

**DEPARTMENT OF AGRICULTURE****Office of Energy Policy and New Uses****7 CFR Part 2902****RIN 0503-AA33****Designation of Biobased Items for Federal Procurement****AGENCY:** Departmental Administration, USDA.**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The U.S. Department of Agriculture (USDA) is proposing to amend the Guidelines for Designating Biobased Products for Federal Procurement, by adding nine sections to designate the following nine items within which biobased products would be afforded Federal procurement preference: Chain and cable lubricants; corrosion preventatives; food cleaners; forming lubricants; gear lubricants; general purpose household cleaners; industrial cleaners; multipurpose cleaners; and parts wash solutions. USDA also is proposing minimum biobased content for each of these items.

**DATES:** USDA will accept public comments on this proposed rule until December 22, 2008.

**ADDRESSES:** You may submit comments by any of the following methods. All submissions received must include the agency name and Regulatory Information Number (RIN). The RIN for this rulemaking is 0503-AA33. Also, please identify submittals as pertaining to the "Proposed Designation of Items."

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *E-mail:* [biopreferred@usda.gov](mailto:biopreferred@usda.gov). Include RIN number 0503-AA33 and "Proposed Designation of Items" on the subject line. Please include your name and address in your message.

- *Mail/commercial/hand delivery:* Mail or deliver your comments to: Shana Love, USDA, Office of the Assistant Secretary for Administration, Room 209A, Whitten Building, 1400 Independence Avenue, SW., Washington, DC 20250-0103.

- Persons with disabilities who require alternative means for communication for regulatory information (Braille, large print, audiotope, etc.) should contact the USDA TARGET Center at (202) 720-2600 (voice) and (202) 401-4133 (TDD).

**FOR FURTHER INFORMATION CONTACT:** Shana Love, USDA, Office of the Assistant Secretary for Administration, Room 209A, Whitten Building, 1400 Independence Avenue, SW.,

Washington, DC 20250-0103; e-mail: [biopreferred@usda.gov](mailto:biopreferred@usda.gov); phone (202) 205-4008. Information regarding the Federal Procurement of Biobased Products (one part of the BioPreferred Program) is available on the Internet at <http://www.biopreferred.gov>.

**SUPPLEMENTARY INFORMATION:** *The information presented in this preamble is organized as follows:*

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**I. Authority**

The designation of these items is proposed under the authority of section 9002 of the Farm Security and Rural Investment Act of 2002 (FSRIA), as amended by the Food, Conservation, and Energy Act of 2008 (FCEA), 7 U.S.C. 8102 (referred to in this document as "section 9002").

**II. Background**

Section 9002, as amended by the FCEA of 2008, provides for the preferred procurement of biobased products by Federal procuring agencies (referred to hereafter in this FR notice as the "preferred procurement program"). The definition of "procuring agency" in section 9002, as amended by the FCEA of 2008, includes both Federal agencies and "a person that is a party to a contract with any Federal agency, with respect to work performed under such a contract." Thus, Federal contractors, as well as Federal agencies, are expressly subject to the procurement preference provisions of section 9002.

Once USDA designates an item, procuring agencies are required generally to purchase biobased products within these designated items where the purchase price of the procurement item exceeds \$10,000 or where the quantity of such items or the functionally equivalent items purchased over the preceding fiscal year equaled \$10,000 or more. Procuring agencies must procure biobased products within each designated item unless they determine that products within a designated item are not reasonably available within a reasonable period of time, fail to meet the reasonable performance standards of the procuring agencies, or are available only at an unreasonable price. As stated in the Guidelines, biobased products that are merely incidental to Federal funding are excluded from the preferred procurement program; that is, the requirements to purchase biobased products do not apply to such purchases if they are unrelated to or incidental to the purpose of the Federal contract. To illustrate, you are awarded a Federal contract to construct a Federal office building with elevators. The elevators require hydraulic fluid to operate. Because stationary equipment hydraulic fluids are an item that has been designated for preferred procurement, the hydraulic fluid purchased for use in the elevators would be subject to the requirements of section 9002. In order to install these elevators, cranes may be used. These cranes require hydraulic fluid to operate. The hydraulic fluid purchased for the maintenance of these cranes used in the performance of that contract, however, is considered to be incidental to the purpose of the Federal contract. Because it is incidental, it would not be subject to the requirements of section 9002, even though some of the monies received under the contract might be used to purchase the hydraulic fluid used in the cranes.

