Insufficient
LONZA, INC.	6	Insufficient
UNIVAR USA, INC.	6	None
ALBEMARLE CORP.	5	Insufficient
CLARIANT LSM (US) INC.	5	None
ATOFINA CHEMICALS, INC.	4	Insufficient
REILLY INDUSTRIES, INC.	4	Insufficient
SYNGENTA CROP PROTECTION, INC.	4	Insufficient
WHEELING-PITTSBURGH STEEL CORP.	4	None

A full list of the "deadbeat dads" is shown in Table 3, along with each of the chemicals they reported. It should be noted that companies we identify as "deadbeat dads" are so designated for the specific orphan chemicals they have *not* sponsored; many of these same companies *have* sponsored other HPV chemicals they produce.

Among the apparent "deadbeat dads," one sector is especially well-represented: companies producing coal and coke-oven derivatives and extracts (see Table 3). Four such companies are among the worst offenders listed above, including the top two. Many companies in this sector have not participated in the HPV Challenge, and many also chose not to respond to our letters. Their poor showing takes on even more significance when one considers that many of these

35 The original core program list of chemicals, derived from the 1990 TSCA Inventory Update, numbered 2782. Of these, 180 are being handled separately by member countries under the Organization for Economic Cooperation and Development (OECD) SIDS Program, while 154 have been exempted by EPA for various reasons (see Figure 1). Of the remaining 2448, 1916 are sponsored and 532 are unsponsored. Hence, the 156-259 apparent "true orphans" represent 8-12% of those available for sponsorship: 156/(156+1916) = 8%; 259/(259+1916) = 12%. The overall sponsorship rate, then, is 88-92%.

products are among those industrial chemicals produced in the very largest amounts, often far exceeding the million-pound-per-year threshold defining an HPV chemical.

As explained earlier, in addition to chemicals we judged likely still to be orphans, we designated 103 chemicals' status as "uncertain." Appendix E lists the additional "possible deadbeat dads" – companies reporting these status-uncertain chemicals that either did not respond at all to our letter, or provided a response we judged insufficient to justify non-sponsorship. As is the case in Table 3, companies are included in Appendix E for the specific chemicals they have *not* sponsored; some of these same companies *have* sponsored other HPV chemicals they produce or import.

What should be done about these orphan chemicals? EPA should use all means available to it, including the issuance of test rules, to compel these companies to live up to the obligation that Congress articulated for chemical producers and importers nearly three decades ago, in the Toxic Substances Control Act of 1976:

> It is the policy of the United States that . . . adequate data should be developed with respect to the effect of chemical substances and mixtures on health and the environment and that the development of such data should be the responsibility of those who manufacture and those who process such chemical substances and mixtures.[36]

Finally, this report also reveals that many hundreds of "new HPVs" have emerged since the launch of the HPV Challenge. Means need to be identified by the interested parties – industry, EPA and other stakeholders – to address these "new HPVs." Going forward, the clear expectation needs to be that manufacturers of <u>all</u> chemicals produced at HPV levels, as a matter of course, develop and make publicly available at least the base set of screening-level data called for under the HPV Challenge.

36 See 15 U.S.C. § 2601(b).

TABLE 2.

HPV CHALLENGE CHEMICALS THAT A) ARE LIKELY STILL ORPHANS, OR B) MAY STILL BE ORPHANS

A. LIKELY STILL ORPHANS			
CAS Number	**Chemical Name**	**CAS Number**	**Chemical Name**
56406	Glycine	579668	Aniline, 2,6-diethyl-
62237	Benzoic acid, p-nitro-	594423	Methanesulfenyl chloride, trichloro-
74953	Methane, dibromo-	597319	Hydracrylaldehyde, 2,2-dimethyl-
74975	Methane, bromochloro-	598721	Propionic acid, 2-bromo-
75070	Acetaldehyde	624839	Isocyanic acid, methyl ester
75365	Acetyl chloride	624920	Methyl disulfide
75467	Methane, trifluoro-	625558	Formic acid, isopropyl ester
75876	Chloral	628137	Pyridine, hydrochloride
77769	Propane, 2,2-dimethoxy-	628966	Ethylene nitrate
78115	Pentaerythritol, tetranitrate	645625	2-Hexenal, 2-ethyl-
83410	Benzene, 1,2-dimethyl-3-nitro-	1002693	Decane, 1-chloro-
84651	9,10-Anthracenedione	1111780	Ammonium carbamate
85405	4-Cyclohexene-1,2-dicarboximide	1115204	Hydracrylic acid, 2,2-dimethyl-, 3-hydroxy-2,2-dimethylpropyl ester
91532	Quinoline, 6-ethoxy-1,2-dihydro-2,2,4-trimethyl-	1323655	Phenol, dinonyl-
94757	Acetic acid, (2,4-dichlorophenoxy)-	1324761	C.I. Pigment Blue 61
96220	3-Pentanone	1459934	1,3-Benzenedicarboxylic acid, dimethyl ester
98099	Benzenesulfonyl chloride	1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt
98566	Benzene, 1-chloro-4-(trifluoromethyl)-	1738256	Propionitrile, 3-(dimethylamino)-
99514	o-Xylene, 4-nitro-	2425549	Tetradecane, 1-chloro-
100641	Cyclohexanone, oxime	2494895	Ethanol, 2-sulfanilyl-, hydrogen sulfate (ester)
101348	Ricinolein, tri-, triacetate	2524041	Phosphorochloridothioic acid, O,O-diethyl ester
104665	1,2-Diphenoxyethane	2611009	3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester
108190	Imidodicarbonic diamide	2915539	Maleic acid, dioctyl ester
108203	Isopropyl ether	2941642	Formic acid, chlorothio-, S-ethyl ester
110441	Sorbic acid	3386332	Octadecane, 1-chloro-
111444	Ether, bis(2-chloroethyl)	3710847	Ethanamine, N-ethyl-N-hydroxy-
111853	Octane, 1-chloro-	3779633	Isocyanic acid, (2,4,6-trioxo-s-triazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) ester
112527	Dodecane, 1-chloro-	4083641	p-Toluenesulfonic acid, anhydride with isocyanic acid
118821	Phenol, 4,4'-methylenebis[2,6-di-tert-butyl-	4170303	2-Butenal
119619	Methanone, diphenyl-	4316738	Sarcosine, monosodium salt
121824	s-Triazine, hexahydro-1,3,5-trinitro-	4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol
124630	Methanesulfonyl chloride	4860031	Hexadecane, 1-chloro-
128449	1,2-Benzisothiazolin-3-one, 1,1-dioxide, sodium salt	5460093	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-, monosodium salt
143282	9-Octadecen-1-ol, (Z)-	6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt
144627	Oxalic acid	6863587	sec-Butyl ether
149440	Sodium formaldehydesulfoxylate	7320378	Hexadecane, 1,2-epoxy-
409029	Heptenone, methyl-	8001589	Creosote
460004	Benzene, 1-bromo-4-fluoro-	8005025	C.I. Solvent Black 7
515402	Benzene, (2-chloro-1,1-dimethylethyl)-	8007452	Tar, coal
529340	1(2H)-Naphthalenone, 3,4-dihydro-	12645317	Phosphoric acid, 2-ethylhexyl ester
537008	Acetic acid, cerium(3+) salt	13749945	Acetohydroximic acid, thio-, methyl ester
542927	1,3-Cyclopentadiene	13826352	Benzyl alcohol, m-phenoxy-

TABLE 2, CONTINUED

A. LIKELY STILL ORPHANS (CONTINUED)			
CAS Number	**Chemical Name**	**CAS Number**	**Chemical Name**
14666945	Cobalt oleate	66241110	C.I. Leuco Sulphur Black 1
17103310	Urea, sulfate (2:1)	68153606	Fatty acids, tall-oil, reaction products with diethylenetriamine, acetates
17976431	Lead, di-.mu.-oxo(.mu.-phthalato)tri-, cyclo-	68187575	Pitch, coal tar-petroleum
19438610	Phthalic anhydride, 4-methyl-	68187597	Coal, anthracite, calcined
21351393	Urea, sulfate (1:1)	68187768	Castor oil, sulfated, sodium salt
22527635	Isobutyric acid, 3-hydroxy-2,2,4-trimethylpentyl ester benzoate	68187848	Castor oil, oxidized
24634615	Sorbic acid, potassium salt	68308747	Amides, tall-oil fatty, N,N-di-Me
25154385	Piperazineethanol	68309160	Fatty acids, tall-oil, 2-(2-hydroxyethoxy)ethyl esters
25646713	Methanesulfonamide, N-[2-[(4-amino-3-methylphenyl)ethylamino]ethyl]-, sulfate (2:3)	68309273	Fatty acids, tall-oil, sulfonated, sodium salts
28106301	Styrene, ar-ethyl-	68442604	Acetaldehyde, reaction products with formaldehyde, by-products from
28777982	Succinic anhydride, octadecenyl-	68442773	2-Butenediamide, (E)-, N,N'-bis[2-(4,5-dihydro-2-nortall-oil alkyl-1H-imidazol-1-yl)ethyl] derivs.
28908001	Benzothiazole, 2-[(chloromethyl)thio]-	68479981	Benzenediamine, ar,ar-diethyl-ar-methyl-
31138655	D-gluco-Heptonic acid, monosodium salt, (2.xi.)-	68514410	Ketones, C12-branched
32072961	Succinic anhydride, hexadecenyl-	68602813	Distillates, hydrocarbon resin prodn. higher boiling
34689468	Phenol, methyl-, sodium salt	68607283	Quaternary ammonium compounds, (oxydi-2,1-ethanediyl)bis[coco alkyldimethyl, dichlorides
37734455	Carbonochloridothioic acid, S-(phenylmethyl) ester	68610902	2-Butenedioic acid (E)-, di-C8-18-alkyl esters
37764253	Acetamide, 2,2-dichloro-N,N-di-2-propenyl-	68611643	Urea, reaction products with formaldehyde
39515510	Benzaldehyde, 3-phenoxy-	68647609	Hydrocarbons, C>4
51632167	Benzene, 1-(bromomethyl)-3-phenoxy-	68650362	Aromatic hydrocarbons, C8, o-xylene-lean
52556420	Propanesulfonic acid, 2-hydroxy-3-(propenyloxy)-, Na salt	68909773	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues
56803373	Phosphoric acid, (1,1-dimethylethyl)phenyl diphenyl ester	68915399	Cyclohexane, oxidized, aq. ext., sodium salt
64742729	Distillates, (petroleum), catalytic dewaxed middle	68938965	Benzene, phenoxytetrapropylene-
64771717	Paraffins, (petroleum), normal C>10	68953708	Oxirane, reaction products with ammonia, distn. residues
65652417	Phosphoric acid, bis[(1,1-dimethylethyl)phenyl] phenyl ester	68953800	Benzene, mixed with toluene, dealkylation product
65996783	Light oil, (coal), coke-oven	68955760	Aromatic hydrocarbons, C9-16, biphenyl deriv.-rich
65996794	Solvent naphtha, (coal)	68988227	1,4-Benzenedicarboxylic acid, dimethyl ester, manuf. of, by-products from
65996807	Ammonia liquor, (coal)	68990614	Tar, coal, high-temp., high-solids
65996818	Fuel gases, coke-oven	69029750	Oils, reclaimed
65996829	Tar oils, coal	70024678	Benzenesulfonic acid, C16-24-alkyl derivs.
65996830	Extracts, coal tar oil alk.	70693504	Phenol, 2,4-bis(1-methyl-1-phenylethyl)-6-[(2-nitrophenyl)azo]-
65996863	Extract oils, (coal), tar base	70851080	Amides, coco, N-[3-(dimethylamino)propyl], alkylation products with sodium 3-chloro-2-hydroxypropanesulfonate
65996874	Extract residues, (coal), tar oil alk.	72162288	2-Propanone, reaction products with phenol
65996896	Tar, coal, high-temp.	84501860	Hexanedioic acid, esters with high-boiling C6-10-alkene hydroformylation products
65996910	Distillates, (coal tar), upper	90640861	Distillates, (coal tar), heavy oils
65996921	Distillates, (coal tar)	116265680	Phosphorous acid, triphenyl ester, reaction products with dipropylene glycol
66071941	Corn, steep liquor	119345027	Benzene, 1,1'-oxybis-, tetrapropylene derivs.

TABLE 2, CONTINUED

B. MAY STILL BE ORPHANS			
CAS Number	**Chemical Name**	**CAS Number**	**Chemical Name**
62566	Urea, thio-	1918021	Picolinic acid, 4-amino-3,5,6-trichloro-
78422	Phosphoric acid, tris(2-ethylhexyl) ester	1929824	Pyridine, 2-chloro-6-(trichloromethyl)-
81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide	2152649	C.I. Solvent Blue 23, monohydrochloride
81163	1-Naphthalenesulfonic acid, 2-amino-	2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-
84695	Phthalic acid, diisobutyl ester	2372454	Butyl alcohol, sodium salt
90437	2-Biphenylol	2524030	Phosphorochloridothioic acid, O,O-dimethyl ester
91689	Phenol, m-(diethylamino)-	2691410	1,3,5,7-Tetrazocine, octahydro-1,3,5,7-tetranitro-
94962	1,3-Hexanediol, 2-ethyl-	2814202	4(1H)-Pyrimidinone, 6-methyl-2-(1-methylethyl)-
95943	Benzene, 1,2,4,5-tetrachloro-	3088311	Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt
96231	2-Propanol, 1,3-dichloro-	3132998	Benzaldehyde, m-bromo-
97007	Benzene, 1-chloro-2,4-dinitro-	3586149	Ether, phenyl m-tolyl
98168	m-Toluidine, .alpha.,.alpha.,.alpha.-trifluoro-	3724650	Crotonic acid
104916	Phenol, p-nitroso-	3965557	1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt
107391	1-Pentene, 2,4,4-trimethyl-	4035896	Isocyanic acid, triester with 1,3,5-tris(6-hydroxyhexyl)biuret
107404	2-Pentene, 2,4,4-trimethyl-	4080313	3,5,7-Triaza-1-azoniaadamantane, 1-(3-chloroallyl)-, chloride
107459	Butylamine, 1,1,3,3-tetramethyl-	5026744	Aniline, p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)-
119335	p-Cresol, 2-nitro-	5915413	s-Triazine, 2-(tert-butylamino)-4-chloro-6-(ethylamino)-
121697	Benzenamine, N,N-dimethyl-	6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt
127684	Benzenesulfonic acid, m-nitro-, sodium salt	10265697	Glycine, N-phenyl-, monosodium salt
131577	Benzophenone, 2-hydroxy-4-methoxy-	14143603	Picolinonitrile, 4-amino-3,5,6-trichloro-
139402	s-Triazine, 2-chloro-4,6-bis(isopropylamino)-	17321470	Phosphoramidothioic acid, O,O-dimethyl ester
140932	Carbonic acid, dithio-, O-isopropyl ester, sodium salt	19525598	Glycine, N-phenyl-, monopotassium salt
330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-	25168063	Phenol, isopropyl-
506514	1-Tetracosanol	25321419	Benzenesulfonic acid, dimethyl-
506525	1-Hexacosanol	25383997	Stearic acid, ester with lactic acid bimol. ester, sodium salt
513746	Carbamic acid, dithio-, monoammonium salt	25586429	Phosphorous acid, tritolyl ester
529339	1-Naphthol, 1,2,3,4-tetrahydro-	26377297	Phosphorodithioic acid, O,O-dimethyl ester, sodium salt
542756	Propene, 1,3-dichloro-	26680546	Succinic anhydride, octenyl-
590192	1,2-Butadiene	27193288	Phenol, octyl-
693958	Thiazole, 4-methyl-	28188241	Stearic acid, triester with pentaerythritol
823405	Toluene-2,6-diamine	35203066	Benzenamine, 2-ethyl-6-methyl-N-methylene-
939979	Benzaldehyde, p-tert-butyl-	35203088	Benzenamine, 2,6-diethyl-N-methylene-
1000824	Urea, (hydroxymethyl)-	38185067	Benzenesulfonic acid, 4-chloro-3,5-dinitro-, potassium salt
1401554	Tannins	38321185	Ethanol, 2-(2-butoxyethoxy)-, sodium salt
1498517	Phosphorodichloridic acid, ethyl ester	40876980	Butanedioic acid, oxo-, diethyl ester, ion(1-), sodium
1558334	Silane, dichloro(chloromethyl)methyl-	52184197	Phenol, 2,4-bis(1,1-dimethylpropyl)-6-[(2-nitrophenyl)azo]-
1912249	s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)-	52663577	Ethanol, 2-butoxy-, sodium salt

TABLE 2, CONTINUED

B. MAY STILL BE ORPHANS (CONTINUED)			
CAS Number	**Chemical Name**	**CAS Number**	**Chemical Name**
57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium	68081867	Phenol, nonyl derivs.
61789320	Fatty acids, coco, 2-sulfoethyl esters, sodium salts	68082780	Lard, oil, Me esters
61789659	Resin acids and Rosin acids, aluminum salts	68187417	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters
61789853	Sulfonic acids, petroleum	68188181	Paraffin oils, chlorosulfonated, saponified
64743028	Alkenes, C>10 .alpha.-	68915059	Fatty acids, tall-oil, low-boiling, reaction products with ammonia-ethanolamine reaction by-products
68441667	Decanoic acid, mixed esters with dipentaerythritol, octanoic acid and valeric acid	68937291	1,6-Hexanediol, distn. residues
68476802	Fats and Glyceridic oils, vegetable, deodorizer distillates	68937699	Carboxylic acids, C6-18 and C5-15-di-
68511400	1-Propanamine, 3-(tridecyloxy)-, branched	68937702	Carboxylic acids, C6-18 and C8-15-di-
68512630	Benzene, ethenyl-, distn. residues	68937724	Carboxylic acids, di-, C4-11
68603849	Carboxylic acids, C5-9	70084989	Terpenes and Terpenoids, C10-30, distn. residues
68608593	Ethane, 1,2-dichloro-, manuf. of, by-products from, distn. lights	71077059	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine product tower residues
68609041	Cyclohexane, oxidized, non-acidic by-products, distn. residues	73665186	Extract residues, (coal), tar oil alk., naphthalene distn. residues
68609052	Cyclohexane, oxidized, non-acidic by-products, distn. lights	90640805	Anthracene oil
68815509	Octadecanoic acid, reaction products with 2-[(2-aminoethyl)amino]ethanol	125997208	Phosphoric acid, mixed 3-bromo-2,2-dimethylpropyl and 2-bromoethyl and 2-chloroethyl esters
68412602	Phosphoric acid, mixed decyl and Et and octyl esters		

TABLE 3.

"DEADBEAT DADS": PRODUCERS OR IMPORTERS OF CHEMICALS THAT ARE LIKELY STILL ORPHANS WHO EITHER DID NOT RESPOND TO OUR LETTER OR WHOSE RESPONSE WAS INSUFFICIENT TO JUSTIFY NON-SPONSORSHIP.

* Companies are included here for the specific chemicals they have not sponsored; many of these same companies have sponsored other HPV chemicals they produce or import.

