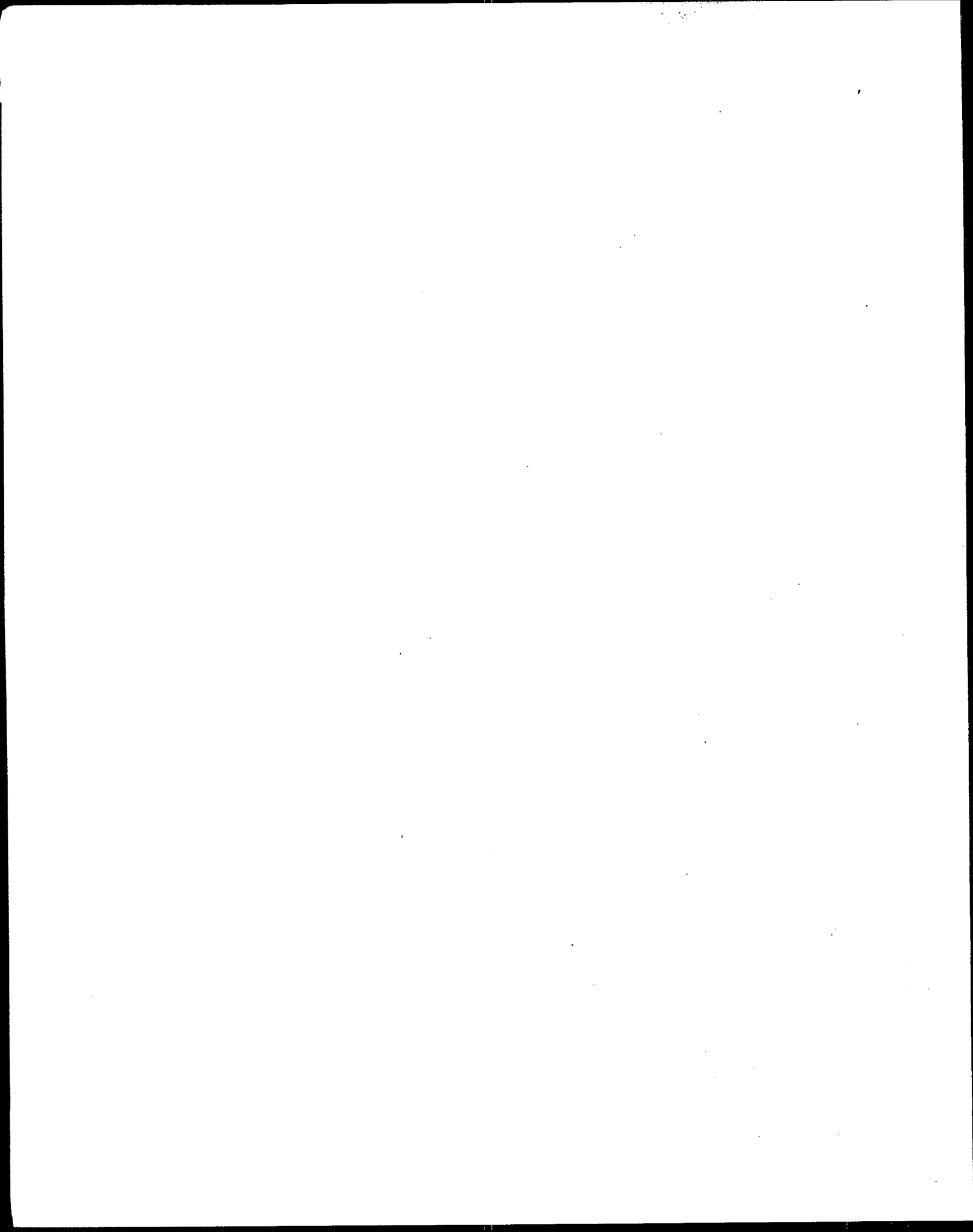




The Presidential Green Chemistry Challenge Awards Program Nomination Package for 1998 Awards