In implementing the preferred procurement program for biobased products, procuring agencies should follow their procurement rules and Office of Federal Procurement Policy guidance on buying non-biobased products when biobased products exist and should document exceptions taken for price, performance, and availability.

USDA recognizes that the performance needs for a given application are important criteria in making procurement decisions. USDA is not requiring procuring agencies to limit their choices to biobased products that fall under the items for designation in this proposed rule. Rather, the effect of the designation of the items is to require procuring agencies to determine their

performance needs, determine whether there are qualified biobased products that fall under the designated items that meet the reasonable performance standards for those needs, and purchase such qualified biobased products to the maximum extent practicable as required by section 9002.

Section 9002(a)(3)(B), as amended by the FCEA of 2008, requires USDA to provide information to procuring agencies on the availability, relative price, performance, and environmental and public health benefits of such items and to recommend where appropriate the minimum level of biobased content to be contained in the procured products.

It is the responsibility of the manufacturers to “self-certify” that each product being offered as a biobased product for preferred procurement contains qualifying feedstock. USDA will develop a monitoring process for these self-certifications to ensure manufacturers are using qualifying feedstocks. If misrepresentations are found, USDA will remove the subject biobased product from the preferred procurement program and may take further actions as deemed appropriate.

**Subcategorization.** Most of the items USDA is considering for designation for preferred procurement cover a wide range of products. For some items, there are groups of products within the item that meet different markets and uses and/or different performance specifications. For example, within the designated item “hand cleaners and sanitizers,” some products are required to meet performance specifications for sanitizing, while other products do not need to meet these specifications. Where such subgroups exist, USDA intends to create subcategories. For example, for the item “hand cleaners and sanitizers,” USDA has determined it is reasonable to create a “hand cleaner” subcategory and a “hand sanitizer” subcategory. Sanitizing specifications would be applicable to the latter subcategory, but not the former. In sum, USDA looks at the products within each item to evaluate whether there are groups of products within the item that meet different performance specifications and, where USDA finds this type of difference, it intends to create subcategories.

For some items, however, USDA may not have sufficient information at the time of proposal to create subcategories within an item. For example, USDA may know that there are different performance specifications that deicing products are required to meet, but it has only information on one type of deicing product. In such instances, USDA may

either designate the item without creating subcategories (i.e., defer the creation of subcategories) or designate one subcategory and defer designation of other subcategories within the item until additional information is obtained.

Within today’s proposed rule, USDA is not proposing subcategories for any of the nine items being proposed for designation, but is requesting specific comments on the appropriateness of creating subcategories within several items.

**Minimum Biobased Contents.** The minimum biobased contents being proposed with today’s rule are based on products for which USDA has biobased content test data. In addition to considering the biobased content test data for each item, USDA also considers other factors including product performance information and the range, groupings, and breaks in the biobased content test data array. Consideration of this information allows USDA to establish minimum biobased contents on a broad set of factors to assist the Federal procurement community in its decisions to purchase biobased products.

USDA makes every effort to obtain biobased content test data on multiple products within each item. For most designated items, USDA has biobased content test data on more than one product within a designated item. However, USDA must rely on biobased product manufacturers to voluntarily submit product information and, in some cases, USDA has been able to obtain biobased content data for only a single product within a designated item. As USDA obtains additional data on the biobased contents for products within these designated items, USDA will evaluate whether the minimum biobased content for a designated item will be revised.

USDA anticipates that the minimum biobased content of an item that is based on a single product is more likely to change as additional products within that item are identified and tested. In today’s proposed rule, none of the minimum biobased contents for the designated items are based on a single tested product.

Where USDA receives additional information on biobased content for products within these proposed items during the public comment period, USDA will take that information into consideration when establishing the minimum biobased content when the items are designated in the final rulemaking.

*Overlap with EPA’s Comprehensive Procurement Guideline program for recovered content products under the*

*Resource Conservation and Recovery Act (RCRA) Section 6002.* Some of the products that are biobased items designated for preferred procurement under the preferred procurement program may also be items the Environmental Protection Agency (EPA) has designated under the EPA’s Comprehensive Procurement Guideline (CPG) for Products Containing Recovered Materials. Where that occurs, an EPA-designated recovered content product (also known as “recycled content products” or “EPA-designated products”) has priority in Federal procurement over the qualifying biobased product as identified in 7 CFR § 2902.2. In situations where it believes there may be an overlap, USDA is asking manufacturers of qualifying biobased products to provide additional product and performance information to Federal agencies to assist them in determining whether the biobased products in question are, or are not, the same products for the same uses as the recovered content products. As this information becomes available, USDA will place it on the BioPreferred Web site with its catalog of qualifying biobased products.