Company to whom our letter was sent/from whom the reply was received*	Company/division associated with the company in column to the left that originally reported the chemical (if different)*	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
A. E. STALEY MFG. COMPANY		66071941	Corn, steep liquor	Insufficient	Y
AGFA CORPORATION		25646713	Methanesulfonamide, N-[2-[(4-amino-3-methylphenyl)ethylamino]ethyl]-, sulfate (2:3)	None	Y
AGRIUM U.S. INC.		17103310	Urea, sulfate (2:1)	None	Y
AGRIUM U.S. INC.		21351393	Urea, sulfate (1:1)	None	Y
AGRIUM U.S. INC.		68611643	Urea, reaction products with formaldehyde	None	Y
AIR PRODUCTS AND CHEMICALS, INC.		1738256	Propionitrile, 3-(dimethylamino)-	Insufficient	Y
AK STEEL CORP.		65996818	Fuel gases, coke-oven	None	Y
ALBEMARLE CORP.		118821	Phenol, 4,4'-methylenebis[2,6-di-tert-butyl-	Insufficient	Y
ALBEMARLE CORP.		579668	Aniline, 2,6-diethyl-	Insufficient	Y
ALBEMARLE CORP.		28777982	Succinic anhydride, octadecenyl-	Insufficient	Y
ALBEMARLE CORP.		32072961	Succinic anhydride, hexadecenyl-	Insufficient	Y
ALBEMARLE CORP.		68479981	Benzenediamine, ar,ar-diethyl-ar-methyl-	Insufficient	Y
ALLIANT TECHSYSTEMS, INC.		121824	s-Triazine, hexahydro-1,3,5-trinitro-	Insufficient	Y
ARCHER DANIELS MIDLAND COMPANY		66071941	Corn, steep liquor	Insufficient	Y
ATOFINA CHEMICALS, INC.		124630	Methanesulfonyl chloride	Insufficient	Y
ATOFINA CHEMICALS, INC.		624920	Methyl disulfide	Insufficient	Y
ATOFINA CHEMICALS, INC.		3710847	Ethanamine, N-ethyl-N-hydroxy-	Insufficient	Y
ATOFINA CHEMICALS, INC.		7320378	Hexadecane, 1,2-epoxy-	Insufficient	Y
ATUL AMERICAS, INC.		5460093	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-, monosodium salt	None	Y
AUX SABLE LIQUID PRODUCTS		624920	Methyl disulfide	None	Y
BAE SYSTEMS TECHNOLOGY SOLUTIONS	BAE SYSTEMS ORDNANCE SYSTEMS, INC.	121824	s-Triazine, hexahydro-1,3,5-trinitro-	None	Y
BASF CORP.		83410	Benzene, 1,2-dimethyl-3-nitro-	Insufficient	Y
BASF CORP.		96220	3-Pentanone	Insufficient	Y
BASF CORP.		99514	o-Xylene, 4-nitro-	Insufficient	Y
BASF CORP.		1111780	Ammonium carbamate	Insufficient	Y
BASF CORP.		1115204	Hydracrylic acid, 2,2-dimethyl-, 3-hydroxy-2,2-dimethylpropyl ester	Insufficient	Y
BASF CORP.		1324761	C.I. Pigment Blue 61	Insufficient	Y
BASF CORP.		4316738	Sarcosine, monosodium salt	Insufficient	Y
BASF CORP.		64771717	Paraffins, (petroleum), normal C>10	Insufficient	Y
BESTON CHEMICAL CORP.		78115	Pentaerythritol, tetranitrate	None	Y
BESTON CHEMICAL CORP.		121824	s-Triazine, hexahydro-1,3,5-trinitro-	None	Y
BETHLEHEM STEEL CORP.		65996896	Tar, coal, high-temp.	None	Y
BETHLEHEM STEEL CORP.		68990614	Tar, coal, high-temp., high-solids	None	Y
BORDEN CHEMICAL, INC.		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	None	Y
CAMBREX CHARLES CITY, INC.		62237	Benzoic acid, p-nitro-	Insufficient	Y

Table 3: **"Deadbeat dads", continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
CELANESE CHEMICALS, INC.		1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	Insufficient	Y
CF INDUSTRIES, INC.		108190	Imidodicarbonic diamide	Insufficient	Y
CF INDUSTRIES, INC.		1111780	Ammonium carbamate	Insufficient	Y
CF INDUSTRIES, INC.		68611643	Urea, reaction products with formaldehyde	Insufficient	Y
CHAMPION TECHNOLOGIES, INC.		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	Insufficient	Y
CHAMPION TECHNOLOGIES, INC.		68607283	Quaternary ammonium compounds, (oxydi-2,1-ethanediyl)bis[coco alkyldimethyl, dichlorides	Insufficient	Y
CHARKIT CHEMICAL CORP.		56406	Glycine	None	Y
CHARKIT CHEMICAL CORP.		75365	Acetyl chloride	None	Y
CHATTEM CHEMICALS, INC.		56406	Glycine	Insufficient	Y
CHEM ONE LTD.		144627	Oxalic acid	Insufficient	Y
CHEM ONE LTD.		6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	Insufficient	Y
CHEMICAL PRODUCTS CORP.		84651	9,10-Anthracenedione	Insufficient	Y
CHEVRON PHILLIPS CHEMICAL COMPANY LP		624920	Methyl disulfide	Insufficient	Y
CHEVRON PHILLIPS CHEMICAL COMPANY LP		3710847	Ethanamine, N-ethyl-N-hydroxy-	Insufficient	Y
CHEVRONTEXACO CORP.		69029750	Oils, reclaimed	Insufficient	Y
CIBA SPECIALTY CHEMICALS CORP.		2494895	Ethanol, 2-sulfanilyl-, hydrogen sulfate (ester)	None	Y
CIBA SPECIALTY CHEMICALS CORP.		5460093	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-, monosodium salt	None	Y
CIBA SPECIALTY CHEMICALS CORP.		70693504	Phenol, 2,4-bis(1-methyl-1-phenylethyl)-6-[(2-nitrophenyl)azo]-	None	Y
CINCINNATI SPECIALTIES, LLC		91532	Quinoline, 6-ethoxy-1,2-dihydro-2,2,4-trimethyl-	None	Y
CINCINNATI SPECIALTIES, LLC		128449	1,2-Benzisothiazolin-3-one, 1,1-dioxide, sodium salt	None	Y
CITIZENS GAS & COKE UTILITY, MFG. DIVISION		65996783	Light oil, (coal), coke-oven	None	Y
CITIZENS GAS & COKE UTILITY, MFG. DIVISION		65996818	Fuel gases, coke-oven	None	Y
CITIZENS GAS & COKE UTILITY, MFG. DIVISION		68990614	Tar, coal, high-temp., high-solids	None	Y
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	515402	Benzene, (2-chloro-1,1-dimethylethyl)-	None	Y
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	598721	Propionic acid, 2-bromo-	None	Y
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	13826352	Benzyl alcohol, m-phenoxy-	None	Y
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	39515510	Benzaldehyde, 3-phenoxy-	None	Y
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	51632167	Benzene, 1-(bromomethyl)-3-phenoxy-	None	Y
CONOCO PHILLIPS, INC.	CONOCO, INC.	64742729	Distillates, (petroleum), catalytic dewaxed middle	Insufficient	Y
COOPERS CREEK CHEMICAL CORP.		8001589	Creosote	None	Y
COOPERS CREEK CHEMICAL CORP.		65996896	Tar, coal, high-temp.	None	Y
COOPERS CREEK CHEMICAL CORP.		65996921	Distillates, (coal tar)	None	Y
CORN PRODUCTS INTERNATIONAL	CORNPRODUCTSMCP SWEETENERS LLC	66071941	Corn, steep liquor	Insufficient	Y

Table 3: **"Deadbeat dads", continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
CORNPRODUCTSMCP SWEETENERS LLC		66071941	Corn, steep liquor	Insufficient	Y
CORSICANA TECHNOLOGIES, INC.		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	None	Y
CORSICANA TECHNOLOGIES, INC.		68153606	Fatty acids, tall-oil, reaction products with diethylenetriamine, acetates	None	Y
CROWLEY CHEMICAL CO.	CROWLEY TAR PRODUCTS COMPANY, INC.	8001589	Creosote	None	Y
CUSTOM SYNTHESIS, LLC	FIBRE CHEMICALS, LLC	12645317	Phosphoric acid, 2-ethylhexyl ester	Insufficient	Y
CYMETECH, LLC		542927	1,3-Cyclopentadiene	None	Y
DAK AMERICAS, LLC		75070	Acetaldehyde	None	Y
DEAD SEA BROMINE GROUP (DSBG), BEER SHEVA, ISRAEL	AMERIBROM, INC.	74953	Methane, dibromo-	Insufficient	Y
DEAD SEA BROMINE GROUP (DSBG), BEER SHEVA, ISRAEL	AMERIBROM, INC.	74975	Methane, bromochloro-	Insufficient	Y
DELPHI CORPORATION	ASEC MANUFACTURING DELPHI	537008	Acetic acid, cerium(3+) salt	None	Y
DIAZ INTERMEDIATES CORPORATION	DIAZ CHEMICAL CORP	460004	Benzene, 1-bromo-4-fluoro-	None	Y
DIXIE CHEMICAL COMPANY, INC.		32072961	Succinic anhydride, hexadecenyl-	None	Y
DOVER CHEMICAL CORP.		1323655	Phenol, dinonyl-	None	Y
DOVER CHEMICAL CORP.		116265680	Phosphorous acid, triphenyl ester, reaction products with dipropylene glycol	None	Y
DOW AGROSCIENCES		94757	Acetic acid, (2,4-dichlorophenoxy)-	Insufficient	Y
DYNO NOBEL, INC.	ENSIGN-BICKFORD INDUSTRIES, INC.	78115	Pentaerythritol, tetranitrate	Insufficient	Y
DYNO NOBEL, INC.		628966	Ethylene nitrate	Insufficient	Y
DYSTAR TEXTILFARBEN GMBH & CO. DEUTSCHLAND KG	DYSTAR L.P.	68187768	Castor oil, sulfated, sodium salt	Insufficient	Y
E.I. DUPONT DE NEMOURS & COMPANY INC.		75467	Methane, trifluoro-	Insufficient	Y
E.I. DUPONT DE NEMOURS & COMPANY INC.		8005025	C.I. Solvent Black 7	Insufficient	Y
E.T. HORN COMPANY		111444	Ether, bis(2-chloroethyl)	None	Y
EASTMAN KODAK COMPANY		3710847	Ethanamine, N-ethyl-N-hydroxy-	None	Y
ENSIGN-BICKFORD INDUSTRIES, INC.		78115	Pentaerythritol, tetranitrate	Insufficient	Y
ERIE COKE CORP.		8007452	Tar, coal	None	Y
ERIE COKE CORP.		65996818	Fuel gases, coke-oven	None	Y
EXXON MOBIL CHEMICAL COMPANY		96220	3-Pentanone	Insufficient	Y
EXXON MOBIL CHEMICAL COMPANY		108203	Isopropyl ether	Insufficient	Y
EXXON MOBIL CHEMICAL COMPANY		409029	Heptenone, methyl-	Insufficient	Y
EXXON MOBIL CHEMICAL COMPANY		6863587	sec-Butyl ether	Insufficient	Y
EXXON MOBIL CHEMICAL COMPANY		14666945	Cobalt oleate	Insufficient	Y
EXXON MOBIL CHEMICAL COMPANY		68514410	Ketones, C12-branched	Insufficient	Y
FARMLAND INDUSTRIES, INC.		68611643	Urea, reaction products with formaldehyde	None	Y
FREUDENBERG - NOK, GP		68187768	Castor oil, sulfated, sodium salt	None	Y
GEMCHEM, INC.		75876	Chloral	None	Y
GENERAL ELECTRIC COMPANY		52556420	Propanesulfonic acid, 2-hydroxy-3-(propenyloxy)-, Na salt	Insufficient	Y
GENERAL ELECTRIC COMPANY		72162288	2-Propanone, reaction products with phenol	Insufficient	Y
GENERAL NUTRITION COMPANIES, INC..		56406	Glycine	None	Y

Table 3: **"Deadbeat dads", continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
GENERAL NUTRITION COMPANIES, INC..		98099	Benzenesulfonyl chloride	None	Y
HALSTAB DIVISION, HAMMOND GROUP, INC.		17976431	Lead, di-.mu.-oxo(.mu.-phthalato)tri-, cyclo-	None	Y
HERCULES, INC.		68442604	Acetaldehyde, reaction products with formaldehyde, by-products from	None	Y
HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	Insufficient	Y
HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	68909773	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	Insufficient	Y
HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	68953708	Oxirane, reaction products with ammonia, distn. residues	Insufficient	Y
INEOS GROUP LTD.		68953708	Oxirane, reaction products with ammonia, distn. residues	None	Y
INTERNATIONAL BUSINESS MACHINES		8005025	C.I. Solvent Black 7	Insufficient	Y
INTERNATIONAL SPECIALTY CHEMICALS, INC.		78115	Pentaerythritol, tetranitrate	Insufficient	Y
ISG WARREN, INC.		65996783	Light oil, (coal), coke-oven	None	Y
ISG WARREN, INC.		65996896	Tar, coal, high-temp.	None	Y
JARCHEM INDUSTRIES, INC.		143282	9-Octadecen-1-ol, (Z)-	Insufficient	Y
JLM INDUSTRIES INC.	JLM MARKETING, INC.	144627	Oxalic acid	None	Y
KAO SPECIALTIES AMERICAS LLC		12645317	Phosphoric acid, 2-ethylhexyl ester	Insufficient	Y
KOPPERS INDUSTRIES, INC.		65996783	Light oil, (coal), coke-oven	None	Y
KOPPERS INDUSTRIES, INC.		65996794	Solvent naphtha, (coal)	None	Y
KOPPERS INDUSTRIES, INC.		65996807	Ammonia liquor, (coal)	None	Y
KOPPERS INDUSTRIES, INC.		65996818	Fuel gases, coke-oven	None	Y
KOPPERS INDUSTRIES, INC.		65996829	Tar oils, coal	None	Y
KOPPERS INDUSTRIES, INC.		65996830	Extracts, coal tar oil alk.	None	Y
KOPPERS INDUSTRIES, INC.		65996863	Extract oils, (coal), tar base	None	Y
KOPPERS INDUSTRIES, INC.		65996874	Extract residues, (coal), tar oil alk.	None	Y
KOPPERS INDUSTRIES, INC.		65996896	Tar, coal, high-temp.	None	Y
KOPPERS INDUSTRIES, INC.		65996910	Distillates, (coal tar), upper	None	Y
KOPPERS INDUSTRIES, INC.		65996921	Distillates, (coal tar)	None	Y
KOPPERS INDUSTRIES, INC.		68187575	Pitch, coal tar-petroleum	None	Y
KOPPERS INDUSTRIES, INC.		90640861	Distillates, (coal tar), heavy oils	None	Y
KOSA B.V.	ARTEVA SPECIALTIES S.A.R.L. D/B/A KOSA	68988227	1,4-Benzenedicarboxylic acid, dimethyl ester, manuf. of, by-products from	None	Y
LENMAR CHEMICAL CORPORATION		12645317	Phosphoric acid, 2-ethylhexyl ester	Insufficient	Y
LONZA, INC.		111853	Octane, 1-chloro-	Insufficient	Y
LONZA, INC.		112527	Dodecane, 1-chloro-	Insufficient	Y
LONZA, INC.		1002693	Decane, 1-chloro-	Insufficient	Y
LONZA, INC.		2425549	Tetradecane, 1-chloro-	Insufficient	Y
LONZA, INC.		3386332	Octadecane, 1-chloro-	Insufficient	Y
LONZA, INC.		4860031	Hexadecane, 1-chloro-	Insufficient	Y
MARCHEM TECHNOLOGIES		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	None	Y
MCWANE, INC.	EMPIRE COKE COMPANY	65996783	Light oil, (coal), coke-oven	None	Y
MCWANE, INC.	EMPIRE COKE COMPANY	65996896	Tar, coal, high-temp.	None	Y
MFG CHEMICAL, INC.		12645317	Phosphoric acid, 2-ethylhexyl ester	None	Y
MICRO INKS CORP.		1324761	C.I. Pigment Blue 61	None	Y

Table 3: **"Deadbeat dads", continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
MILLIKEN CHEMICAL		28777982	Succinic anhydride, octadecenyl-	Insufficient	Y
MISSISSIPPI CHEMICAL CORPORATION	TRIAD NITROGEN, L.L.C.	68611643	Urea, reaction products with formaldehyde	None	Y
MITSUBISHI CHEMICAL CORPORATION	USR OPTONIX, INC.	8005025	C.I. Solvent Black 7	None	Y
MONA INDUSTRIES INC.(D/B/A UNIQEMA)		12645317	Phosphoric acid, 2-ethylhexyl ester	None	Y
NAGASE AMERICA CORP.		8005025	C.I. Solvent Black 7	None	Y
NORTHROP GRUMMAN CORPORATION	TRW VEHICLE SAFETY SYSTEMS, INC..	121824	s-Triazine, hexahydro-1,3,5-trinitro-	None	Y
ORIENT CORP. OF AMERICA		8005025	C.I. Solvent Black 7	None	Y
ORMET CORPORATION	ORMET PRIMARY ALUMINUM CORP.	65996896	Tar, coal, high-temp.	None	Y
P CHEM, INC.		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	Insufficient	Y
P CHEM, INC.		68153606	Fatty acids, tall-oil, reaction products with diethylenetriamine, acetates	Insufficient	Y
PECHINEY CHEMICALS DIVISION	R.W. GREEFF & COMPANY, L.L.C.	62237	Benzoic acid, p-nitro-	None	Y
PENFORD CORPORATION	PENFORD PRODUCTS COMPANY	66071941	Corn, steep liquor	Insufficient	Y
PHT INTERNATIONAL, INC.		62237	Benzoic acid, p-nitro-	Insufficient	Y
PIEDMONT CHEMICAL INDUSTRIES, INC.	ETHOX CHEMICALS,LLC	12645317	Phosphoric acid, 2-ethylhexyl ester	None	Y
PMP FERMENTATION PRODUCTS, INC.		6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	Insufficient	Y
PRAXAIR, INC.		75467	Methane, trifluoro-	Insufficient	Y
RAILWORKS CORP.		8001589	Creosote	None	Y
RAILWORKS CORP.		65996921	Distillates, (coal tar)	None	Y
REILLY INDUSTRIES, INC.		8007452	Tar, coal	Insufficient	Y
REILLY INDUSTRIES, INC.		65996829	Tar oils, coal	Insufficient	Y
REILLY INDUSTRIES, INC.		65996896	Tar, coal, high-temp.	Insufficient	Y
REILLY INDUSTRIES, INC.		65996910	Distillates, (coal tar), upper	Insufficient	Y
ROQUETTE AMERICA, INC.		6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	Insufficient	Y
ROQUETTE AMERICA, INC.		66071941	Corn, steep liquor	Insufficient	Y
ROWELL CHEMICAL CORPORATION	MILPORT ENTERPRISES, INC.	31138655	D-gluco-Heptonic acid, monosodium salt, (2.xi.)-	None	Y
RPM INTERNATIONAL INC.	AMERICAN EMULSIONS CO., INC.	12645317	Phosphoric acid, 2-ethylhexyl ester	Insufficient	Y
RUTHERFORD CHEMICALS	CASCHEM, INC.	101348	Ricinolein, tri-, triacetate	None	Y
RUTHERFORD CHEMICALS	CASCHEM, INC.	68187848	Castor oil, oxidized	None	Y
SAKAI TRADING NEW YORK, INC.		110441	Sorbic acid	Insufficient	Y
SAKAI TRADING NEW YORK, INC.		24634615	Sorbic acid, potassium salt	Insufficient	Y
SASOL CHEMICALS NORTH AMERICA LLC		4170303	2-Butenal	None	Y
SHELL CHEMICALS LTD.		108203	Isopropyl ether	Insufficient	Y
SNPE N. AMERICA, L.L.C.		4083641	p-Toluenesulfonic acid, anhydride with isocyanic acid	None	Y
SPECIALTYCHEM PRODUCTS CORP.		104665	1,2-Diphenoxyethane	None	Y
SUMITOMO CORP. OF AMERICA		542927	1,3-Cyclopentadiene	Insufficient	Y
SUMITOMO CORP. OF AMERICA		8001589	Creosote	Insufficient	Y
SUNBELT CORP.		84651	9,10-Anthracenedione	None	Y
SYNGENTA CROP PROTECTION, INC.		2941642	Formic acid, chlorothio-, S-ethyl ester	Insufficient	Y
SYNGENTA CROP PROTECTION, INC.	ZENECA, INC.	19438610	Phthalic anhydride, 4-methyl-	Insufficient	Y
SYNGENTA CROP PROTECTION, INC.		37734455	Carbonochloridothioic acid, S-(phenylmethyl) ester	Insufficient	Y