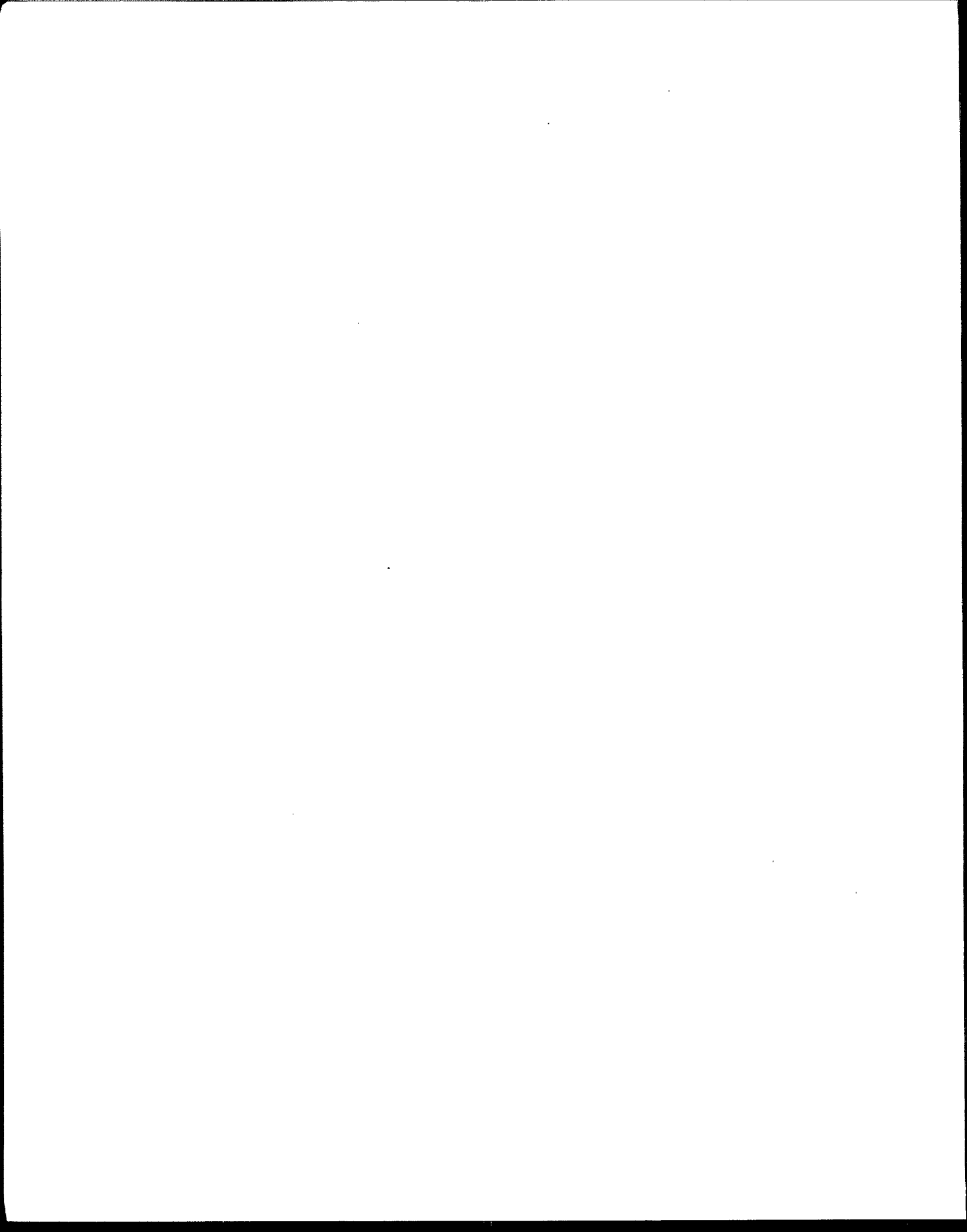
Closing Date: December 31, 1997



The Presidential Green Chemistry Challenge Awards Program: Nomination Package for 1998 Awards

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The Presidential Green Chemistry Challenge Awards Program

Nomination Package for 1998 Awards

THE PRESIDENTIAL GREEN CHEMISTRY CHALLENGE was established to recognize and promote fundamental and innovative chemical methods that accomplish pollution prevention through source reduction and that have broad applicability in industry. For purposes of the program, green chemistry is defined as the use of chemistry for source reduction, the highest tier of the risk management hierarchy as described in the Pollution Prevention Act of 1990.¹ Green chemistry encompasses all aspects and types of chemical processes—including synthesis, catalysis, analysis, monitoring, separations and reaction conditions—that reduce impacts on human health and the environment relative to the current state of the art.