In cases where USDA believes an overlap with EPA-designated recovered content products may occur, manufacturers are being asked to indicate the various suggested uses of their product and the performance standards against which a particular product has been tested. In addition, depending on the type of biobased product, manufacturers are being asked to provide other types of information, such as whether the product contains fossil energy-based components (including petroleum, coal, and natural gas) and whether the product contains recovered materials. Federal agencies may also ask manufacturers for information on a product’s biobased content and its profile against environmental and health measures and life-cycle costs (the Building for Environmental and Economic Sustainability (BEES) analysis or ASTM Standard D7075, “Standard Practice for Evaluating and Reporting Environmental Performance of Biobased Products,” for evaluating and reporting on environmental performance of biobased products). Such information will permit agencies to determine whether or not an overlap occurs. Detailed information on the BEES analytical tool can be found on the Web site <http://www.bfrl.nist.gov/oea/software/bees.html>. Summary information on ASTM Standard D7075, and other ASTM standards, can be

found on ASTM's Web site at <http://www.astm.org>.

Section 6002 of RCRA requires a procuring agency procuring an item designated by EPA generally to procure such items composed of the highest percentage of recovered materials content practicable. However, a procuring agency may decide not to procure such an item based on a determination that the item fails to meet the reasonable performance standards or specifications of the procuring agency. An item with recovered materials content may not meet reasonable performance standards or specifications, for example, if the use of the item with recovered materials content would jeopardize the intended end use of the item.

Where a biobased item is used for the same purposes and to meet the same Federal agency performance requirements as an EPA-designated recovered content product, the Federal agency must purchase the recovered content product. For example, if a biobased hydraulic fluid is to be used as a fluid in hydraulic systems and because "lubricating oils containing re-refined oil" has already been designated by EPA for that purpose, then the Federal agency must purchase the EPA-designated recovered content product, "lubricating oils containing re-refined oil." If, on the other hand, that biobased hydraulic fluid is to be used to address a Federal agency's certain environmental or health performance requirements that the EPA-designated recovered content product would not meet, then the biobased product should be given preference, subject to cost, availability, and performance.

This proposed rule designates one item for preferred procurement for which there may be overlap with an EPA-designated recovered content product. This item is "gear lubricants," which, depending on how they are used, may overlap with the EPA-designated recovered content product "Re-refined Lubricating Oils." EPA provides recovered materials content recommendations for this recovered content product in a Recovered Materials Advisory Notice (RMAN I). The RMAN recommendations for this CPG product can be found by accessing EPA's Web site <http://www.epa.gov/epaoswer/non-hw/procure/products.htm> and then clicking on the appropriate product name.

**Federal Government Purchase of "Green" Products.** Three components of the Federal government's green purchasing program are the Biobased Products Preferred Purchasing Program, the Environmental Protection Agency's

Comprehensive Procurement Guideline for Products Containing Recovered Materials, and the Environmentally Preferable Products Program. The Office of the Federal Environmental Executive (OFEE) and the Office of Management and Budget (OMB) encourage agencies to implement these components comprehensively when purchasing products and services.

Procuring agencies should note that not all biobased products are "environmentally preferable." For example, unless cleaning products contain no or reduced levels of metals and toxic and hazardous constituents, they can be harmful to aquatic life, the environment, and/or workers. Household cleaning products that are formulated to be disinfectants are required, under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), to be registered with EPA and must meet specific labeling requirements warning of the potential risks associated with misuse of such products. When purchasing environmentally preferable cleaning products, many Federal agencies specify that products must meet Green Seal standards<sup>1</sup> for institutional cleaning products or that products must have been reformulated in accordance with recommendations from the U.S. EPA's Design for the Environment (DfE) program. Both the Green Seal standards and the DfE program identify chemicals of concern in cleaning products. These include zinc and other metals, formaldehyde, ammonia, alkyl phenol ethoxylates, ethylene glycol ethers, and volatile organic compounds. In addition, both require that cleaning products have neutral or less caustic pH.

On the other hand, some biobased products may be better for the environment than some products that meet Green Seal standards for institutional cleaning products or that have been reformulated in accordance with EPA's DfE program. To fully compare products, one must look at the "cradle-to-grave" impacts of the manufacture, use, and disposal of products. Biobased products that will be available for preferred procurement under this program have been assessed as to their "cradle-to-grave" impacts.