Table 3: **"Deadbeat dads", continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
SYNGENTA CROP PROTECTION, INC.		39515510	Benzaldehyde, 3-phenoxy-	Insufficient	Y
TESSENDERLO KERLEY, INC.		56406	Glycine	None	Y
TESSENDERLO KERLEY, INC.		75365	Acetyl chloride	None	Y
THE DOW CHEMICAL COMPANY		75070	Acetaldehyde	Insufficient	Y
THE DOW CHEMICAL COMPANY		96220	3-Pentanone	Insufficient	Y
THE DOW CHEMICAL COMPANY		124630	Methanesulfonyl chloride	Insufficient	Y
THE DOW CHEMICAL COMPANY		645625	2-Hexenal, 2-ethyl-	Insufficient	Y
THE DOW CHEMICAL COMPANY		2611009	3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester	Insufficient	Y
THE DOW CHEMICAL COMPANY		4316738	Sarcosine, monosodium salt	Insufficient	Y
THE DOW CHEMICAL COMPANY		7320378	Hexadecane, 1,2-epoxy-	Insufficient	Y
THE DOW CHEMICAL COMPANY		28106301	Styrene, ar-ethyl-	Insufficient	Y
THE GOODYEAR TIRE & RUBBER COMPANY		149440	Sodium formaldehydesulfoxylate	Insufficient	Y
THE LUBRIZOL CORPORATION	CHEMRON CORPORATION	12645317	Phosphoric acid, 2-ethylhexyl ester	Insufficient	Y
THE PROCTER & GAMBLE COMPANY		143282	9-Octadecen-1-ol, (Z)-	Insufficient	Y
TOMEN AMERICA, INC.		110441	Sorbic acid	None	Y
TOMEN AMERICA, INC.		143282	9-Octadecen-1-ol, (Z)-	None	Y
TOMEN AMERICA, INC.		24634615	Sorbic acid, potassium salt	None	Y
TONAWANDA COKE CORP.		8007452	Tar, coal	None	Y
TONAWANDA COKE CORP.		65996783	Light oil, (coal), coke-oven	None	Y
TONAWANDA COKE CORP.		65996818	Fuel gases, coke-oven	None	Y
TOYO INK AMERICA, LLC.		1324761	C.I. Pigment Blue 61	None	Y
TRENTON SALES, INC.		8001589	Creosote	Insufficient	Y
UCAR CARBON COMPANY, INC.		68187597	Coal, anthracite, calcined	None	Y
UNITED STATES STEEL CORP.	NATIONAL STEEL CORP.	65996783	Light oil, (coal), coke-oven	None	Y
UNITED STATES STEEL CORP.	GREAT LAKES DIVISION, NATIONAL STEEL CORP.	65996783	Light oil, (coal), coke-oven	None	Y
UNITED STATES STEEL CORP.		65996783	Light oil, (coal), coke-oven	None	Y
UNITED STATES STEEL CORP.	USS CLAIRTON WORKS	65996783	Light oil, (coal), coke-oven	None	Y
UNITED STATES STEEL CORP.	GREAT LAKES DIVISION, NATIONAL STEEL CORP.	65996818	Fuel gases, coke-oven	None	Y
UNITED STATES STEEL CORP.		65996818	Fuel gases, coke-oven	None	Y
UNITED STATES STEEL CORP.	USS CLAIRTON WORKS	65996818	Fuel gases, coke-oven	None	Y
UNITED STATES STEEL CORP.	GREAT LAKES DIVISION, NATIONAL STEEL CORP.	65996896	Tar, coal, high-temp.	None	Y
UNITED STATES STEEL CORP.	NATIONAL STEEL CORP.	65996896	Tar, coal, high-temp.	None	Y
UNITED STATES STEEL CORP.		65996896	Tar, coal, high-temp.	None	Y
UNIVAR USA, INC.		98099	Benzenesulfonyl chloride	None	Y
UNIVAR USA, INC.		110441	Sorbic acid	None	Y
UNIVAR USA, INC.		128449	1,2-Benzisothiazolin-3-one, 1,1-dioxide, sodium salt	None	Y
UNIVAR USA, INC.		144627	Oxalic acid	None	Y
UNIVAR USA, INC.		6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	None	Y
UNIVAR USA, INC.		24634615	Sorbic acid, potassium salt	None	Y
VANDEMARK, INC.	VANCHEM, INC.	4083641	p-Toluenesulfonic acid, anhydride with isocyanic acid	None	Y

Table 3: **"Deadbeat dads", continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?
VARIED INVESTMENTS, INC.	GRAIN PROCESSING CORP.	66071941	Corn, steep liquor	None	Y
VELSICOL CHEMICAL CORP.		542927	1,3-Cyclopentadiene	Insufficient	Y
VELSICOL CHEMICAL CORP.		22527635	Isobutyric acid, 3-hydroxy-2,2,4-trimethylpentyl ester benzoate	Insufficient	Y
WERNER G. SMITH, INC.		68187848	Castor oil, oxidized	None	Y
WERNER G. SMITH, INC.		84501860	Hexanedioic acid, esters with high-boiling C6-10-alkene hydroformylation products	None	Y
WESTPOINT STEVENS, INC.		2915539	Maleic acid, dioctyl ester	Insufficient	Y
WESTPOINT STEVENS, INC.		12645317	Phosphoric acid, 2-ethylhexyl ester	Insufficient	Y
WHEELING-PITTSBURGH STEEL CORP.		65996783	Light oil, (coal), coke-oven	None	Y
WHEELING-PITTSBURGH STEEL CORP.		65996818	Fuel gases, coke-oven	None	Y
WHEELING-PITTSBURGH STEEL CORP.		65996896	Tar, coal, high-temp.	None	Y
WHEELING-PITTSBURGH STEEL CORP.		68990614	Tar, coal, high-temp., high-solids	None	Y

APPENDIX A

Generic version of letter sent by Environmental Defense to companies reporting manufacture of unsponsored chemicals

«DATE»

«CEO_NAME»
«CEO_TITLE»
«COMPNAME»
«ADDRESS»

Dear «CEO_LAST_NAME»:

According to the U.S. Environmental Protection Agency (EPA), your company, «COMPNAME», reported manufacturing (defined to include producing and importing) one or more high-production-volume (HPV) chemicals in 1998 and/or 2002 in the United States.

HPV chemicals are those produced or imported in amounts exceeding 1 million pounds per year, aggregated across all producers and importers. Such chemicals are identified by EPA using manufacturing volume data required to be reported every four years under the TSCA Inventory Update Rule (IUR).

Also according to EPA records, the chemical shown in the attachment to this letter that «COMPNAME» reported producing has not been sponsored under the U.S. HPV Challenge Program. The attachment lists the unsponsored HPV chemical, along with the total reported amounts manufactured in 1998 and 2002, aggregated across all producers and importers.

In 1998, Environmental Defense, EPA and the American Chemistry Council jointly launched the HPV Challenge Program, which called for chemical manufacturers to voluntarily commit to fill gaps in basic screening-level hazard data for HPV chemicals they manufacture and to make the data publicly available. In a nutshell, the program provides that companies can sign up to sponsor chemicals they manufacture; if there are multiple manufacturers, companies can join together to form consortia to jointly sponsor work. A sponsor's first obligation is to review and summarize existing data, comparing them against an internationally agreed-upon template known as the Screening Information Data Set, and to determine whether any data gaps exist. The sponsor then develops a test plan to fill any such gaps. These documents are submitted to EPA and posted on the Internet for public review before any needed testing begins (testing must follow established protocols). Once data gathering and any further testing are completed, data are to be made publicly available.

We are concerned that the below-listed HPV chemical «COMPNAME» reported manufacturing is not sponsored, and hence that basic hazard data on it are not being developed and made publicly available. As a result, the public's right to know about the hazard characteristics of widely used chemicals is being undercut. We are writing you to seek clarification as to:

- whether «COMPNAME» still produces or imports the chemical listed below, and if so,
- why «COMPNAME» is not sponsoring the chemical under the HPV Challenge Program.

We are sending similar letters to all companies that reported manufacturing HPV chemicals in 1998 and/or 2002 but have not sponsored them, and we intend to make public the responses (or lack thereof) that we receive. We recognize that publicly available information as to which companies manufacture which chemicals at what levels may be somewhat dated. The purpose of our letter is to ensure that any association we report between your company and the manufacture of unsponsored HPV chemicals is accurate. We also recognize that there may be legitimate reasons why your company has chosen not to sponsor a given chemical, which we wish to accurately reflect in any information we make public. If, for example, EPA has been informed of circumstances that led «COMPNAME» not to sponsor the chemical, or to withdraw sponsorship (e.g., ceased production of the chemical in question), we would appreciate your describing such circumstances and providing us with a copy of the correspondence provided to EPA so that we may accurately reflect it in our report.

We ask that you provide a written response to this letter by no later than Tuesday, March 30, 2004. If you have any questions about this request, please contact Dr. Richard Denison, Environmental Defense senior scientist, who can be reached at 202/387-3500, x3348, or by email at rdenison@environmentaldefense.org. Thank you in advance for your assistance in ensuring the accuracy of information about your company.

Sincerely,

Fred Krupp
President
Environmental Defense

Cc: «HPV_NAME»
«HPV_TITLE»
«COMPNAME»
«ADDRESS_2A»
«ADDRESS_2B»

ATTACHMENT

APPENDIX B

Basis for our assessment of the 532 unsponsored Challenge program chemicals

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
51285	Phenol, 2,4-dinitro-	Not HPV in '98 or '02			N
51661	p-Acetanisidide	Not HPV in '98 or '02			N
56406	Glycine	Sent letter(s)	4	1	Y
62237	Benzoic acid, p-nitro-	Sent letter(s)	3	2	Y
62566	Urea, thio-	Sent letter(s)	2	2	?
67721	Ethane, hexachloro-	Not HPV in '98 or '02			N
68360	p-Xylene, .alpha.,.alpha.,.alpha.,.alpha.',.alpha.',.alpha.'-hexachloro-	Not HPV in '98 or '02			N
74953	Methane, dibromo-	Sent letter(s)	1	1	Y
74975	Methane, bromochloro-	Sent letter(s)	1	1	Y
74997	Propyne	Not HPV in '98 or '02			N
75070	Acetaldehyde	Sent letter(s)	3	2	Y
75343	Ethane, 1,1-dichloro-	Sent letter(s)	2	2	N
75365	Acetyl chloride	Sent letter(s)	2	0	Y
75467	Methane, trifluoro-	Sent letter(s)	4	3	Y
75638	Methane, bromotrifluoro-	Not HPV in '98 or '02			N
75694	Methane, trichlorofluoro-	Not HPV in '98 or '02			N
75718	Methane, dichlorodifluoro-	Not HPV in '98 or '02			N
75876	Chloral	Sent letter(s)	1	0	Y
76153	Ethane, chloropentafluoro-	Not HPV in '98 or '02			N
76879	Triphenyltin hydroxide	Not HPV in '98 or '02			N
77769	Propane, 2,2-dimethoxy-	No company match			Y
78115	Pentaerythritol, tetranitrate	Sent letter(s)	4	2	Y
78422	Phosphoric acid, tris(2-ethylhexyl) ester	Sent letter(s)	2	2	?
81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide	Sent letter(s)	2	1	?
81163	1-Naphthalenesulfonic acid, 2-amino-	Sent letter(s)	2	1	?
81845	Naphthalic anhydride	Sent letter(s)	1	1	N
83410	Benzene, 1,2-dimethyl-3-nitro-	Sent letter(s)	1	1	Y
84617	1,2-Benzenedicarboxylic acid, dicyclohexyl ester	Not HPV in '98 or '02			N
84651	9,10-Anthracenedione	Sent letter(s)	2	1	Y
84695	Phthalic acid, diisobutyl ester	Sent letter(s)	2	1	?
85405	4-Cyclohexene-1,2-dicarboximide	No company match			Y
88686	Benzamide, o-amino-	Not HPV in '98 or '02			N
89656	D-erythro-Hex-2-enonic acid, .gamma.-lactone	Not HPV in '98 or '02			N
89872	m-Xylene, 4-nitro-	Not HPV in '98 or '02			N
90437	2-Biphenylol	Sent letter(s)	1	1	?
91532	Quinoline, 6-ethoxy-1,2-dihydro-2,2,4-trimethyl-	Sent letter(s)	2	1	Y
91689	Phenol, m-(diethylamino)-	Sent letter(s)	1	1	?
92002	Ethanol, 2,2'-[(m-chlorophenyl)imino]di-	Not HPV in '98 or '02			N
94757	Acetic acid, (2,4-dichlorophenoxy)-	Sent letter(s)	1	1	Y
94962	1,3-Hexanediol, 2-ethyl-	Sent letter(s)	1	0	?
95294	2-Benzothiazolesulfenamide, N,N-diisopropyl-	Not HPV in '98 or '02			N
95512	Benzenamine, 2-chloro-	Not HPV in '98 or '02			N
95749	p-Toluidine, 3-chloro-	Not HPV in '98 or '02			N
95943	Benzene, 1,2,4,5-tetrachloro-	Sent letter(s)	1	0	?
96093	Benzene, (epoxyethyl)-	Not HPV in '98 or '02			N
96220	3-Pentanone	Sent letter(s)	3	3	Y
96231	2-Propanol, 1,3-dichloro-	Sent letter(s)	2	1	?
97007	Benzene, 1-chloro-2,4-dinitro-	No company match			?
97029	Aniline, 2,4-dinitro-	Not HPV in '98 or '02			N
97303	Glucopyranoside, methyl, .alpha.-D-	Not HPV in '98 or '02			N
97392	Guanidine, 1,3-di-o-tolyl-	Not HPV in '98 or '02			N
98099	Benzenesulfonyl chloride	Sent letter(s)	2	0	Y
98168	m-Toluidine, .alpha.,.alpha.,.alpha.-trifluoro-	No company match			?
98566	Benzene, 1-chloro-4-(trifluoromethyl)-	New orphan since 11-21-03			Y
98873	Toluene, .alpha.,.alpha.-dichloro-	Not HPV in '98 or '02			N

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
99309	Aniline, 2,6-dichloro-4-nitro-	Not HPV in '98 or '02			N
99514	o-Xylene, 4-nitro-	Sent letter(s)	1	1	Y
99718	Phenol, p-sec-butyl-	Sent letter(s)	1	1	Sp?
99763	Benzoic acid, p-hydroxy-, methyl ester	Not HPV in '98 or '02			N
99945	p-Toluic acid	Not HPV in '98 or '02			N
100298	Phenetole, p-nitro-	Not HPV in '98 or '02			N
100641	Cyclohexanone, oxime	Sent letter(s)	1	1	Y
101348	Ricinolein, tri-, triacetate	Sent letter(s)	1	0	Y
104438	Phenol, p-dodecyl-	Not HPV in '98 or '02			N
104665	1,2-Diphenoxyethane	Sent letter(s)	1	0	Y
104916	Phenol, p-nitroso-	No company match			?
105306	1-Pentanol, 2-methyl-	Not HPV in '98 or '02			N
107164	Glycolonitrile	Not HPV in '98 or '02			N
107391	1-Pentene, 2,4,4-trimethyl-	Sent letter(s)	3	1	?
107404	2-Pentene, 2,4,4-trimethyl-	Sent letter(s)	1	0	?
107459	Butylamine, 1,1,3,3-tetramethyl-	Sent letter(s)	1	0	?
108190	Imidodicarbonic diamide	Sent letter(s)	1	1	Y
108203	Isopropyl ether	Sent letter(s)	2	2	Y
109671	1-Pentene	Not HPV in '98 or '02			N
109864	Ethanol, 2-methoxy-	Sent letter(s)	4	3	Sp?
110292	Adipic acid, decyl octyl ester	Not HPV in '98 or '02			N
110338	Adipic acid, dihexyl ester	Not HPV in '98 or '02			N
110441	Sorbic acid	Sent letter(s)	4	2	Y
110576	2-Butene, 1,4-dichloro-, (E)-	Not HPV in '98 or '02			N
110678	Propanenitrile, 3-methoxy-	Not HPV in '98 or '02			N
111217	Triethylene glycol, diacetate	Not HPV in '98 or '02			N
111262	Hexylamine	Not HPV in '98 or '02			N
111444	Ether, bis(2-chloroethyl)	Sent letter(s)	2	1	Y
111853	Octane, 1-chloro-	Sent letter(s)	1	1	Y
111911	Methane, bis(2-chloroethoxy)-	Sent letter(s)	1	1	N
112527	Dodecane, 1-chloro-	Sent letter(s)	1	1	Y
115286	5-Norbornene-2,3-dicarboxylic acid, 1,4,5,6,7,7-hexachloro-	Not HPV in '98 or '02			N
118821	Phenol, 4,4'-methylenebis[2,6-di-tert-butyl-	Sent letter(s)	1	1	Y
118901	o-Toluic acid	Sent letter(s)	3	3	N
119335	p-Cresol, 2-nitro-	Sent letter(s)	1	0	?
119619	Methanone, diphenyl-	New orphan since 11-21-03			Y
120718	o-Anisidine, 5-methyl-	Not HPV in '98 or '02			N
121608	Sulfanilyl chloride, N-acetyl-	Not HPV in '98 or '02			N
121697	Benzenamine, N,N-dimethyl-	New orphan since 11-21-03			?
121824	s-Triazine, hexahydro-1,3,5-trinitro-	Sent letter(s)	4	1	Y
121868	Toluene, 2-chloro-4-nitro-	Not HPV in '98 or '02			N
122349	s-Triazine, 2-chloro-4,6-bis(ethylamino)-	Not HPV in '98 or '02			N
123795	Adipic acid, dioctyl ester	Not HPV in '98 or '02			N
124630	Methanesulfonyl chloride	Sent letter(s)	3	3	Y
126136	Sucrose, diacetate hexaisobutyrate	Not on 2002 IU			N
127684	Benzenesulfonic acid, m-nitro-, sodium salt	Sent letter(s)	2	1	?
128449	1,2-Benzisothiazolin-3-one, 1,1-dioxide, sodium salt	Sent letter(s)	2	0	Y
131566	Benzophenone, 2,4-dihydroxy-	Not HPV in '98 or '02			N
131577	Benzophenone, 2-hydroxy-4-methoxy-	Sent letter(s)	2	2	?
137406	Propionic acid, sodium salt	Not HPV in '98 or '02			N
138250	Isophthalic acid, 5-	Sent letter(s)	1	1	N
139402	s-Triazine, 2-chloro-4,6-bis(isopropylamino)-	Sent letter(s)	1	1	?
140932	Carbonic acid, dithio-, O-isopropyl ester, sodium salt	Sent letter(s)	2	0	?
142734	Glycine, N-(carboxymethyl)-	Sent letter(s)	1	1	Sp?
143237	Dihexylamine, 6,6'-diamino-	Not HPV in '98 or '02			N
143282	9-Octadecen-1-ol, (Z)-	Sent letter(s)	3	2	Y
144627	Oxalic acid	Sent letter(s)	4	2	Y
147477	Quinoline, 1,2-dihydro-2,2,4-trimethyl-	Not HPV in '98 or '02			N
149440	Sodium formaldehydesulfoxylate	Sent letter(s)	1	1	Y
307357	1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	Single company; reason already known			N
330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-	Sent letter(s)	3	1	?