THE PRESIDENTIAL GREEN CHEMISTRY CHALLENGE AWARDS PROGRAM was established to recognize technologies that incorporate the principles of green chemistry into chemical design, manufacture, and use. The evaluation of the impact of the new technology will include considerations of the health and environmental effects throughout the life-cycle with a recognition that incremental improvements are necessary.

THE PRESIDENTIAL GREEN CHEMISTRY CHALLENGE AWARDS PROGRAM is open to all individuals, groups, and organizations, both nonprofit and for profit, including academia and industry. *The nominated green chemistry technology must be demonstrated, implemented, and/or applied within the last five years in the United States.*

This nomination package contains concise instructions on how to enter the competition. Entries must be postmarked no later than December 31, 1997. Awards will be presented in spring, 1998, in Washington, DC.

Nominated green chemistry technologies must be an example of one or more of the following three focus areas:

1. **The use of alternative synthetic pathways for green chemistry, such as:**
 - Catalysis/biocatalysis,
 - Natural processes, such as photochemistry and biomimetic synthesis, or
 - Alternative feedstocks that are more innocuous and renewable (e.g., biomass).
2. **The use of alternative reaction conditions for green chemistry, such as**
 - Use of solvents that have a reduced impact on human health and the environment, or
 - Increased selectivity and reduced wastes and emissions.

**Scope of the
Program**

Scope Focus Areas

Selection Criteria

3. **The design of chemicals that are, for example,**
 - Less toxic than current alternatives, or
 - Inherently safer with regard to accident potential.

Green chemistry technologies nominated for the award will be judged based on whether they meet the following criteria (where applicable):

1. The nominated chemistry technology must fall within the scope of the program and at least one of the focus areas.
2. The nominated chemistry technology should offer **human health and/or environmental benefits**. The technology may, for example,
 - Reduce toxicity (acute or chronic), illness or injury, flammability, explosion potential, emissions or other releases, transport of hazardous substances, or use of hazardous substances in reaction processes;
 - Improve usage of natural resources, such as renewable feedstocks; or
 - Enhance biodiversity.
3. The nominated chemistry technology must be **generally applicable** to a large and broad-based segment of chemical manufacturers, users, or society at large. The nominated technology must offer at least the following:
 - A realistic approach to green chemistry,
 - A remedy to a real environmental management problem, or
 - Features that can be transferred readily to other facilities, locations, and industry sectors.
4. The nominated chemistry technology must be **innovative and of scientific merit**. The technology should be, for example,
 - Original (i.e., never employed before) and
 - Scientifically valid. (That is, can the nominated technology or strategy stand up to scientific scrutiny through peer review? Has the mechanism of action been thoroughly elucidated through sound scientific research?)

The judging panel will look for as much detail (non-proprietary) as possible about the green chemistry technology. Specifics of the chemistry, including comparisons to an existing technology, toxicity data, quantities of hazardous substances being reduced or eliminated, degree of implementation in commerce, and other human health, environmental, and economic benefits, will both assist the judging panel in evaluating your nomination and will enhance the prospects of your nomination winning.

Up to five awards will be made. One award will be made to each of the following:

- A small business² for a project in any of the scope focus areas,
- An academic institution for a project in any of the scope focus areas,
- Any sponsor for a project in focus area 1 (the use of alternative synthetic pathways for green chemistry),
- Any sponsor for a project in focus area 2 (the use of alternative reaction conditions for green chemistry), and
- Any sponsor for a project in focus area 3 (the design of chemicals for green chemistry).