One consideration of a product's impact on the environment is whether (and to what degree) it introduces new, fossil carbon into the atmosphere. Qualifying biobased products offer the user the opportunity to manage the carbon cycle and limit the introduction of new, fossil carbon into the

atmosphere, whereas non-biobased products derived from fossil fuels add new, fossil carbon to the atmosphere.

Manufacturers of qualifying biobased products under the preferred procurement program will be able to provide, at the request of Federal agencies, factual information on environmental and human health effects of their products, including the results of the BEES analysis, which examines 11 different environmental parameters, including human health, or the comparable ASTM D7075. Therefore, USDA encourages Federal procurement agencies to examine all available information on the environmental and human health effects of products when making their purchasing decisions.

**Other Preferred Procurement Programs.** Federal procurement officials should also note that biobased products may be available for purchase by Federal agencies through the AbilityOne Program (formerly known as the Javits-Wagner-O'Day (JWOD) program). Under this program, members of organizations including the National Industries for the Blind (NIB) and the National Institute for the Severely Handicapped (NISH) offer products and services for preferred procurement by Federal agencies. A search of the AbilityOne Program's JWOD online catalog (<http://www.jwodcatalog.com>) indicated that three of the items being proposed today ("general purpose household cleaners", "industrial cleaners", and "multipurpose cleaners") are available through the AbilityOne Program. While none of the specific products within these items are identified in the JWOD online catalog as being biobased products, there currently are biobased cleaning products available from at least one NIB affiliate. Also, because additional categories of products are frequently added to the AbilityOne Program, it is possible that biobased products within other items being proposed for designation today may be available through the AbilityOne Program in the future. Procurement of biobased products through the AbilityOne Program would further the objectives of both the AbilityOne Program and the preferred procurement program.

**Interagency Council.** USDA has created, and is chairing, an "interagency council" with membership selected from among Federal stakeholders to the preferred procurement program. To augment its own research, USDA consults with this council in identifying the order of item designation, manufacturers producing and marketing products that fall within an item proposed for designation, performance

<sup>1</sup> Reference to these standards does not represent or imply any endorsement by USDA.

standards used by Federal agencies evaluating products to be procured, and warranty information used by manufacturers of end user equipment and other products with regard to biobased products.

**Future Designations.** In making future designations, USDA will continue to conduct market searches to identify manufacturers of biobased products within items. USDA will then contact the identified manufacturers to solicit samples of their products for voluntary submission for biobased content testing and for the BEES analytical tool. Based on these results, USDA will then propose new items for designation for preferred procurement.

As stated in the preamble to the first six items designated for preferred procurement (71 FR 13686, March 16, 2006), USDA plans to identify approximately 10 items in each future rulemaking. USDA has developed a preliminary list of items for future designation. This list is available on the BioPreferred Web site. While this list presents an initial prioritization of items for designation, USDA cannot identify with certainty which items will be presented in each of the future rulemakings. Items may be added or dropped and the information necessary to designate an item may take more time to obtain than an item lower on the prioritization list.

### III. Summary of Today's Proposed Rule

USDA is proposing to designate the following nine items for preferred procurement: Chain and cable lubricants; corrosion preventatives; food cleaners; forming lubricants; gear lubricants; general purpose household cleaners; industrial cleaners; multipurpose cleaners; and parts wash solutions. USDA is also proposing minimum biobased content for each of these items (see Section IV.C). Lastly, USDA is proposing a date by which Federal agencies must incorporate designated items into their procurement specifications (see Section IV.D).

In today's proposed rule, USDA is providing information on its findings as to the availability, economic and technical feasibility, environmental and public health benefits, and life-cycle costs for each of the designated items. Information on the availability, relative price, performance, and environmental and public health benefits of individual products within each of these items is not presented in this notice. Further, USDA has reached an agreement with manufacturers not to publish their names in the **Federal Register** when designating items. This agreement was reached to encourage manufacturers to

submit products for testing to support the designation of an item. Once an item has been designated, USDA will encourage the manufacturers of products within the designated item to voluntarily make their names and other contact information available for the BioPreferred Web site.