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
353593	Methane, bromochlorodifluoro-	Not HPV in '98 or '02			N
393759	Toluene, 4-chloro-.alpha.,.alpha.,.alpha.-trifluoro-3,5-dinitro-	Not HPV in '98 or '02			N
409029	Heptenone, methyl-	Sent letter(s)	1	1	Y
460004	Benzene, 1-bromo-4-fluoro-	Sent letter(s)	1	0	Y
506514	1-Tetracosanol	Sent letter(s)	2	0	?
506525	1-Hexacosanol	Sent letter(s)	1	0	?
506592	Dimethylamine, hydrochloride	Not HPV in '98 or '02			N
506934	Guanidine, mononitrate	Not HPV in '98 or '02			N
513746	Carbamic acid, dithio-, monoammonium salt	No company match			?
515402	Benzene, (2-chloro-1,1-dimethylethyl)-	Sent letter(s)	1	0	Y
528290	o-Dinitrobenzene	Not on 2002 IU			N
529339	1-Naphthol, 1,2,3,4-tetrahydro-	No company match			?
529340	1(2H)-Naphthalenone, 3,4-dihydro-	No company match			Y
533744	2H-1,3,5-Thiadiazine-2-thione, tetrahydro-3,5-dimethyl-	Not HPV in '98 or '02			N
537008	Acetic acid, cerium(3+) salt	Sent letter(s)	1	0	Y
542109	1,1-Ethanediol, diacetate	Not HPV in '98 or '02			N
542756	Propene, 1,3-dichloro-	Sent letter(s)	1	1	?
542927	1,3-Cyclopentadiene	Sent letter(s)	3	2	Y
547648	Lactic acid, methyl ester	Not HPV in '98 or '02			N
556616	Methane, isothiocyanato-	Not HPV in '98 or '02			N
556887	Guanidine, nitro-	Not HPV in '98 or '02			N
557619	1-Octacosanol	Sent letter(s)	1	1	N
579668	Aniline, 2,6-diethyl-	Sent letter(s)	1	1	Y
590192	1,2-Butadiene	Sent letter(s)	2	1	?
592450	1,4-Hexadiene	Sent letter(s)	1	1	N
594423	Methanesulfenyl chloride, trichloro-	No company match			Y
597319	Hydracrylaldehyde, 2,2-dimethyl-	No company match			Y
598721	Propionic acid, 2-bromo-	Sent letter(s)	1	0	Y
602017	Toluene, 2,3-dinitro-	Not HPV in '98 or '02			N
606202	Toluene, 2,6-dinitro-	Not HPV in '98 or '02			N
609938	p-Cresol, 2,6-dinitro-	Not HPV in '98 or '02			N
610399	Toluene, 3,4-dinitro-	Not HPV in '98 or '02			N
616239	1-Propanol, 2,3-dichloro-	Not HPV in '98 or '02			N
617947	Benzenemethanol, alpha,alpha-dimethyl	Sent letter(s)	1	1	N
619158	Toluene, 2,5-dinitro-	Not HPV in '98 or '02			N
624839	Isocyanic acid, methyl ester	No company match			Y
624920	Methyl disulfide	Sent letter(s)	4	3	Y
625558	Formic acid, isopropyl ester	No company match			Y
628137	Pyridine, hydrochloride	No company match			Y
628966	Ethylene nitrate	Sent letter(s)	1	1	Y
629765	1-Pentadecanol	Sent letter(s)	1	1	Sp?
634662	Benzene, 1,2,3,4-tetrachloro-	Not HPV in '98 or '02			N
636533	Isophthalic acid, diethyl ester	Not HPV in '98 or '02			N
643389	2,3-Quinolinedecarboxylic acid	Not on 2002 IU			N
645625	2-Hexenal, 2-ethyl-	Sent letter(s)	1	1	Y
669909	D-arabino-Hexulosonic acid	Not HPV in '98 or '02			N
681845	Methyl silicate, ((MeO)4Si)	Not HPV in '98 or '02			N
693958	Thiazole, 4-methyl-	No company match			?
719324	Terephthaloyl chloride, tetrachloro-	Not HPV in '98 or '02			N
756809	Phosphorodithioic acid, O,O-dimethyl ester	Sent letter(s)	1	1	N
815178	Butyric acid, 3,3-dimethyl-2-oxo-	Not HPV in '98 or '02			N
823405	Toluene-2,6-diamine	Sent letter(s)	1	1	?
882337	Phenyl disulfide	Not HPV in '98 or '02			N
918047	Ethanesulfonic acid, 1-hydroxy-, monosodium salt	Not HPV in '98 or '02			N
923024	Acrylamide, N-(hydroxymethyl)-2-methyl-	Not HPV in '98 or '02			N
925213	Maleic acid, monobutyl ester	Not HPV in '98 or '02			N
928723	Glycine, N-(carboxymethyl)-, disodium salt	Sent letter(s)	3	3	Sp?
930698	Benzenethiol, sodium salt	Not HPV in '98 or '02			N
939979	Benzaldehyde, p-tert-butyl-	Sent letter(s)	1	0	?
993431	Phosphonothioic dichloride, ethyl-	Not HPV in '98 or '02			N
1000824	Urea, (hydroxymethyl)-	Sent letter(s)	2	1	?
1002693	Decane, 1-chloro-	Sent letter(s)	1	1	Y
1074824	Phthalimide, potassium salt	Not HPV in '98 or '02			N
1111780	Ammonium carbamate	Sent letter(s)	2	2	Y

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
1115204	Hydracrylic acid, 2,2-dimethyl-, 3-hydroxy-2,2-dimethylpropyl ester	Sent letter(s)	1	1	Y
1203174	Indan, 1,1,2,3,3-pentamethyl-	Not HPV in '98 or '02			N
1217089	5-Indanethanol, .beta.,1,1,2,3,3-hexamethyl-	Not HPV in '98 or '02			N
1323655	Phenol, dinonyl-	Sent letter(s)	1	0	Y
1324761	C.I. Pigment Blue 61	Sent letter(s)	3	1	Y
1338029	Naphthenic acids, copper salts	Not HPV in '98 or '02			N
1401554	Tannins	Sent letter(s)	1	1	?
1435718	p-Cresol, 2-[(o-nitrophenyl)azo]-	Not HPV in '98 or '02			N
1452159	4-Thiazolecarbonitrile	Not HPV in '98 or '02			N
1459934	1,3-Benzenedicarboxylic acid, dimethyl ester	New orphan since 11-21-03			Y
1476115	2-Butene, 1,4-dichloro-, (Z)-	Not HPV in '98 or '02			N
1498517	Phosphorodichloridic acid, ethyl ester	Sent letter(s)	1	1	?
1558334	Silane, dichloro(chloromethyl)methyl-	Sent letter(s)	1	0	?
1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	Sent letter(s)	4	4	Y
1569693	Cyclohexanethiol	Not HPV in '98 or '02			N
1679647	1,4-Benzenedicarboxylic acid, monomethyl ester	Not HPV in '98 or '02			N
1691992	1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-	Single company; reason already known			N
1738256	Propionitrile, 3-(dimethylamino)-	Sent letter(s)	1	1	Y
1817738	Aniline, 2-bromo-4,6-dinitro-	Not HPV in '98 or '02			N
1912249	s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)-	Sent letter(s)	1	1	?
1918021	Picolinic acid, 4-amino-3,5,6-trichloro-	Sent letter(s)	1	1	?
1929824	Pyridine, 2-chloro-6-(trichloromethyl)-	Sent letter(s)	1	1	?
1975786	Decanenitrile	Not HPV in '98 or '02			N
2016571	Decylamine	Not HPV in '98 or '02			N
2152649	C.I. Solvent Blue 23, monohydrochloride	No company match			?
2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-	Sent letter(s)	3	0	?
2244215	s-Triazine-2,4,6(1H,3H,5H)-trione, 1,3-dichloro-, potassium salt	Not HPV in '98 or '02			N
2372454	Butyl alcohol, sodium salt	Sent letter(s)	1	1	?
2409554	p-Cresol, 2-tert-butyl-	Sent letter(s)	1	1	N
2425549	Tetradecane, 1-chloro-	Sent letter(s)	1	1	Y
2444908	Phenol, 4,4'-isopropylidenedi-, disodium salt	Not HPV in '98 or '02			N
2494895	Ethanol, 2-sulfanilyl-, hydrogen sulfate (ester)	Sent letter(s)	1	0	Y
2524030	Phosphorochloridothioic acid, O,O-dimethyl ester	New orphan since 11-21-03			?
2524041	Phosphorochloridothioic acid, O,O-diethyl ester	New orphan since 11-21-03			Y
2611009	3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester	Sent letter(s)	1	1	Y
2691410	1,3,5,7-Tetrazocine, octahydro-1,3,5,7-tetranitro-	Sent letter(s)	1	0	?
2702729	Acetic acid, (2,4-dichlorophenoxy)-, sodium salt	Sent letter(s)	1	1	N
2814202	4(1H)-Pyrimidinone, 6-methyl-2-(1-methylethyl)-	Sent letter(s)	1	0	?
2905659	Benzoic acid, m-chloro-, methyl ester	Not HPV in '98 or '02			N
2915539	Maleic acid, dioctyl ester	Sent letter(s)	2	2	Y
2941642	Formic acid, chlorothio-, S-ethyl ester	Sent letter(s)	1	1	Y
3088311	Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt	Sent letter(s)	2	2	?
3132998	Benzaldehyde, m-bromo-	Sent letter(s)	1	0	?
3149686	D-Glucopyranoside, methyl	Not HPV in '98 or '02			N
3386332	Octadecane, 1-chloro-	Sent letter(s)	1	1	Y
3586149	Ether, phenyl m-tolyl	Sent letter(s)	1	0	?
3710847	Ethanamine, N-ethyl-N-hydroxy-	Sent letter(s)	3	2	Y
3724650	Crotonic acid	Single company; reason already known			?
3734483	4,7-Methano-1H-indene, 4,5,6,7,8,8-hexachloro-3a,4,7,7a-tetrahydro-	Not HPV in '98 or '02			N
3779633	Isocyanic acid, (2,4,6-trioxo-s-triazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) ester	Sent letter(s)	1	1	Y
3965557	1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt	Sent letter(s)	1	1	?
3999700	Butyl alcohol, potassium salt	Not HPV in '98 or '02			N

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
4026204	Butyric acid, 2-hydroxy-3,3-dimethyl-	Not HPV in '98 or '02			N
4035896	Isocyanic acid, triester with 1,3,5-tris(6-hydroxyhexyl)biuret	Sent letter(s)	1	1	?
4080313	3,5,7-Triaza-1-azoniaadamantane, 1-(3-chloroallyl)-, chloride	Sent letter(s)	2	0	?
4083641	p-Toluenesulfonic acid, anhydride with isocyanic acid	Sent letter(s)	2	0	Y
4170303	2-Butenal	Sent letter(s)	1	0	Y
4300974	Propanoyl chloride, 3-chloro-2,2-dimethyl-	Not on 2002 IU			N
4316738	Sarcosine, monosodium salt	Sent letter(s)	2	2	Y
4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	Sent letter(s)	5	2	Y
4860031	Hexadecane, 1-chloro-	Sent letter(s)	1	1	Y
5026744	Aniline, p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)-	Sent letter(s)	1	0	?
5216251	Toluene, p,.alpha.,.alpha.,.alpha.-tetrachloro-	Sent letter(s)	1	1	N
5460093	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-, monosodium salt	Sent letter(s)	2	0	Y
5915413	s-Triazine, 2-(tert-butylamino)-4-chloro-6-(ethylamino)-	Sent letter(s)	1	1	?
5959897	D-Glucitol, 1,4-anhydro-, 6-dodecanoate	Not HPV in '98 or '02			N
6196958	Ethane, 1-phenyl-1-(3,4-xylyl)-	Not HPV in '98 or '02			N
6375479	p-Acetanisidide, 3'-amino-	Not HPV in '98 or '02			N
6381619	1,2-Benzisothiazolin-3-one, 1,1-dioxide, ammonium salt	Not HPV in '98 or '02			N
6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	Sent letter(s)	4	3	Y
6422997	Sebacic acid, compd. with 1,6-hexanediamine (1:1)	Not HPV in '98 or '02			N
6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt	Sent letter(s)	3	1	?
6842155	Propene, tetramer	Not HPV in '98 or '02			N
6863587	sec-Butyl ether	Sent letter(s)	1	1	Y
7320378	Hexadecane, 1,2-epoxy-	Sent letter(s)	2	2	Y
7378236	D-erythro-Hex-2-enonic acid, .gamma.-lactone, sodium salt	Not HPV in '98 or '02			N
7446813	Acrylic acid, sodium salt	Sent letter(s)	1	1	N
7795951	1-Octanesulfonyl chloride	Single company; reason already known			N
8001589	Creosote	Sent letter(s)	5	2	Y
8002504	Fats and Glyceridic oils, menhaden	Not HPV in '98 or '02			N
8005025	C.I. Solvent Black 7	Sent letter(s)	6	3	Y
8007452	Tar, coal	Sent letter(s)	3	1	Y
8045349	Stearic acid, ester with pentaerythritol	Not HPV in '98 or '02			N
8052106	Tall-oil rosin	Not on 2002 IU			N
10265697	Glycine, N-phenyl-, monosodium salt	No company match			?
10402161	Oleic acid, copper salt	Not HPV in '98 or '02			N
10533672	Acetaldehyde, (methylthio)-, oxime	Not HPV in '98 or '02			N
12645317	Phosphoric acid, 2-ethylhexyl ester	Sent letter(s)	9	6	Y
13031419	Benzonitrile, p-hydroxy-, acetate (ester)	Not HPV in '98 or '02			N
13631646	4-Thiazolecarboxamidine, N-phenyl-, hydrochloride	Not HPV in '98 or '02			N
13749945	Acetohydroximic acid, thio-, methyl ester	No company match			Y
13826352	Benzyl alcohol, m-phenoxy-	Sent letter(s)	2	1	Y
14064030	Ethanol, 2-ethoxy-, magnesium salt	Not HPV in '98 or '02			N
14143603	Picolinonitrile, 4-amino-3,5,6-trichloro-	Sent letter(s)	1	1	?
14666945	Cobalt oleate	Sent letter(s)	2	2	Y
15233473	1,4-Benzenediamine, N-(1-methylheptyl)-N'-phenyl-	Not HPV in '98 or '02			N
16530726	Octanoic acid, compd. with 2,2'-iminodiethanol (1:1)	Not HPV in '98 or '02			N
17103310	Urea, sulfate (2:1)	Sent letter(s)	1	0	Y
17321470	Phosphoramidothioic acid, O,O-dimethyl ester	No company match			?
17797034	Cyclohexanesulfenyl chloride	Not HPV in '98 or '02			N
17976431	Lead, di-.mu.-oxo(.mu.-phthalato)tri-, cyclo-	Sent letter(s)	1	0	Y
19224261	1,2-Propanediol, dibenzoate	Not HPV in '98 or '02			N

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
19438610	Phthalic anhydride, 4-methyl-	Sent letter(s)	1	1	Y
19525598	Glycine, N-phenyl-, monopotassium salt	No company match			?
20068024	Crotononitrile, 2-methyl-, (Z)-	Sent letter(s)	1	1	N
21063401	D-arabino-Hexulosonic acid, methyl ester	Not HPV in '98 or '02			N
21351393	Urea, sulfate (1:1)	Sent letter(s)	1	0	Y
22031330	Propionitrile, 3-[N-(2-hydroxyethyl)anilino]-, acetate (ester)	Not HPV in '98 or '02			N
22527635	Isobutyric acid, 3-hydroxy-2,2,4-trimethylpentyl ester benzoate	Sent letter(s)	1	1	Y
23128510	p-Acetanisidide, 3'-[bis(2-hydroxyethyl)amino]-, diacetate (ester)	Not HPV in '98 or '02			N
23681609	Methanol, tris(p-anilinophenyl)-	Not HPV in '98 or '02			N
24310416	1,2,3-Benzotriazin-4(3H)-one, 3-(chloromethyl)-	Not HPV in '98 or '02			N
24448097	1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-N-methyl-	Single company; reason already known			N
24615847	Hydracrylic acid, acrylate	Sent letter(s)	1	1	N
24634615	Sorbic acid, potassium salt	Sent letter(s)	4	2	Y
24794589	Formic acid, compd. with 2,2',2''-nitrilotriethanol (1:1)	Sent letter(s)	1	1	N
25154385	Piperazineethanol	No company match			Y
25168052	Toluene, ar-chloro-	Sent letter(s)	1	1	N
25168063	Phenol, isopropyl-	Sent letter(s)	1	1	?
25321419	Benzenesulfonic acid, dimethyl-	Sent letter(s)	3	2	?
25340185	Benzene, triethyl-	Not HPV in '98 or '02			N
25383997	Stearic acid, ester with lactic acid bimol. ester, sodium salt	No company match			?
25586429	Phosphorous acid, tritolyl ester	Sent letter(s)	1	1	?
25640782	1,1'-Biphenyl, (1-methylethyl)-	Not HPV in '98 or '02			N
25646713	Methanesulfonamide, N-[2-[(4-amino-3-methylphenyl)ethylamino]ethyl]-, sulfate (2:3)	Sent letter(s)	1	0	Y
26266682	Hexenal, 2-ethyl-	Not HPV in '98 or '02			N
26377297	Phosphorodithioic acid, O,O-dimethyl ester, sodium salt	Sent letter(s)	1	1	?
26680546	Succinic anhydride, octenyl-	Sent letter(s)	2	2	?
26896184	Isononanoic acid	Not HPV in '98 or '02			N
26968581	Toluene, .alpha.-chloro-ar-ethyl-	Not HPV in '98 or '02			N
27157944	Phosphorodithioic acid, O,O-bis(methylphenyl) ester	Not HPV in '98 or '02			N
27193288	Phenol, octyl-	Sent letter(s)	2	1	?
27576869	Phenol, (1-methyl-1-phenylethyl)-	Not HPV in '98 or '02			N
28106301	Styrene, ar-ethyl-	Sent letter(s)	1	1	Y
28188241	Stearic acid, triester with pentaerythritol	Sent letter(s)	2	1	?
28677932	Methoxy-1-propanol	Not on 2002 IU			N
28777982	Succinic anhydride, octadecenyl-	Sent letter(s)	2	2	Y
28908001	Benzothiazole, 2-[(chloromethyl)thio]-	No company match			Y
30207988	Undecanol	Not HPV in '98 or '02			N
30574971	2-Butenenitrile, 2-methyl-, (E)-	Sent letter(s)	1	1	N
31138655	D-gluco-Heptonic acid, monosodium salt, (2.xi.)-	Sent letter(s)	3	2	Y
32072961	Succinic anhydride, hexadecenyl-	Sent letter(s)	2	1	Y
32687777	Hydrocinnamic acid, 3,5-di-tert-butyl-4-hydroxy-, hydrazide	Not HPV in '98 or '02			N
33125869	Phosphoric acid, ethylene tetrakis(2-chloroethyl) ester	Not HPV in '98 or '02			N
34689468	Phenol, methyl-, sodium salt	Sent letter(s)	1	1	Y
35203066	Benzenamine, 2-ethyl-6-methyl-N-methylene-	Sent letter(s)	1	1	?
35203088	Benzenamine, 2,6-diethyl-N-methylene-	Sent letter(s)	1	1	?
37439342	2(1H)-Pyridinone, 3,5,6-trichloro-, sodium salt	Sent letter(s)	1	1	N
37734455	Carbonochloridothioic acid, S-(phenylmethyl) ester	Sent letter(s)	1	1	Y
37764253	Acetamide, 2,2-dichloro-N,N-di-2-propenyl-	Sent letter(s)	1	1	Y
38185067	Benzenesulfonic acid, 4-chloro-3,5-dinitro-, potassium salt	Sent letter(s)	1	0	?
38321185	Ethanol, 2-(2-butoxyethoxy)-, sodium salt	Sent letter(s)	1	1	?
39515510	Benzaldehyde, 3-phenoxy-	Sent letter(s)	3	2	Y
40630635	1-Octanesulfonyl fluoride	Single company; reason already known			N