Self-nominations are allowed and expected. There is no entry fee, and no standard entry form, but certain requirements must be met. Entrants must submit a report that is no longer than eight pages, written in a 12-point font with a typewriter or word processor, and printed single-spaced on 8½-by-11-inch paper with 1-inch margins. *Submissions longer than eight pages total will not be accepted.*

The report must include the following:

1. A one-page cover sheet with the complete names, addresses, telephone numbers, fax numbers, and e-mail addresses (if available) of:
 - The prime sponsor (person or organization that owns the project or, in the case of academic projects, is the prime researcher).
 - Contributors (individuals or organizations that provided financial or technical support for project development or implementation).
 - Contact person (person who is responsible for all communications with the awards program sponsors).
2. The cover sheet should be followed by a page containing the following information:
 - Statement affirming that the nominated green chemistry technology has been demonstrated, implemented, and/or applied in the United States within the last five years.
 - Statement indicating within which of the three focus areas the nominated project can be categorized. (If the nominated technology falls within more than one focus area, a primary focus area should be designated.)
 - Statement indicating whether the nominated technology is eligible for either the small business or academic award.

Award Categories

How to Enter

- An abstract not to exceed 200 words that briefly describes the nominated project. Please include a project title.
- 3. The third page should consist of a one-page executive summary of the nominated project. Please repeat the project title.
- 4. The remaining five pages can be used to detail how the nominated project meets the selection criteria. Explain the following:
 - How the technology meets the scope and focus areas of the Presidential Green Chemistry Challenge program.
 - All human health and/or environmental benefits of the technology.
 - How the technology is applicable to industry and society.
 - How the technology is innovative and of scientific merit.

(Some criteria may not apply to every nominated project. Such instances should be indicated where appropriate.)

There is no limit on the number of entries that may be submitted by one sponsor. However, each project must be nominated as a separate entry with a separate project report.

All entries received will be considered public information. No material will be returned. Program sponsors are not responsible for lost or damaged entries.

An original hard copy of the report; four double-sided photocopies; and an electronic copy on a 3½ inch computer disk clearly labeled with the computer format (IBM or Apple), software used, and file name(s) must be post-marked no later than December 31, 1997 and mailed to:

Presidential Green Chemistry Challenge
Attn: Tracy Williamson
U.S. Environmental Protection Agency
401 M Street, SW.
East Tower Room 338
Mail Code 7406
Washington, DC 20460

Judging Entries

A panel of technical experts selected by the American Chemical Society will judge the entries. These experts may include members of the scientific, industrial, governmental, educational, and environmental communities. To assure fairness, judges will compare entries only with others in the same award category. Judges may request verification of any chemistry described or claims made in entries that are selected as finalists. The judges will select the chemistry projects or programs that best meet the selection criteria as award recipients.

Winners will be notified prior to the official public announcement, which will be made in spring, 1998, in Washington, DC. A crystal award will be presented to the primary sponsor of the winning green chemistry project in each of the five award categories. Certificates will be presented to individuals (as identified by the primary sponsor) who contributed to the development or implementation of the chemistry.

Notification of Winners

Questions about eligibility, nomination procedures, or the Presidential Green Chemistry Challenge program should be directed to Paul Anastas and Tracy Williamson of EPA's Industrial Chemistry Branch at 202 260-2659. Additional information about the Presidential Green Chemistry Challenge is also available from EPA's Pollution Prevention Information Clearinghouse at 202 260-1023 or via the Internet at (<http://www.epa.gov/docs/gcc>).

Additional Information

¹Pertinent sections of the Pollution Prevention Act of 1990:

Footnotes

Sec. 6601. SHORT TITLE.

This subtitle may be cited as the "Pollution Prevention Act of 1990."

Sec. 6602. FINDINGS AND POLICY.

(b) Policy. - "The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible."

Sec. 6603. DEFINITIONS.

For the purposes of this subtitle -

"(5)(A) The term "source reduction" means any practice which -

(i) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and

(ii) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants."

²A small business is defined here as one with annual sales of less than \$40 million, including all domestic and foreign sales by the company, its subsidiaries, and its parent company.