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
40876980	Butanedioic acid, oxo-, diethyl ester, ion(1-), sodium	Sent letter(s)	1	1	?
41638555	1,1'-Biphenyl, butyl-	Not HPV in '98 or '02			N
50594440	Phenol, 5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitro-, acetate (ester)	Not HPV in '98 or '02			N
50651393	Acetamide, N-(4-methoxy-3-nitrophenyl)-	Not HPV in '98 or '02			N
51307927	Butanedioic acid, 2,3-dihydroxy-, disodium salt, (R*,R*)-(.+-.)-	Not HPV in '98 or '02			N
51632167	Benzene, 1-(bromomethyl)-3-phenoxy-	Sent letter(s)	1	0	Y
52184197	Phenol, 2,4-bis(1,1-dimethylpropyl)-6-[(2-nitrophenyl)azo]-	Sent letter(s)	1	0	?
52556420	Propanesulfonic acid, 2-hydroxy-3-(propenyloxy)-, Na salt	Sent letter(s)	1	1	Y
52663577	Ethanol, 2-butoxy-, sodium salt	Sent letter(s)	1	1	?
56038892	Benzenamine, N-(1-ethylpropyl)-4,5-dimethyl-	Not on 2002 IU			N
56803373	Phosphoric acid, (1,1-dimethylethyl)phenyl diphenyl ester	Sent letter(s)	1	1	Y
57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium	Sent letter(s)	3	1	?
60754247	Carbamic acid, cyanomethyl-, ethyl ester	Not HPV in '98 or '02			N
61788645	Fats and Glyceridic oils, fish, sulfated, sodium salts	Not HPV in '98 or '02			N
61789046	Glycerides, coco mono-, sulfated, sodium salts	Not HPV in '98 or '02			N
61789320	Fatty acids, coco, 2-sulfoethyl esters, sodium salts	Sent letter(s)	1	1	?
61789659	Resin acids and Rosin acids, aluminum salts	Sent letter(s)	1	1	?
61789853	Sulfonic acids, petroleum	No company match			?
63734623	Benzoic acid, 3-[2-chloro-4-(trifluoromethyl)phenoxy]-	Not HPV in '98 or '02			N
64742150	Naphtha, (petroleum), acid-treated	Not HPV in '98 or '02			N
64742252	Lubricating oils, (petroleum), acid-treated spent	Not HPV in '98 or '02			N
64742365	Distillates, (petroleum), clay-treated heavy paraffinic	Not HPV in '98 or '02			N
64742412	Residual oils, (petroleum), clay-treated	Not HPV in '98 or '02			N
64742456	Distillates, (petroleum), clay-treated light naphthenic	Not HPV in '98 or '02			N
64742503	Lubricating oils, (petroleum), clay-treated spent	Not HPV in '98 or '02			N
64742694	Naphthenic oils, (petroleum), catalytic dewaxed light	Not HPV in '98 or '02			N
64742729	Distillates, (petroleum), catalytic dewaxed middle	Sent letter(s)	2	2	Y
64742923	Petroleum resins, oxidized	Not HPV in '98 or '02			N
64743028	Alkenes, C>10 .alpha.-	Sent letter(s)	1	0	?
64743062	Extracts, (petroleum), gas oil solvent	Not HPV in '98 or '02			N
64743073	Sludges, (petroleum), chemically neutralized	Not HPV in '98 or '02			N
64771717	Paraffins, (petroleum), normal C>10	Sent letter(s)	1	1	Y
65652417	Phosphoric acid, bis[(1,1-dimethylethyl)phenyl] phenyl ester	Sent letter(s)	1	1	Y
65996783	Light oil, (coal), coke-oven	Sent letter(s)	11	0	Y
65996794	Solvent naphtha, (coal)	Sent letter(s)	2	1	Y
65996807	Ammonia liquor, (coal)	Sent letter(s)	1	0	Y
65996818	Fuel gases, coke-oven	Sent letter(s)	10	0	Y
65996829	Tar oils, coal	Sent letter(s)	3	2	Y
65996830	Extracts, coal tar oil alk.	Sent letter(s)	2	1	Y
65996863	Extract oils, (coal), tar base	Sent letter(s)	1	0	Y
65996874	Extract residues, (coal), tar oil alk.	Sent letter(s)	1	0	Y
65996896	Tar, coal, high-temp.	Sent letter(s)	13	2	Y
65996910	Distillates, (coal tar), upper	Sent letter(s)	3	2	Y
65996921	Distillates, (coal tar)	Sent letter(s)	3	0	Y
66028011	Benzene, 1-[2-[2-(2-chloroethoxy)ethoxy]ethoxy]-4-octyl-	Not HPV in '98 or '02			N
66071941	Corn, steep liquor	Sent letter(s)	6	5	Y
66241110	C.I. Leuco Sulphur Black 1	No company match			Y
66697276	Benzene, 1,2-dimethyltetrapropylene-	Not HPV in '98 or '02			N
67845265	4H-Pyran-4-one, tetrahydro-3,5-bis(hydroxymethyl)-	Not HPV in '98 or '02			N
67906303	2H-1-Benzopyran-2-one, 7-[(2-amino-1-naphthalenyl)azo]-3-phenyl-	Not HPV in '98 or '02			N

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
67998941	Octadecanoic acid, sulfo-, sodium salt	Not HPV in '98 or '02			N
68002675	Nitriles, C6-12	Not HPV in '98 or '02			N
68002835	Fatty acids, C16 and C18-unsatd. and C18-unsatd. hydroxy, compds. with isopropanolamine	Not HPV in '98 or '02			N
68037945	Amines, C8-18 and C18-unsatd. alkyl	Not HPV in '98 or '02			N
68038324	Fatty acids, vegetable-oil, esters with neopentyl glycol	Not HPV in '98 or '02			N
68081845	Oxirane, mono[(C10-16-alkyloxy)methyl] derivs.	Not HPV in '98 or '02			N
68081867	Phenol, nonyl derivs.	Sent letter(s)	1	1	?
68082780	Lard, oil, Me esters	No company match			?
68140089	Amides, tallow, N,N-bis(hydroxyethyl)	Not HPV in '98 or '02			N
68153220	Paraffin waxes and Hydrocarbon waxes, oxidized	Not HPV in '98 or '02			N
68153231	Peanut oil, glycerol trioleate-enriched, sulfated, sodium salt	Not HPV in '98 or '02			N
68153606	Fatty acids, tall-oil, reaction products with diethylenetriamine, acetates	Sent letter(s)	2	1	Y
68154245	Fatty acids, C8-18 and C18-unsatd., compds. with triethanolamine	Not HPV in '98 or '02			N
68187417	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters	No company match			?
68187575	Pitch, coal tar-petroleum	Sent letter(s)	1	0	Y
68187597	Coal, anthracite, calcined	Sent letter(s)	1	0	Y
68187757	Fats and Glyceridic oils, fish, oxidized	Not HPV in '98 or '02			N
68187768	Castor oil, sulfated, sodium salt	Sent letter(s)	2	1	Y
68187848	Castor oil, oxidized	Sent letter(s)	2	0	Y
68188181	Paraffin oils, chlorosulfonated, saponified	Sent letter(s)	1	1	?
68308010	Tail gas, (petroleum), cracked distillate hydrotreater stripper	Not HPV in '98 or '02			N
68308076	Tail gas (petroleum), hydrodesulfurized vacuum gas oil stripper, hydrogen sulfide-free	Not HPV in '98 or '02			N
68308349	Shale oils	Not HPV in '98 or '02			N
68308747	Amides, tall-oil fatty, N,N-di-Me	No company match			Y
68309160	Fatty acids, tall-oil, 2-(2-hydroxyethoxy)ethyl esters	No company match			Y
68309273	Fatty acids, tall-oil, sulfonated, sodium salts	No company match			Y
68411007	Alkenes, C>8	Not HPV in '98 or '02			N
68411449	Benzene, butyl-, branched and linear	Not HPV in '98 or '02			N
68411767	Reaction product (cyclohexane/oxygen), nonvolatile residue	Not HPV in '98 or '02			N
68412588	Phosphorodithioic acid, mixed hexyl and iso-Pr esters, zinc salts	Not HPV in '98 or '02			N
68412602	Phosphoric acid, mixed decyl and Et and octyl esters	Sent letter(s)	1	0	?
68412839	Sulfuric acid, mono-C8-30-alkyl esters, compds. with triethanolamine	Not HPV in '98 or '02			N
68441667	Decanoic acid, mixed esters with dipentaerythritol, octanoic acid and valeric acid	Sent letter(s)	1	1	?
68442126	9-Octadecenoic acid (Z)-, 2-mercaptoethyl ester, reaction products with dichlorodimethylstannane, sodium sulfide(Na2S) and trichloromethylstannane	Not HPV in '98 or '02			N
68442604	Acetaldehyde, reaction products with formaldehyde, by-products from	Sent letter(s)	1	0	Y
68442773	2-Butenediamide, (E)-, N,N'-bis[2-(4,5-dihydro-2-nortall-oil alkyl-1H-imidazol-1-yl)ethyl] derivs.	Sent letter(s)	1	1	Y
68457852	Sulfuric acid, esters, wastes	Not HPV in '98 or '02			N
68476039	Fatty acids, montan-wax	Not HPV in '98 or '02			N
68476051	Fatty acids, montan-wax, 2-hydroxyethyl esters	Not HPV in '98 or '02			N
68476802	Fats and Glyceridic oils, vegetable, deodorizer distillates	Sent letter(s)	1	1	?
68477474	Distillates, (petroleum), mixed heavy olefin vacuum, heart-cut	Not HPV in '98 or '02			N
68477996	Gases (petroleum), isomerized naphtha fractionater, C4-rich, hydrogen sulfide-free	Not HPV in '98 or '02			N
68478206	Residues (petroleum), steam-cracked petroleum distillates cyclopentadiene conc., C4-cyclopentadiene-free	Sent letter(s)	1	1	N
68479981	Benzenediamine, ar,ar-diethyl-ar-methyl-	Sent letter(s)	1	1	Y

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
68511400	1-Propanamine, 3-(tridecyloxy)-, branched	No company match			?
68512027	Benzene, (tetrapropenyl) derivs.	Not HPV in '98 or '02			N
68512630	Benzene, ethenyl-, distn. residues	Sent letter(s)	2	2	?
68514410	Ketones, C12-branched	Sent letter(s)	1	1	Y
68514681	Nitriles, tall oil fatty	Not HPV in '98 or '02			N
68515253	Benzene, C1-9-alkyl derivs.	Not HPV in '98 or '02			N
68515355	Benzene, mono-C10-12-alkyl derivs., fractionation bottoms, light ends	Not HPV in '98 or '02			N
68527220	Naphtha, (petroleum), clay-treated light straight-run	Not HPV in '98 or '02			N
68551100	1-Propene, hydroformylation products	Not HPV in '98 or '02			N
68553140	Hydrocarbons, C8-11	Sent letter(s)	1	1	Sp?
68555088	Steroids, hydroxy	Not HPV in '98 or '02			N
68555248	Tar acids, cresylic, residues	Not HPV in '98 or '02			N
68584258	Benzenesulfonic acid, C10-16-alkyl derivs., compds. with triethanolamine	Sent letter(s)	2	1	Sp?
68602813	Distillates, hydrocarbon resin prodn. higher boiling	Sent letter(s)	1	1	Y
68603189	Alcohols, C10-16, distn. residues	Not HPV in '98 or '02			N
68603190	Alcohols, C14-18, distn. residues	Not HPV in '98 or '02			N
68603849	Carboxylic acids, C5-9	Single company; reason already known			?
68606097	Fuel gases, expander off	Not HPV in '98 or '02			N
68606337	Hydrocarbons, C1-6, chloro	Not HPV in '98 or '02			N
68607283	Quaternary ammonium compounds, (oxydi-2,1-ethanediyl)bis[coco alkyldimethyl, dichlorides	Sent letter(s)	1	1	Y
68608593	Ethane, 1,2-dichloro-, manuf. of, by-products from, distn. lights	Sent letter(s)	1	1	?
68609041	Cyclohexane, oxidized, non-acidic by-products, distn. residues	New orphan since 11-21-03			?
68609052	Cyclohexane, oxidized, non-acidic by-products, distn. lights	New orphan since 11-21-03			?
68610902	2-Butenedioic acid (E)-, di-C8-18-alkyl esters	Sent letter(s)	1	1	Y
68611552	Sulfuric acid, mono-C10-16-alkyl esters	Not HPV in '98 or '02			N
68611643	Urea, reaction products with formaldehyde	Sent letter(s)	7	4	Y
68647198	Phosphoric acid, isooctyl ester, potassium salt	Not HPV in '98 or '02			N
68647609	Hydrocarbons, C>4	No company match			Y
68650362	Aromatic hydrocarbons, C8, o-xylene-lean	Sent letter(s)	2	2	Y
68782978	Distillates (petroleum), hydrofined lubricating-oil	New orphan since 11-21-03			N
68815509	Octadecanoic acid, reaction products with 2-[(2-aminoethyl)amino]ethanol	Sent letter(s)	2	1	?
68876879	1-Hexanol, 2-ethyl-, C5-12 dicarboxylates (2:1)	Not HPV in '98 or '02			N
68909773	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	Sent letter(s)	1	1	Y
68910690	Fats and Glyceridic oils, menhaden, stearins	Not HPV in '98 or '02			N
68915059	Fatty acids, tall-oil, low-boiling, reaction products with ammonia-ethanolamine reaction by-products	Sent letter(s)	1	1	?
68915399	Cyclohexane, oxidized, aq. ext., sodium salt	Single company; reason already known			Y
68918161	Tar, coal, dried and oxidized	Single company; reason already known			N
68918365	Soaps, stocks, C8-18 and C18-unsatd. alkyl	Not HPV in '98 or '02			N
68919095	Gases, (petroleum), straight-run naphtha catalytic reforming off	Not HPV in '98 or '02			N
68937280	1,6-Hexanediol, distn. overheads	Not HPV in '98 or '02			N
68937291	1,6-Hexanediol, distn. residues	Single company; reason already known			?
68937484	1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, C5-9 carboxylates	Not HPV in '98 or '02			N
68937699	Carboxylic acids, C6-18 and C5-15-di-	Single company; reason already known			?

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
68937702	Carboxylic acids, C6-18 and C8-15-di-	Single company; reason already known			?
68937713	Carboxylic acids, C6-18 and C8-15-di-, hydrogenated	Not HPV in '98 or '02			N
68937724	Carboxylic acids, di-, C4-11	Single company; reason already known			?
68938965	Benzene, phenoxytetrapropylene-	Sent letter(s)	1	1	Y
68951393	1,2-Benzenedicarboxylic acid, C4-13-branched alkyl esters	Not HPV in '98 or '02			N
68952330	Tar acids, cresylic, C8-rich, phosphates	Not HPV in '98 or '02			N
68952352	Tar acids, cresylic, Ph phosphates	Not HPV in '98 or '02			N
68952783	Tail gas (petroleum), catalytic hydrodesulfurized distillate fractionation stabilizer, hydrogen sulfide-free	Not HPV in '98 or '02			N
68953708	Oxirane, reaction products with ammonia, distn. residues	Sent letter(s)	3	2	Y
68953800	Benzene, mixed with toluene, dealkylation product	Sent letter(s)	1	1	Y
68955362	Residues, (petroleum), steam-cracked, resinous	Not HPV in '98 or '02			N
68955760	Aromatic hydrocarbons, C9-16, biphenyl deriv.-rich	New orphan since 11-21-03			Y
68956127	Fatty acids, C18-unsatd., dimers, distn. lights	Not HPV in '98 or '02			N
68956478	Fuel oil, isoprene reject absorption	Not HPV in '98 or '02			N
68974787	Phenol, thiobis[(tetrapropenyl)-, magnesium salt	Not HPV in '98 or '02			N
68987484	Benzene, (1-methylethyl)-, distn. residues, bis(1-methylethyl)benzene-rich	Not HPV in '98 or '02			N
68987519	1,4-Benzenedicarboxylic acid, mixed esters with diethylene glycol, ethylene glycol and triethylene glycol	Not HPV in '98 or '02			N
68987666	Ethene, hydrated, by-products from	Single company; reason already known			N
68988227	1,4-Benzenedicarboxylic acid, dimethyl ester, manuf. of, by-products from	Sent letter(s)	1	0	Y
68989333	Alkenes, C2-3, hydroformylation products	Not HPV in '98 or '02			N
68989979	Fats and Glyceridic oils, vegetable, deodorizer distillates, Me esters	Not HPV in '98 or '02			N
68990534	Glycerides, C14-22 mono-	Not HPV in '98 or '02			N
68990545	Glycerides, C14-22 mono-, acetates	Not HPV in '98 or '02			N
68990614	Tar, coal, high-temp., high-solids	Sent letter(s)	3	0	Y
68990658	Fats and Glyceridic oils, vegetable, reclaimed	Not HPV in '98 or '02			N
68990807	Fats and Glyceridic oils, animal, mixed with animal oil Me esters, sulfurized	Not HPV in '98 or '02			N
69029750	Oils, reclaimed	Sent letter(s)	2	2	Y
69834179	Benzene, decylphenoxy-	Not HPV in '98 or '02			N
70024678	Benzenesulfonic acid, C16-24-alkyl derivs.	No company match			Y
70084989	Terpenes and Terpenoids, C10-30, distn. residues	Sent letter(s)	1	1	?
70321798	Creosote oil, high-boiling distillate	Not HPV in '98 or '02			N
70321801	Creosote oil, low-boiling distillate	Not HPV in '98 or '02			N
70356320	Benzene, C14-26-alkyl derivs.	Not HPV in '98 or '02			N
70528733	Residues, (petroleum), heavy distillate solvent ext. vacuum	Not HPV in '98 or '02			N
70693504	Phenol, 2,4-bis(1-methyl-1-phenylethyl)-6-[(2-nitrophenyl)azo]-	Sent letter(s)	1	0	Y
70851080	Amides, coco, N-[3-(dimethylamino)propyl], alkylation products with sodium 3-chloro-2-hydroxypropanesulfonate	New orphan since 11-21-03			Y
71060725	Quaternary ammonium compounds, tri-C14-18-alkylmethyl, chlorides	Not HPV in '98 or '02			N
71077059	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine product tower residues	Sent letter(s)	1	1	?
71077162	Pyridine, C1-3-alkyl derivs.	Not HPV in '98 or '02			N
72030263	Cyclopentene, hexachloro-	Not HPV in '98 or '02			N
72162288	2-Propanone, reaction products with phenol	Sent letter(s)	1	1	Y
72207557	Benzenamine, ethylenated, distn. residues	Not HPV in '98 or '02			N
72230785	Nitriles, tallow, distn. residues	Not HPV in '98 or '02			N

Appendix B: **Orphan status, continued**

CAS Number	Chemical name	Did we send letter(s)? If not, why not? (See text for details)	Letters sent	Responses received	Does the chemical appear to still be an orphan?
72230796	Nitriles, tallow, hydrogenated, distn. residues	Not HPV in '98 or '02			N
72252483	Benzoic acid, 3-[2-chloro-4-(trifluoromethyl)phenoxy]-, potassium salt	Not HPV in '98 or '02			N
72623735	Amides, C12-18, N-(hydroxyethyl)	Not HPV in '98 or '02			N
72854274	Tannins, reaction products with sodium bisulfite, sodium polysulfide and sodium sulfite	Sent letter(s)	1	1	N
73246954	Benzaldehyde, 4-hydroxy-3-methoxy-, manuf. of, distn. residues	Not HPV in '98 or '02			N
73665186	Extract residues, (coal), tar oil alk., naphthalene distn. residues	Sent letter(s)	2	1	?
74664941	Amides, from polyethylenepolyamines and tall-oil fatty acids	Not HPV in '98 or '02			N
83864022	Bis(adiponitrile)dicyanobis(triphenylborane)nickel	Single company; reason already known			N
84501860	Hexanedioic acid, esters with high-boiling C6-10-alkene hydroformylation products	Sent letter(s)	1	0	Y
87396223	Phosphonic acid, [[(phosphonomethyl)imino]bis[6,1-hexanediylnitrilobis(methylene)]]tetrakis-, reaction products with ammonia-diethylene glycol reaction product morpholine derivs. residues	Not HPV in '98 or '02			N
89740114	Nonanoic acid, 4-sulfophenyl ester, sodium salt	Not on 2002 IU			N
90640805	Anthracene oil	Sent letter(s)	1	0	?
90640861	Distillates, (coal tar), heavy oils	Sent letter(s)	1	0	Y
102268155	2,3-Pyridinedicarboxylic acid, 5-ethyl-	Not on 2002 IU			N
116265680	Phosphorous acid, triphenyl ester, reaction products with dipropylene glycol	Sent letter(s)	2	1	Y
119345027	Benzene, 1,1'-oxybis-, tetrapropylene derivs.	No company match			Y
125715379	Shale oils, hydrocracked	Not HPV in '98 or '02			N
125997208	Phosphoric acid, mixed 3-bromo-2,2-dimethylpropyl and 2-bromoethyl and 2-chloroethyl esters	No company match			?

APPENDIX C

Our assessment of the reasons companies provided for non-sponsorship of chemicals

* Data here are sorted by CAS number; use the HPV Tracker database to sort or select by company name.
** "?" = status unclear; "Sp?" = chemical appears to be in process of becoming sponsored. Where multiple reasons were provided by a company, all of them were considered in our assessment of the response.

CAS Number*	Chemical name	Company to whom our letter was sent/from whom the reply was received*	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?**
56406	Glycine	CHATTEM CHEMICALS, INC.		N
62237	Benzoic acid, p-nitro-	CAMBREX CHARLES CITY, INC.		N
62237	Benzoic acid, p-nitro-	PHT INTERNATIONAL, INC.		N
62566	Urea, thio-	CHEM ONE LTD.		N
62566	Urea, thio-	SAKAI TRADING NEW YORK, INC.		N
74953	Methane, dibromo-	DEAD SEA BROMINE GROUP (DSBG), BEER SHEVA, ISRAEL	AMERIBROM, INC.	N
74975	Methane, bromochloro-	DEAD SEA BROMINE GROUP (DSBG), BEER SHEVA, ISRAEL	AMERIBROM, INC.	N
75070	Acetaldehyde	CELANESE CHEMICALS, INC.		Y
75070	Acetaldehyde	THE DOW CHEMICAL COMPANY		N
75343	Ethane, 1,1-dichloro-	THE DOW CHEMICAL COMPANY		Y
75343	Ethane, 1,1-dichloro-	THE SOMERSET REFINERY, INC.		?
75467	Methane, trifluoro-	E.I. DUPONT DE NEMOURS & COMPANY INC.		N
75467	Methane, trifluoro-	HONEYWELL INTERNATIONAL, INC.		Sp?
75467	Methane, trifluoro-	PRAXAIR, INC.		N
78115	Pentaerythritol, tetranitrate	DYNO NOBEL, INC.	ENSIGN-BICKFORD INDUSTRIES, INC.	N
78115	Pentaerythritol, tetranitrate	ENSIGN-BICKFORD INDUSTRIES, INC.		N
78115	Pentaerythritol, tetranitrate	INTERNATIONAL SPECIALTY CHEMICALS, INC.		N
78422	Phosphoric acid, tris(2-ethylhexyl) ester	FMC CORP.		Y
78422	Phosphoric acid, tris(2-ethylhexyl) ester	MITSUI & CO, LTD	MITSUI & COMPANY (U.S.A.), INC.	Y
81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide	HENKEL KGAA	HENKEL LOCTITE CORP.	N
81163	1-Naphthalenesulfonic acid, 2-amino-	SUMITOMO CORP. OF AMERICA		N
81845	Naphthalic anhydride	ACETO CORP.		Y
83410	Benzene, 1,2-dimethyl-3-nitro-	BASF CORP.		N
84651	9,10-Anthracenedione	CHEMICAL PRODUCTS CORP.		N
84695	Phthalic acid, diisobutyl ester	KIC CHEMICALS, INC.		N
90437	2-Biphenylol	DOW AGROSCIENCES		N
91532	Quinoline, 6-ethoxy-1,2-dihydro-2,2,4-trimethyl-	FLEXSYS N.V.	FLEXSYS AMERICA LP	Y
91689	Phenol, m-(diethylamino)-	MITSUI & CO, LTD	MITSUI & COMPANY (U.S.A.), INC.	N

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
94757	Acetic acid, (2,4-dichlorophenoxy)-	DOW AGROSCIENCES		N
96220	3-Pentanone	BASF CORP.		N
96220	3-Pentanone	EXXON MOBIL CHEMICAL COMPANY		N
96220	3-Pentanone	THE DOW CHEMICAL COMPANY		N
96231	2-Propanol, 1,3-dichloro-	THE DOW CHEMICAL COMPANY		?
99514	o-Xylene, 4-nitro-	BASF CORP.		N
99718	Phenol, p-sec-butyl-	SCHENECTADY INTERNATIONAL, INC.		Sp?
100641	Cyclohexanone, oxime	DSM	DSM CHEMICALS NORTH AMERICA, INC.	Y
107391	1-Pentene, 2,4,4-trimethyl-	CONOCO PHILLIPS, INC.	PHILLIPS PETROLEUM COMPANY	Y
108190	Imidodicarbonic diamide	CF INDUSTRIES, INC.		N
108203	Isopropyl ether	EXXON MOBIL CHEMICAL COMPANY		N
108203	Isopropyl ether	SHELL CHEMICALS LTD.		N
109864	Ethanol, 2-methoxy-	ARCH CHEMICALS, INC.		Sp?
109864	Ethanol, 2-methoxy-	EQUISTAR CHEMICALS, LP		Sp?
109864	Ethanol, 2-methoxy-	THE DOW CHEMICAL COMPANY		?
110441	Sorbic acid	MITSUI & CO, LTD	MITSUI & COMPANY (U.S.A.), INC.	?
110441	Sorbic acid	SAKAI TRADING NEW YORK, INC.		N
111444	Ether, bis(2-chloroethyl)	ITOCHU INTERNATIONAL, INC	ITOCHU SPECIALTY CHEMICALS	Y
111853	Octane, 1-chloro-	LONZA, INC.		N
111911	Methane, bis(2-chloroethoxy)-	ROHM AND HAAS COMPANY	MORTON INTERNATIONAL, INC.	Y
112527	Dodecane, 1-chloro-	LONZA, INC.		N
118821	Phenol, 4,4'-methylenebis[2,6-di-tert-butyl-	ALBEMARLE CORP.		N
118901	o-Toluic acid	CHUGAI BOYEKI (AMERICA) CORP.		Y
118901	o-Toluic acid	MITSUBISHI GAS CHEMICAL COMPANY, INC.	MITSUBISHI GAS CHEMICAL COMPANY AMERICA, INC.	N
118901	o-Toluic acid	REILLY INDUSTRIES, INC.	MRM TOLUIC COMPANY	Y
121824	s-Triazine, hexahydro-1,3,5-trinitro-	ALLIANT TECHSYSTEMS, INC.		N
124630	Methanesulfonyl chloride	ATOFINA CHEMICALS, INC.		N
124630	Methanesulfonyl chloride	PHT INTERNATIONAL, INC.		Y
124630	Methanesulfonyl chloride	THE DOW CHEMICAL COMPANY		N
127684	Benzenesulfonic acid, m-nitro-, sodium salt	BASF CORP.		N
131577	Benzophenone, 2-hydroxy-4-methoxy-	ACETO CORP.		N
131577	Benzophenone, 2-hydroxy-4-methoxy-	GREAT LAKES CHEMICAL CORP.		Y
138250	Isophthalic acid, 5-	E.I. DUPONT DE NEMOURS & COMPANY INC.		Y
139402	s-Triazine, 2-chloro-4,6-bis(isopropylamino)-	SYNGENTA CROP PROTECTION, INC.	NOVARTIS CROP PROTECTION, INC.	?
142734	Glycine, N-(carboxymethyl)-	MONSANTO COMPANY		Sp?
143282	9-Octadecen-1-ol, (Z)-	JARCHEM INDUSTRIES, INC.		N
143282	9-Octadecen-1-ol, (Z)-	THE PROCTER & GAMBLE COMPANY		N
144627	Oxalic acid	CHEM ONE LTD.		N
144627	Oxalic acid	E.I. DUPONT DE NEMOURS & COMPANY INC.		Y

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
149440	Sodium formaldehydesulfoxylate	THE GOODYEAR TIRE & RUBBER COMPANY		N
330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-	E.I. DUPONT DE NEMOURS & COMPANY INC.		Y
409029	Heptenone, methyl-	EXXON MOBIL CHEMICAL COMPANY		N
542756	Propene, 1,3-dichloro-	THE DOW CHEMICAL COMPANY		N
542927	1,3-Cyclopentadiene	SUMITOMO CORP. OF AMERICA		N
542927	1,3-Cyclopentadiene	VELSICOL CHEMICAL CORP.		N
557619	1-Octacosanol	SASOL CHEMICALS NORTH AMERICA LLC	CONDEA VISTA COMPANY	?
579668	Aniline, 2,6-diethyl-	ALBEMARLE CORP.		N
590192	1,2-Butadiene	EXXON MOBIL CHEMICAL COMPANY		Sp?
592450	1,4-Hexadiene	E.I. DUPONT DE NEMOURS & COMPANY INC.		Y
617947	Benzenemethanol, alpha,alpha-dimethyl	GEO SPECIALTY CHEMICALS, INC.		?
624920	Methyl disulfide	ATOFINA CHEMICALS, INC.		N
624920	Methyl disulfide	CHEVRON PHILLIPS CHEMICAL CO. LP		N
624920	Methyl disulfide	TECNAL CORP.		Y
628966	Ethylene nitrate	DYNO NOBEL, INC.		N
629765	1-Pentadecanol	SHELL CHEMICALS LTD.		Sp?
645625	2-Hexenal, 2-ethyl-	THE DOW CHEMICAL COMPANY		N
756809	Phosphorodithioic acid, O,O-dimethyl ester	SYNGENTA CROP PROTECTION, INC.	ZENECA, INC.	Y
823405	Toluene-2,6-diamine	AIR PRODUCTS AND CHEMICALS, INC.		?
928723	Glycine, N-(carboxymethyl)-, disodium salt	MONSANTO COMPANY		Sp?
928723	Glycine, N-(carboxymethyl)-, disodium salt	SOLUTIA, INC.		Y
928723	Glycine, N-(carboxymethyl)-, disodium salt	STERLING CHEMICALS, INC.		Y
1000824	Urea, (hydroxymethyl)-	BASF CORP.		N
1002693	Decane, 1-chloro-	LONZA, INC.		N
1111780	Ammonium carbamate	BASF CORP.		N
1111780	Ammonium carbamate	CF INDUSTRIES, INC.		N
1115204	Hydracrylic acid, 2,2-dimethyl-, 3-hydroxy-2,2-dimethylpropyl ester	BASF CORP.		N
1324761	C.I. Pigment Blue 61	BASF CORP.		N
1401554	Tannins	ACETO CORP.		N
1498517	Phosphorodichloridic acid, ethyl ester	AVENTIS	RHONE-POULENC AG COMPANY	Y
1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	AIR PRODUCTS AND CHEMICALS, INC.		?
1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	CELANESE CHEMICALS, INC.		N
1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	N
1562001	Ethanesulfonic acid, 2-hydroxy-, monosodium salt	THE DOW CHEMICAL COMPANY		?
1738256	Propionitrile, 3-(dimethylamino)-	AIR PRODUCTS AND CHEMICALS, INC.		N
1912249	s-Triazine, 2-chloro-4-(ethylamino)-6-(isopropylamino)-	SYNGENTA CROP PROTECTION, INC.	NOVARTIS CROP PROTECTION, INC.	?
1918021	Picolinic acid, 4-amino-3,5,6-trichloro-	DOW AGROSCIENCES		N
1929824	Pyridine, 2-chloro-6-(trichloromethyl)-	DOW AGROSCIENCES		N

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
2372454	Butyl alcohol, sodium salt	AKZO NOBEL	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	Y
2409554	p-Cresol, 2-tert-butyl-	MERISOL ANTIOXIDANTS LLC		Y
2425549	Tetradecane, 1-chloro-	LONZA, INC.		N
2611009	3-Cyclohexene-1-carboxylic acid, 3-cyclohexen-1-ylmethyl ester	THE DOW CHEMICAL COMPANY		N
2702729	Acetic acid, (2,4-dichlorophenoxy)-, sodium salt	DOW AGROSCIENCES		?
2915539	Maleic acid, dioctyl ester	MCINTYRE GROUP, LTD.		Sp?
2915539	Maleic acid, dioctyl ester	WESTPOINT STEVENS, INC.		N
2941642	Formic acid, chlorothio-, S-ethyl ester	SYNGENTA CROP PROTECTION, INC.		N
3088311	Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt	LONZA, INC.		Y
3088311	Ethanol, 2-[2-(dodecyloxy)ethoxy]-, hydrogen sulfate, sodium salt	STEPAN COMPANY		?
3386332	Octadecane, 1-chloro-	LONZA, INC.		N
3710847	Ethanamine, N-ethyl-N-hydroxy-	ATOFINA CHEMICALS, INC.		N
3710847	Ethanamine, N-ethyl-N-hydroxy-	CHEVRON PHILLIPS CHEMICAL CO. LP		N
3779633	Isocyanic acid, (2,4,6-trioxo-s-triazine-1,3,5(2H,4H,6H)-triyl)tris(hexamethylene) ester	LYONDELL CHEMICAL COMPANY		Y
3965557	1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt	E.I. DUPONT DE NEMOURS & COMPANY INC.		?
4035896	Isocyanic acid, triester with 1,3,5-tris(6-hydroxyhexyl)biuret	BASF CORP.		?
4316738	Sarcosine, monosodium salt	BASF CORP.		N
4316738	Sarcosine, monosodium salt	THE DOW CHEMICAL COMPANY		N
4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	CHAMPION TECHNOLOGIES, INC.		N
4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol	P CHEM, INC.		N
4860031	Hexadecane, 1-chloro-	LONZA, INC.		N
5216251	Toluene, p,.alpha.,.alpha.,.alpha.-tetrachloro-	OCCIDENTAL PETROLEUM CORP.	OCCIDENTAL CHEMICAL CORP.	Y
5915413	s-Triazine, 2-(tert-butylamino)-4-chloro-6-(ethylamino)-	SYNGENTA CROP PROTECTION, INC.	NOVARTIS CROP PROTECTION, INC.	?
6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	CHEM ONE LTD.		N
6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	PMP FERMENTATION PRODUCTS, INC.		N
6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt	ROQUETTE AMERICA, INC.		N
6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt	DYSTAR TEXTILFARBEN GMBH & CO. DEUTSCHLAND KG	DYSTAR L.P.	?
6863587	sec-Butyl ether	EXXON MOBIL CHEMICAL COMPANY		N
7320378	Hexadecane, 1,2-epoxy-	ATOFINA CHEMICALS, INC.		N
7320378	Hexadecane, 1,2-epoxy-	THE DOW CHEMICAL COMPANY		N

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
7446813	Acrylic acid, sodium salt	THE DOW CHEMICAL COMPANY		?
8001589	Creosote	SUMITOMO CORP. OF AMERICA		N
8001589	Creosote	TRENTON SALES, INC.		N
8005025	C.I. Solvent Black 7	E.I. DUPONT DE NEMOURS & COMPANY INC.		N
8005025	C.I. Solvent Black 7	INTERNATIONAL BUSINESS MACHINES		N
8005025	C.I. Solvent Black 7	SENSIENT TECHNOLOGIES	FORMULABS	Y
8007452	Tar, coal	REILLY INDUSTRIES, INC.		N
12645317	Phosphoric acid, 2-ethylhexyl ester	CUSTOM SYNTHESIS, LLC	FIBRE CHEMICALS, LLC	N
12645317	Phosphoric acid, 2-ethylhexyl ester	KAO SPECIALTIES AMERICAS LLC		N
12645317	Phosphoric acid, 2-ethylhexyl ester	LENMAR CHEMICAL CORPORATION		N
12645317	Phosphoric acid, 2-ethylhexyl ester	RPM INTERNATIONAL INC.	AMERICAN EMULSIONS CO., INC.	N
12645317	Phosphoric acid, 2-ethylhexyl ester	THE LUBRIZOL CORPORATION	CHEMRON CORPORATION	N
12645317	Phosphoric acid, 2-ethylhexyl ester	WESTPOINT STEVENS, INC.		N
13826352	Benzyl alcohol, m-phenoxy-	FMC CORP.		Y
14143603	Picolinonitrile, 4-amino-3,5,6-trichloro-	DOW AGROSCIENCES		N
14666945	Cobalt oleate	EXXON MOBIL CHEMICAL COMPANY		N
14666945	Cobalt oleate	SHEPHERD CHEMICAL		Y
19438610	Phthalic anhydride, 4-methyl-	SYNGENTA CROP PROTECTION, INC.	ZENECA, INC.	N
20068024	Crotononitrile, 2-methyl-, (Z)-	E.I. DUPONT DE NEMOURS & COMPANY INC.		Y
22527635	Isobutyric acid, 3-hydroxy-2,2,4-trimethylpentyl ester benzoate	VELSICOL CHEMICAL CORP.		N
24615847	Hydracrylic acid, acrylate	CELANESE, LTD.		Y
24634615	Sorbic acid, potassium salt	MITSUI & CO, LTD	MITSUI & COMPANY (U.S.A.), INC.	?
24634615	Sorbic acid, potassium salt	SAKAI TRADING NEW YORK, INC.		N
24794589	Formic acid, compd. with 2,2',2''-nitrilotriethanol (1:1)	W.R. GRACE & CO.		?
25168052	Toluene, ar-chloro-	OCCIDENTAL PETROLEUM CORP.	OCCIDENTAL CHEMICAL CORP.	Y
25168063	Phenol, isopropyl-	FMC CORP.		Y
25321419	Benzenesulfonic acid, dimethyl-	AKZO NOBEL	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	N
25321419	Benzenesulfonic acid, dimethyl-	RUTGERS ORGANICS CORP.		N
25586429	Phosphorous acid, tritolyl ester	GREAT LAKES CHEMICAL CORP.		Y
26377297	Phosphorodithioic acid, O,O-dimethyl ester, sodium salt	SYNGENTA CROP PROTECTION, INC.	ZENECA AG PRODUCTS	N
26680546	Succinic anhydride, octenyl-	LONZA, INC.		Y
26680546	Succinic anhydride, octenyl-	MILLIKEN CHEMICAL		N
27193288	Phenol, octyl-	SCHENECTADY INTERNATIONAL, INC.		?
28106301	Styrene, ar-ethyl-	THE DOW CHEMICAL COMPANY		N
28188241	Stearic acid, triester with pentaerythritol	LONZA, INC.		Y
28777982	Succinic anhydride, octadecenyl-	ALBEMARLE CORP.		N
28777982	Succinic anhydride, octadecenyl-	MILLIKEN CHEMICAL		N

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
30574971	2-Butenenitrile, 2-methyl-, (E)-	E.I. DUPONT DE NEMOURS & COMPANY INC.		Y
31138655	D-gluco-Heptonic acid, monosodium salt, (2.xi.)-	VULCAN PERFORMANCE CHEMICALS		Y
31138655	D-gluco-Heptonic acid, monosodium salt, (2.xi.)-	W.R. GRACE & CO.		?
32072961	Succinic anhydride, hexadecenyl-	ALBEMARLE CORP.		N
34689468	Phenol, methyl-, sodium salt	MERISOL	MERISOL USA LLC	?
35203066	Benzenamine, 2-ethyl-6-methyl-N-methylene-	MONSANTO COMPANY		?
35203088	Benzenamine, 2,6-diethyl-N-methylene-	MONSANTO COMPANY		?
37439342	2(1H)-Pyridinone, 3,5,6-trichloro-, sodium salt	DOW AGROSCIENCES		?
37734455	Carbonochloridothioic acid, S-(phenylmethyl) ester	SYNGENTA CROP PROTECTION, INC.		N
37764253	Acetamide, 2,2-dichloro-N,N-di-2-propenyl-	SYNGENTA CROP PROTECTION, INC.		Y
38321185	Ethanol, 2-(2-butoxyethoxy)-, sodium salt	AKZO NOBEL	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	Y
39515510	Benzaldehyde, 3-phenoxy-	FMC CORP.		Y
39515510	Benzaldehyde, 3-phenoxy-	SYNGENTA CROP PROTECTION, INC.		N
40876980	Butanedioic acid, oxo-, diethyl ester, ion(1-), sodium	WYETH	AMERICAN CYANAMID COMPANY	Y
52556420	Propanesulfonic acid, 2-hydroxy-3-(propenyloxy)-, Na salt	GENERAL ELECTRIC COMPANY		N
52663577	Ethanol, 2-butoxy-, sodium salt	FMC CORP.		Y
56803373	Phosphoric acid, (1,1-dimethylethyl)phenyl diphenyl ester	AKZO NOBEL	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	?
57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium	ORGANIC DYESTUFFS CORP.		N
61789320	Fatty acids, coco, 2-sulfoethyl esters, sodium salts	BASF CORP.		?
61789659	Resin acids and Rosin acids, aluminum salts	TEMBEC INC.	TEMBEC USA LLC	Y
64742729	Distillates, (petroleum), catalytic dewaxed middle	CONOCO PHILLIPS, INC.	CONOCO, INC.	N
64742729	Distillates, (petroleum), catalytic dewaxed middle	SUNOCO	COASTAL EAGLE POINT OIL COMPANY	?
64771717	Paraffins, (petroleum), normal C>10	BASF CORP.		N
65652417	Phosphoric acid, bis[(1,1-dimethylethyl)phenyl] phenyl ester	AKZO NOBEL	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	?
65996794	Solvent naphtha, (coal)	HEMPEL (USA)		Y
65996829	Tar oils, coal	HONEYWELL INTERNATIONAL, INC.		Y
65996829	Tar oils, coal	REILLY INDUSTRIES, INC.		N
65996830	Extracts, coal tar oil alk.	MERISOL	MERISOL USA LLC	Y
65996896	Tar, coal, high-temp.	HONEYWELL INTERNATIONAL, INC.		Y
65996896	Tar, coal, high-temp.	REILLY INDUSTRIES, INC.		N
65996910	Distillates, (coal tar), upper	HONEYWELL INTERNATIONAL, INC.		Y
65996910	Distillates, (coal tar), upper	REILLY INDUSTRIES, INC.		N
66071941	Corn, steep liquor	A. E. STALEY MFG. COMPANY		N
66071941	Corn, steep liquor	ARCHER DANIELS MIDLAND COMPANY		N

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
66071941	Corn, steep liquor	CORN PRODUCTS INTERNATIONAL	CORNPRODUCTSMCP SWEETENERS LLC	N
66071941	Corn, steep liquor	CORN PRODUCTS INTERNATIONAL	CORNPRODUCTSMCP SWEETENERS LLC	N
66071941	Corn, steep liquor	PENFORD CORPORATION	PENFORD PRODUCTS COMPANY	N
66071941	Corn, steep liquor	ROQUETTE AMERICA, INC.		N
68081867	Phenol, nonyl derivs.	EXXON MOBIL CHEMICAL COMPANY		Y
68153606	Fatty acids, tall-oil, reaction products with diethylenetriamine, acetates	P CHEM, INC.		N
68187768	Castor oil, sulfated, sodium salt	DYSTAR TEXTILFARBEN GMBH & CO. DEUTSCHLAND KG	DYSTAR L.P.	N
68188181	Paraffin oils, chlorosulfonated, saponified	BASF CORP.		?
68441667	Decanoic acid, mixed esters with dipentaerythritol, octanoic acid and valeric acid	HATCO CORP.		?
68442773	2-Butenediamide, (E)-, N,N'-bis[2-(4,5-dihydro-2-nortall-oil alkyl-1H-imidazol-1-yl)ethyl] derivs.	HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	Y
68476802	Fats and Glyceridic oils, vegetable, deodorizer distillates	CARGILL, INC.		Y
68478206	Residues (petroleum), steam-cracked petroleum distillates cyclopentadiene conc., C4-cyclopentadiene-free	VELSICOL CHEMICAL CORP.		Y
68479981	Benzenediamine, ar,ar-diethyl-ar-methyl-	ALBEMARLE CORP.		N
68512630	Benzene, ethenyl-, distn. residues	CHEVRON PHILLIPS CHEMICAL CO. LP		Y
68512630	Benzene, ethenyl-, distn. residues	WESTLAKE GROUP		Y
68514410	Ketones, C12-branched	EXXON MOBIL CHEMICAL COMPANY		N
68553140	Hydrocarbons, C8-11	BP AMERICA, INC.		Sp?
68584258	Benzenesulfonic acid, C10-16-alkyl derivs., compds. with triethanolamine	HARCROS CHEMICALS INC.		Sp?
68602813	Distillates, hydrocarbon resin prodn. higher boiling	SARTOMER COMPANY, INC.		Y
68607283	Quaternary ammonium compounds, (oxydi-2,1-ethanediyl)bis[coco alkyldimethyl, dichlorides	CHAMPION TECHNOLOGIES, INC.		N
68608593	Ethane, 1,2-dichloro-, manuf. of, by-products from, distn. lights	POLYONE CORP.	THE GEON COMPANY	Y
68610902	2-Butenedioic acid (E)-, di-C8-18-alkyl esters	VULCAN PERFORMANCE CHEMICALS		Y
68611643	Urea, reaction products with formaldehyde	ARCH CHEMICALS, INC.		Y
68611643	Urea, reaction products with formaldehyde	CF INDUSTRIES, INC.		N
68611643	Urea, reaction products with formaldehyde	ROYSTER-CLARK NITROGEN, INC.		?
68611643	Urea, reaction products with formaldehyde	TERRA NITROGEN, L.P.		?
68650362	Aromatic hydrocarbons, C8, o-xylene-lean	CONOCO PHILLIPS, INC.		Y
68650362	Aromatic hydrocarbons, C8, o-xylene-lean	EXXON MOBIL CHEMICAL COMPANY		Y
68815509	Octadecanoic acid, reaction products with 2-[(2-aminoethyl)amino]ethanol	KAO SPECIALTIES AMERICAS LLC		N
68909773	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine derivs. residues	HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	N

Appendix C: **Response analysis, continued**

CAS Number	Chemical name	Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	Does the reason(s) provided appear legitimate for company not to sponsor?
68915059	Fatty acids, tall-oil, low-boiling, reaction products with ammonia-ethanolamine reaction by-products	ARR-MAZ PRODUCTS, L.P.		Y
68938965	Benzene, phenoxytetrapropylene-	BAYER CORPORATION	SYBRON CHEMICALS, INC.	Y
68953708	Oxirane, reaction products with ammonia, distn. residues	HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	N
68953708	Oxirane, reaction products with ammonia, distn. residues	W.R. GRACE & CO.		Y
68953800	Benzene, mixed with toluene, dealkylation product	CONOCO PHILLIPS, INC.		Y
69029750	Oils, reclaimed	CHEVRONTEXACO CORP.		N
69029750	Oils, reclaimed	CONOCO PHILLIPS, INC.		Y
70084989	Terpenes and Terpenoids, C10-30, distn. residues	IFF CHEMICAL HOLDINGS, INC.		?
71077059	Ethanol, 2,2'-oxybis-, reaction products with ammonia, morpholine product tower residues	HUNTSMAN CORPORATION	HUNTSMAN PETROCHEMICAL CORP.	?
72162288	2-Propanone, reaction products with phenol	GENERAL ELECTRIC COMPANY		N
72854274	Tannins, reaction products with sodium bisulfite, sodium polysulfide and sodium sulfite	M.I. L.L.C.		Y
73665186	Extract residues, (coal), tar oil alk., naphthalene distn. residues	HONEYWELL INTERNATIONAL, INC.	ALLIED-SIGNAL, INC.	Y
116265680	Phosphorous acid, triphenyl ester, reaction products with dipropylene glycol	GENERAL ELECTRIC COMPANY		Y

APPENDIX D

Companies that did not respond to our letter

* Data are here sorted by company name; use the HPV Tracker database to sort or select by CAS number.

Company to whom our letter was sent/from whom the reply was received*	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number*	Chemical name
AGFA CORPORATION		25646713	Methanesulfonamide, N-[2-[(4-amino-3-methylphenyl)ethylamino]ethyl]-, sulfate (2:3)
AGRIUM U.S. INC.		17103310	Urea, sulfate (2:1)
AGRIUM U.S. INC.		21351393	Urea, sulfate (1:1)
AGRIUM U.S. INC.		68611643	Urea, reaction products with formaldehyde
AK STEEL CORP.		65996818	Fuel gases, coke-oven
ATUL AMERICAS, INC.		5460093	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-, monosodium salt
ATUL AMERICAS, INC.		6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt
AUX SABLE LIQUID PRODUCTS		624920	Methyl disulfide
BAE SYSTEMS TECHNOLOGY SOLUTIONS	BAE SYSTEMS ORDNANCE SYSTEMS, INC.	121824	s-Triazine, hexahydro-1,3,5-trinitro-
BAE SYSTEMS TECHNOLOGY SOLUTIONS	BAE SYSTEMS ORDNANCE SYSTEMS, INC.	2691410	1,3,5,7-Tetrazocine, octahydro-1,3,5,7-tetranitro-
BESTON CHEMICAL CORP.		78115	Pentaerythritol, tetranitrate
BESTON CHEMICAL CORP.		121824	s-Triazine, hexahydro-1,3,5-trinitro-
BETHLEHEM STEEL CORP.		65996896	Tar, coal, high-temp.
BETHLEHEM STEEL CORP.		68990614	Tar, coal, high-temp., high-solids
BORDEN CHEMICAL, INC.		1000824	Urea, (hydroxymethyl)-
BORDEN CHEMICAL, INC.		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol
BURLINGTON CHEMICAL COMPANY, INC.		68815509	Octadecanoic acid, reaction products with 2-[(2-aminoethyl)amino]ethanol
CEDAR CHEMICAL CORP.		330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-
CHARKIT CHEMICAL CORP.		56406	Glycine
CHARKIT CHEMICAL CORP.		75365	Acetyl chloride
CIBA SPECIALTY CHEMICALS CORP.		2494895	Ethanol, 2-sulfanilyl-, hydrogen sulfate (ester)
CIBA SPECIALTY CHEMICALS CORP.		2814202	4(1H)-Pyrimidinone, 6-methyl-2-(1-methylethyl)-
CIBA SPECIALTY CHEMICALS CORP.		5460093	2,7-Naphthalenedisulfonic acid, 4-amino-5-hydroxy-, monosodium salt
CIBA SPECIALTY CHEMICALS CORP.		6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt
CIBA SPECIALTY CHEMICALS CORP.		52184197	Phenol, 2,4-bis(1,1-dimethylpropyl)-6-[(2-nitrophenyl)azo]-
CIBA SPECIALTY CHEMICALS CORP.		57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium
CIBA SPECIALTY CHEMICALS CORP.		70693504	Phenol, 2,4-bis(1-methyl-1-phenylethyl)-6-[(2-nitrophenyl)azo]-
CINCINNATI SPECIALTIES, LLC		81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide
CINCINNATI SPECIALTIES, LLC		91532	Quinoline, 6-ethoxy-1,2-dihydro-2,2,4-trimethyl-
CINCINNATI SPECIALTIES, LLC		96231	2-Propanol, 1,3-dichloro-

Appendix D: **Non-responding companies, continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name
CINCINNATI SPECIALTIES, LLC		128449	1,2-Benzisothiazolin-3-one, 1,1-dioxide, sodium salt
CITIZENS GAS & COKE UTILITY, MFG. DIVISION		65996783	Light oil, (coal), coke-oven
CITIZENS GAS & COKE UTILITY, MFG. DIVISION		65996818	Fuel gases, coke-oven
CITIZENS GAS & COKE UTILITY, MFG. DIVISION		68990614	Tar, coal, high-temp., high-solids
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	515402	Benzene, (2-chloro-1,1-dimethylethyl)-
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	598721	Propionic acid, 2-bromo-
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	3132998	Benzaldehyde, m-bromo-
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	3586149	Ether, phenyl m-tolyl
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	13826352	Benzyl alcohol, m-phenoxy-
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	39515510	Benzaldehyde, 3-phenoxy-
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	51632167	Benzene, 1-(bromomethyl)-3-phenoxy-
COLOR RESOURCES INTERNATIONAL		127684	Benzenesulfonic acid, m-nitro-, sodium salt
COLOURTEX, INC.		57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium
COOPERS CREEK CHEMICAL CORP.		8001589	Creosote
COOPERS CREEK CHEMICAL CORP.		65996896	Tar, coal, high-temp.
COOPERS CREEK CHEMICAL CORP.		65996921	Distillates, (coal tar)
CORSICANA TECHNOLOGIES, INC.		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol
CORSICANA TECHNOLOGIES, INC.		68153606	Fatty acids, tall-oil, reaction products with diethylenetriamine, acetates
CROWLEY CHEMICAL CO.	CROWLEY TAR PRODUCTS COMPANY, INC.	8001589	Creosote
CYMETECH, LLC		542927	1,3-Cyclopentadiene
DAK AMERICAS, LLC		75070	Acetaldehyde
DEGUSSA	SKW CHEMICALS, INC.	330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-
DELPHI CORPORATION	ASEC MANUFACTURING DELPHI	537008	Acetic acid, cerium(3+) salt
DIAZ INTERMEDIATES CORPORATION	DIAZ CHEMICAL CORP	460004	Benzene, 1-bromo-4-fluoro-
DIXIE CHEMICAL COMPANY, INC.		94962	1,3-Hexanediol, 2-ethyl-
DIXIE CHEMICAL COMPANY, INC.		32072961	Succinic anhydride, hexadecenyl-
DOVER CHEMICAL CORP.		1323655	Phenol, dinonyl-
DOVER CHEMICAL CORP.		116265680	Phosphorous acid, triphenyl ester, reaction products with dipropylene glycol
DYNACHEM, INC.		2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-
DYNACHEM, INC.		25321419	Benzenesulfonic acid, dimethyl-
E.T. HORN COMPANY		111444	Ether, bis(2-chloroethyl)
EASTMAN KODAK COMPANY		3710847	Ethanamine, N-ethyl-N-hydroxy-
ERIE COKE CORP.		8007452	Tar, coal
ERIE COKE CORP.		65996818	Fuel gases, coke-oven
FARMLAND INDUSTRIES, INC.		68611643	Urea, reaction products with formaldehyde
FREUDENBERG - NOK, GP		68187768	Castor oil, sulfated, sodium salt
GEMCHEM, INC.		75876	Chloral
GENERAL NUTRITION COMPANIES, INC..		56406	Glycine

Appendix D: **Non-responding companies, continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name
GENERAL NUTRITION COMPANIES, INC..		98099	Benzenesulfonyl chloride
GIVAUDAN ROURE CORP.		939979	Benzaldehyde, p-tert-butyl-
HALSTAB DIVISION, HAMMOND GROUP, INC.		17976431	Lead, di-.mu.-oxo(.mu.-phthalato)tri-, cyclo-
HERCULES, INC.		506514	1-Tetracosanol
HERCULES, INC.		68442604	Acetaldehyde, reaction products with formaldehyde, by-products from
HUISH DETERGENTS, INC.		68584258	Benzenesulfonic acid, C10-16-alkyl derivs., compds. with triethanolamine
HUNTSMAN INTERNATIONAL LLC	VANTICO A&T US INC.	109864	Ethanol, 2-methoxy-
HUNTSMAN INTERNATIONAL LLC	VANTICO, INC.	2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-
HUNTSMAN INTERNATIONAL LLC	VANTICO, INC.	5026744	Aniline, p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)-
INEOS GROUP LTD.		68953708	Oxirane, reaction products with ammonia, distn. residues
ISG WARREN, INC.		65996783	Light oil, (coal), coke-oven
ISG WARREN, INC.		65996896	Tar, coal, high-temp.
JAYHAWK FINE CHEMICALS		1558334	Silane, dichloro(chloromethyl)methyl-
JLM INDUSTRIES INC.	JLM MARKETING, INC.	144627	Oxalic acid
JLM INDUSTRIES INC.	JLM MARKETING, INC.	590192	1,2-Butadiene
KOPPERS INDUSTRIES, INC.		65996783	Light oil, (coal), coke-oven
KOPPERS INDUSTRIES, INC.		65996794	Solvent naphtha, (coal)
KOPPERS INDUSTRIES, INC.		65996807	Ammonia liquor, (coal)
KOPPERS INDUSTRIES, INC.		65996818	Fuel gases, coke-oven
KOPPERS INDUSTRIES, INC.		65996829	Tar oils, coal
KOPPERS INDUSTRIES, INC.		65996830	Extracts, coal tar oil alk.
KOPPERS INDUSTRIES, INC.		65996863	Extract oils, (coal), tar base
KOPPERS INDUSTRIES, INC.		65996874	Extract residues, (coal), tar oil alk.
KOPPERS INDUSTRIES, INC.		65996896	Tar, coal, high-temp.
KOPPERS INDUSTRIES, INC.		65996910	Distillates, (coal tar), upper
KOPPERS INDUSTRIES, INC.		65996921	Distillates, (coal tar)
KOPPERS INDUSTRIES, INC.		68187575	Pitch, coal tar-petroleum
KOPPERS INDUSTRIES, INC.		73665186	Extract residues, (coal), tar oil alk., naphthalene distn. residues
KOPPERS INDUSTRIES, INC.		90640805	Anthracene oil
KOPPERS INDUSTRIES, INC.		90640861	Distillates, (coal tar), heavy oils
KOSA B.V.	ARTEVA SPECIALTIES S.A.R.L. D/B/A KOSA	68988227	1,4-Benzenedicarboxylic acid, dimethyl ester, manuf. of, by-products from
MARCHEM TECHNOLOGIES		4719044	1,3,5-Triazine-1,3,5(2H,4H,6H)-triethanol
MCWANE, INC.	EMPIRE COKE COMPANY	65996783	Light oil, (coal), coke-oven
MCWANE, INC.	EMPIRE COKE COMPANY	65996896	Tar, coal, high-temp.
MFG CHEMICAL, INC.		12645317	Phosphoric acid, 2-ethylhexyl ester
MICRO INKS CORP.		1324761	C.I. Pigment Blue 61
MISSISSIPPI CHEMICAL CORPORATION	TRIAD NITROGEN, L.L.C.	68611643	Urea, reaction products with formaldehyde
MITSUBISHI CHEMICAL AMERICA, INC.		64743028	Alkenes, C>10 .alpha.-
MITSUBISHI CHEMICAL CORPORATION	USR OPTONIX, INC.	8005025	C.I. Solvent Black 7
MONA INDUSTRIES INC.(D/B/A UNIQEMA)		12645317	Phosphoric acid, 2-ethylhexyl ester
NAGASE AMERICA CORP.		8005025	C.I. Solvent Black 7

Appendix D: **Non-responding companies, continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name
NIPA HARDWICKE, INC.		4080313	3,5,7-Triaza-1-azoniaadamantane, 1-(3-chloroallyl)-, chloride
NISSHO IWAI CORPORATION	NISSHO IWAI AMERICAN CORP.	107391	1-Pentene, 2,4,4-trimethyl-
NORTHROP GRUMMAN CORPORATION	TRW VEHICLE SAFETY SYSTEMS, INC..	121824	s-Triazine, hexahydro-1,3,5-trinitro-
ORIENT CORP. OF AMERICA		8005025	C.I. Solvent Black 7
ORMET CORPORATION	ORMET PRIMARY ALUMINUM CORP.	65996896	Tar, coal, high-temp.
PCL GROUP, LLC	LOMAC, LLC	38185067	Benzenesulfonic acid, 4-chloro-3,5-dinitro-, potassium salt
PECHINEY CHEMICALS DIVISION	R.W. GREEFF & COMPANY, L.L.C.	62237	Benzoic acid, p-nitro-
PIEDMONT CHEMICAL INDUSTRIES, INC.	ETHOX CHEMICALS,LLC	12645317	Phosphoric acid, 2-ethylhexyl ester
PIEDMONT CHEMICAL INDUSTRIES, INC.	ETHOX CHEMICALS,LLC	68412602	Phosphoric acid, mixed decyl and Et and octyl esters
PMC SPECIALTIES GROUP, INC.		27193288	Phenol, octyl-
PMC, INC.		119335	p-Cresol, 2-nitro-
RAILWORKS CORP.		8001589	Creosote
RAILWORKS CORP.		65996921	Distillates, (coal tar)
RESOLUTION PERFORMANCE PRODUCTS		2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-
ROHM AND HAAS COMPANY		107459	Butylamine, 1,1,3,3-tetramethyl-
ROWELL CHEMICAL CORPORATION	MILPORT ENTERPRISES, INC.	31138655	D-gluco-Heptonic acid, monosodium salt, (2.xi.)-
RUTHERFORD CHEMICALS	CASCHEM, INC.	101348	Ricinolein, tri-, triacetate
RUTHERFORD CHEMICALS	CASCHEM, INC.	68187848	Castor oil, oxidized
SASOL CHEMICALS NORTH AMERICA LLC		506514	1-Tetracosanol
SASOL CHEMICALS NORTH AMERICA LLC		506525	1-Hexacosanol
SASOL CHEMICALS NORTH AMERICA LLC		4170303	2-Butenal
SNPE N. AMERICA, L.L.C.		4083641	p-Toluenesulfonic acid, anhydride with isocyanic acid
SPECIALTYCHEM PRODUCTS CORP.		104665	1,2-Diphenoxyethane
STANDARD CHLORINE OF DELAWARE		95943	Benzene, 1,2,4,5-tetrachloro-
STRUKTOL COMPANY OF AMERICA		28188241	Stearic acid, triester with pentaerythritol
SUNBELT CORP.		84651	9,10-Anthracenedione
TESSENDERLO KERLEY, INC.		56406	Glycine
TESSENDERLO KERLEY, INC.		75365	Acetyl chloride
TESSENDERLO KERLEY, INC.	ALKEMIN SRL	140932	Carbonic acid, dithio-, O-isopropyl ester, sodium salt
TEXAS PETROCHEMICALS CORP		107391	1-Pentene, 2,4,4-trimethyl-
TEXAS PETROCHEMICALS CORP		107404	2-Pentene, 2,4,4-trimethyl-
TOMEN AMERICA, INC.		110441	Sorbic acid
TOMEN AMERICA, INC.		143282	9-Octadecen-1-ol, (Z)-
TOMEN AMERICA, INC.		24634615	Sorbic acid, potassium salt
TONAWANDA COKE CORP.		8007452	Tar, coal
TONAWANDA COKE CORP.		65996783	Light oil, (coal), coke-oven
TONAWANDA COKE CORP.		65996818	Fuel gases, coke-oven
TOYO INK AMERICA, LLC.		1324761	C.I. Pigment Blue 61

Appendix D: **Non-responding companies, continued**

Company to whom our letter was sent/from whom the reply was received	Company/division associated with the company in column to the left that originally reported the chemical (if different)	CAS Number	Chemical name
UCAR CARBON COMPANY, INC.		68187597	Coal, anthracite, calcined
UNITED STATES STEEL CORP.	NATIONAL STEEL CORP.	65996783	Light oil, (coal), coke-oven
UNITED STATES STEEL CORP.	GREAT LAKES DIVISION, NATIONAL STEEL CORP.	65996783	Light oil, (coal), coke-oven
UNITED STATES STEEL CORP.		65996783	Light oil, (coal), coke-oven
UNITED STATES STEEL CORP.	USS CLAIRTON WORKS	65996783	Light oil, (coal), coke-oven
UNITED STATES STEEL CORP.	GREAT LAKES DIVISION, NATIONAL STEEL CORP.	65996818	Fuel gases, coke-oven
UNITED STATES STEEL CORP.		65996818	Fuel gases, coke-oven
UNITED STATES STEEL CORP.	USS CLAIRTON WORKS	65996818	Fuel gases, coke-oven
UNITED STATES STEEL CORP.	GREAT LAKES DIVISION, NATIONAL STEEL CORP.	65996896	Tar, coal, high-temp.
UNITED STATES STEEL CORP.	NATIONAL STEEL CORP.	65996896	Tar, coal, high-temp.
UNITED STATES STEEL CORP.		65996896	Tar, coal, high-temp.
UNITEX CHEMICAL CORP.		84695	Phthalic acid, diisobutyl ester
UNIVAR USA, INC.		98099	Benzenesulfonyl chloride
UNIVAR USA, INC.		110441	Sorbic acid
UNIVAR USA, INC.		128449	1,2-Benzisothiazolin-3-one, 1,1-dioxide, sodium salt
UNIVAR USA, INC.		140932	Carbonic acid, dithio-, O-isopropyl ester, sodium salt
UNIVAR USA, INC.		144627	Oxalic acid
UNIVAR USA, INC.		6381777	D-erythro-Hex-2-enonic acid, .gamma.-lactone, monosodium salt
UNIVAR USA, INC.		24634615	Sorbic acid, potassium salt
VANDEMARK, INC.	VANCHEM, INC.	4083641	p-Toluenesulfonic acid, anhydride with isocyanic acid
VARIED INVESTMENTS, INC.	GRAIN PROCESSING CORP.	66071941	Corn, steep liquor
WERNER G. SMITH, INC.		68187848	Castor oil, oxidized
WERNER G. SMITH, INC.		84501860	Hexanedioic acid, esters with high-boiling C6-10-alkene hydroformylation products
WHEELING-PITTSBURGH STEEL CORP.		65996783	Light oil, (coal), coke-oven
WHEELING-PITTSBURGH STEEL CORP.		65996818	Fuel gases, coke-oven
WHEELING-PITTSBURGH STEEL CORP.		65996896	Tar, coal, high-temp.
WHEELING-PITTSBURGH STEEL CORP.		68990614	Tar, coal, high-temp., high-solids
WRIGHT CORP.		4080313	3,5,7-Triaza-1-azoniaadamantane, 1-(3-chloroallyl)-, chloride
Our letters to the following companies could not be delivered			
ACME STEEL COMPANY		65996783	Light oil, (coal), coke-oven
ACME STEEL COMPANY		65996818	Fuel gases, coke-oven
ACME STEEL COMPANY		65996896	Tar, coal, high-temp.
OMNISPECIALTY CORP.		81163	1-Naphthalenesulfonic acid, 2-amino-
SOLVAY FLUORIDES, INC.		75467	Methane, trifluoro-

APPENDIX E

Additional "possible deadbeat dads": Producers or importers of chemicals that may still be orphans who either did not respond to our letter or whose response was insufficient to justify non-sponsorship

* Data are here sorted by company name; use the HPV Tracker database to sort or select by CAS number. Companies are included here for the specific chemicals they have *not* sponsored; some of these same companies *have* sponsored other HPV chemicals they produce or import.

** Includes companies reporting chemicals that appear likely to be sponsored but have not yet been sponsored (designated "Sp?").

Company to whom our letter was sent/from whom the reply was received*	Company/division associated with the company in column to the left that originally reported the chemical (if different)*	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?**
ACETO CORP.		131577	Benzophenone, 2-hydroxy-4-methoxy-	Insufficient	?
ACETO CORP.		1401554	Tannins	Insufficient	?
AKZO NOBEL	AKZO NOBEL FUNCTIONAL CHEMICALS LLC	25321419	Benzenesulfonic acid, dimethyl-	Insufficient	?
ATUL AMERICAS, INC.		6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt	None	?
BAE SYSTEMS TECHNOLOGY SOLUTIONS	BAE SYSTEMS ORDNANCE SYSTEMS, INC.	2691410	1,3,5,7-Tetrazocine, octahydro-1,3,5,7-tetranitro-	None	?
BASF CORP.		127684	Benzenesulfonic acid, m-nitro-, sodium salt	Insufficient	?
BASF CORP.		1000824	Urea, (hydroxymethyl)-	Insufficient	?
BORDEN CHEMICAL, INC.		1000824	Urea, (hydroxymethyl)-	None	?
BURLINGTON CHEMICAL COMPANY, INC.		68815509	Octadecanoic acid, reaction products with 2-[(2-aminoethyl)amino]ethanol	None	?
CEDAR CHEMICAL CORP.		330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-	None	?
CHEM ONE LTD.		62566	Urea, thio-	Insufficient	?
CIBA SPECIALTY CHEMICALS CORP.		2814202	4(1H)-Pyrimidinone, 6-methyl-2-(1-methylethyl)-	None	?
CIBA SPECIALTY CHEMICALS CORP.		6473138	2-Naphthalenesulfonic acid, 6-[(2,4-diaminophenyl)azo]-3-[[4-[[4-[[7-[(2,4-diaminophenyl)azo]-1-hydroxy-3-sulfo-2-naphthalenyl]azo]phenyl]amino]-3-sulfophenyl]azo]-4-hydroxy-, trisodium salt	None	?
CIBA SPECIALTY CHEMICALS CORP.		52184197	Phenol, 2,4-bis(1,1-dimethylpropyl)-6-[(2-nitrophenyl)azo]-	None	?
CIBA SPECIALTY CHEMICALS CORP.		57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium	None	?
CINCINNATI SPECIALTIES, LLC		81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide	None	?
CINCINNATI SPECIALTIES, LLC		96231	2-Propanol, 1,3-dichloro-	None	?

Appendix E: **Additional "Possible Deadbeat Dads," continued**

Company to whom our letter was sent/from whom the reply was received*	Company/division associated with the company in column to the left that originally reported the chemical (if different)*	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?**
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	3132998	Benzaldehyde, m-bromo-	None	?
CLARIANT LSM (US) INC.	CLARIANT LSM (AMERICA), INC.	3586149	Ether, phenyl m-tolyl	None	?
COLOR RESOURCES INTERNATIONAL		127684	Benzenesulfonic acid, m-nitro-, sodium salt	None	?
COLOURTEX, INC.		57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium	None	?
DEGUSSA	SKW CHEMICALS, INC.	330541	Urea, 3-(3,4-dichlorophenyl)-1,1-dimethyl-	None	?
DIXIE CHEMICAL COMPANY, INC.		94962	1,3-Hexanediol, 2-ethyl-	None	?
DOW AGROSCIENCES		90437	2-Biphenylol	Insufficient	?
DOW AGROSCIENCES		1918021	Picolinic acid, 4-amino-3,5,6-trichloro-	Insufficient	?
DOW AGROSCIENCES		1929824	Pyridine, 2-chloro-6-(trichloromethyl)-	Insufficient	?
DOW AGROSCIENCES		14143603	Picolinonitrile, 4-amino-3,5,6-trichloro-	Insufficient	?
DYNACHEM, INC.		2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-	None	?
DYNACHEM, INC.		25321419	Benzenesulfonic acid, dimethyl-	None	?
GIVAUDAN ROURE CORP.		939979	Benzaldehyde, p-tert-butyl-	None	?
HENKEL KGAA	HENKEL LOCTITE CORP.	81072	1,2-Benzisothiazolin-3-one, 1,1-dioxide	Insufficient	?
HERCULES, INC.		506514	1-Tetracosanol	None	?
HUISH DETERGENTS, INC.		68584258	Benzenesulfonic acid, C10-16-alkyl derivs., compds. with triethanolamine	None	Sp?
HUNTSMAN INTERNATIONAL LLC	VANTICO A&T US INC.	109864	Ethanol, 2-methoxy-	None	Sp?
HUNTSMAN INTERNATIONAL LLC	VANTICO, INC.	2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-	None	?
HUNTSMAN INTERNATIONAL LLC	VANTICO, INC.	5026744	Aniline, p-(2,3-epoxypropoxy)-N,N-bis(2,3-epoxypropyl)-	None	?
JAYHAWK FINE CHEMICALS		1558334	Silane, dichloro(chloromethyl)methyl-	None	?
JLM INDUSTRIES INC.	JLM MARKETING, INC.	590192	1,2-Butadiene	None	?
KAO SPECIALTIES AMERICAS LLC		68815509	Octadecanoic acid, reaction products with 2-[(2-aminoethyl)amino]ethanol	Insufficient	?
KIC CHEMICALS, INC.		84695	Phthalic acid, diisobutyl ester	Insufficient	?
KOPPERS INDUSTRIES, INC.		73665186	Extract residues, (coal), tar oil alk., naphthalene distn. Residues	None	?
KOPPERS INDUSTRIES, INC.		90640805	Anthracene oil	None	?
MILLIKEN CHEMICAL		26680546	Succinic anhydride, octenyl-	Insufficient	?
MITSUBISHI CHEMICAL AMERICA, INC.		64743028	Alkenes, C>10 .alpha.-	None	?
MITSUI & CO, LTD	MITSUI & COMPANY (U.S.A.), INC.	91689	Phenol, m-(diethylamino)-	Insufficient	?
NIPA HARDWICKE, INC.		4080313	3,5,7-Triaza-1-azoniaadamantane, 1-(3-chloroallyl)-, chloride	None	?
NISSHO IWAI CORPORATION	NISSHO IWAI AMERICAN CORP.	107391	1-Pentene, 2,4,4-trimethyl-	None	?
ORGANIC DYESTUFFS CORP.		57693148	Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-7-nitro-1-naphthalenesulfonato(3-)]-, trisodium	Insufficient	?
PIEDMONT CHEMICAL INDUSTRIES, INC.	ETHOX CHEMICALS,LLC	68412602	Phosphoric acid, mixed decyl and Et and octyl esters	None	?
PCL GROUP, LLC	LOMAC, LLC	38185067	Benzenesulfonic acid, 4-chloro-3,5-dinitro-, potassium salt	None	?
PMC, INC.		119335	p-Cresol, 2-nitro-	None	?
PMC SPECIALTIES GROUP, INC.		27193288	Phenol, octyl-	None	?

Appendix E: **Additional "Possible Deadbeat Dads," continued**

Company to whom our letter was sent/from whom the reply was received*	Company/division associated with the company in column to the left that originally reported the chemical (if different)*	CAS Number	Chemical name	Response? If so, sufficient to justify non-sponsorship?	Does the chemical appear to still be an orphan?**
RESOLUTION PERFORMANCE PRODUCTS		2210799	Propane, 1,2-epoxy-3-(o-tolyloxy)-	None	?
ROHM AND HAAS COMPANY		107459	Butylamine, 1,1,3,3-tetramethyl-	None	?
RUTGERS ORGANICS CORP.		25321419	Benzenesulfonic acid, dimethyl-	Insufficient	?
SAKAI TRADING NEW YORK, INC.		62566	Urea, thio-	Insufficient	?
SASOL CHEMICALS NORTH AMERICA LLC		506514	1-Tetracosanol	None	?
SASOL CHEMICALS NORTH AMERICA LLC		506525	1-Hexacosanol	None	?
STANDARD CHLORINE OF DELAWARE		95943	Benzene, 1,2,4,5-tetrachloro-	None	?
STRUKTOL COMPANY OF AMERICA		28188241	Stearic acid, triester with pentaerythritol	None	?
SUMITOMO CORP. OF AMERICA		81163	1-Naphthalenesulfonic acid, 2-amino-	Insufficient	?
SYNGENTA CROP PROTECTION, INC.	ZENECA AG PRODUCTS	26377297	Phosphorodithioic acid, O,O-dimethyl ester, sodium salt	Insufficient	?
TESSENDERLO KERLEY, INC.	ALKEMIN SRL	140932	Carbonic acid, dithio-, O-isopropyl ester, sodium salt	None	?
TEXAS PETROCHEMICALS CORP		107391	1-Pentene, 2,4,4-trimethyl-	None	?
TEXAS PETROCHEMICALS CORP		107404	2-Pentene, 2,4,4-trimethyl-	None	?
THE DOW CHEMICAL COMPANY		542756	Propene, 1,3-dichloro-	Insufficient	?
UNITEX CHEMICAL CORP.		84695	Phthalic acid, diisobutyl ester	None	?
UNIVAR USA, INC.		140932	Carbonic acid, dithio-, O-isopropyl ester, sodium salt	None	?
WRIGHT CORP.		4080313	3,5,7-Triaza-1-azoniaadamantane, 1-(3-chloroallyl)-, chloride	None	?

National Headquarters
257 Park Avenue South
New York, NY 10010
212-505-2100

1875 Connecticut Avenue, NW
Washington, DC 20009
202-387-3500

5655 College Avenue
Oakland, CA 94618
510-658-8008

2334 North Broadway
Boulder, CO 80304
303-440-4901

2500 Blue Ridge Road
Raleigh, NC 27607
919-881-2601

44 East Avenue
Austin, TX 78701
512-478-5161

18 Tremont Street
Suite 850
Boston, MA 02108
617-723-5111

Project Office
3250 Wilshire Boulevard
Suite 1400
Los Angeles, CA 90010
213-386-5501