**Warranties.** Some of the items, including subcategories, being proposed for designation today may affect maintenance warranties. As time and resources allow, USDA will work with original equipment manufacturers (OEMs) on addressing any effect the use of biobased products may have on their maintenance warranties. At this time, however, USDA does not have information available as to whether or not OEMs will state that the use of these products will void their maintenance warranties. This does not mean that use of biobased products will void warranties, only that USDA does not currently have such information. USDA encourages manufacturers of biobased products to test their products against all relevant standards, including those that affect warranties, and to work with OEMs to ensure that biobased products will not void maintenance warranties when used. Whenever manufacturers of biobased products find that existing performance standards for maintenance warranties are not relevant or appropriate for biobased products, USDA is willing to assist them in working with the appropriate OEMs to develop tests that are relevant and appropriate for the end uses in which biobased products are intended. If, in spite of these efforts, there is insufficient information regarding the use of a biobased product and its effect of maintenance warranties, USDA notes that the procurement agent would not be required to buy such a product. As information is available on warranties, USDA will make such information available on the BioPreferred Web site.

**Additional Information.** USDA is working with manufacturers and vendors to make all relevant product and manufacturer contact information available on the BioPreferred Web site before a procuring agency asks for it, in order to make the preferred program more efficient. Steps USDA has implemented, or will implement, include: Making direct contact with submitting companies through e-mail and phone conversations to encourage completion of product listing; coordinating outreach efforts with intermediate material producers to encourage participation of their customer base; conducting targeted outreach with industry and commodity groups to educate stakeholders on the

importance of providing complete product information; participating in industry conferences and meetings to educate companies on program benefits and requirements; and communicating the potential for expanded markets beyond the Federal government, to include State and local governments, as well as the general public markets. Section V provides instructions to agencies on how to obtain this information on products within these items through the following Web site: <http://www.biopREFERRED.gov>.

**Comments.** USDA invites comment on the proposed designation of these items, including the definition, proposed minimum biobased content, and any of the relevant analyses performed during the selection of these items. In addition, USDA invites comments and information in the following areas:

1. One item, "gear lubricants," may overlap with one of the products designated under EPA's Comprehensive Procurement Guideline for Products Containing Recovered Material. To help procuring agencies in making their purchasing decisions between biobased products within the proposed designated items that overlap with products containing recovered material, USDA is requesting product specific information on unique performance attributes, environmental and human health effects, disposal costs, and other attributes that would distinguish biobased products from products containing recovered material as well as non-biobased products.

2. We have attempted to identify relevant and appropriate performance standards and other relevant measures of performance for each of the proposed items. If you know of other such standards or relevant measures of performance for any of the proposed items, USDA requests that you submit information identifying such standards and measures, including their name (and other identifying information as necessary), identifying who is using the standard/measure, and describing the circumstances under which the product is being used.

3. Many biobased products within the items being proposed for designation will have positive environmental and human health attributes. USDA is seeking comments on such attributes in order to provide additional information on the BioPreferred Web site. This information will then be available to Federal procuring agencies and will assist them in making "best value" purchase decisions. When possible, please provide appropriate documentation to support the

environmental and human health attributes you describe.

4. Several items (i.e., “corrosion preventatives,” “industrial cleaners,” and “multipurpose cleaners”) have wide ranges of tested biobased contents. For the reasons discussed later in this preamble, USDA is proposing minimum biobased content levels for these items that would allow a high percentage of the tested products to be eligible for preferred procurement. USDA welcomes comments on the appropriateness of the proposed minimum biobased contents for these items and whether there are potential subcategories within the items that should be considered.

5. USDA considered combining the proposed items “gear lubricants,” “chain and cable lubricants,” and “forming lubricants” into a single designated item with multiple subcategories. The decision to propose the items separately was based largely on the differences in functional performance between the items. While the basic purpose of products within each of these items is to provide lubrication, the applications and the conditions under which they perform are very different. USDA requests comments from procuring agencies and manufacturers of products within these items specifically addressing the advantages and disadvantages of these items being designated separately versus combined into a single item with subcategories.

All comments should be submitted as directed in the **ADDRESSES** section above.

To assist you in developing your comments, the background information used in proposing these items for designation has been assembled in a technical support document, “Technical Support for Proposed Rule—Round 5 Designated Items,” which is available on the BioPreferred Web site. The technical support document can be located by clicking on the Proposed and Final Regulations link on the left side of the BioPreferred Web site’s home page (<http://www.biopreferred.gov>). At the BioPreferred Web site, click on the Proposed and Final Regulations link on the left side of the page. At the next screen, click on the Supporting Documentation link under Round 5 Designated Items under the Proposed Regulations section. This will bring you to the link to the technical support document.

#### **IV. Designation of Items, Minimum Biobased Contents, and Time Frame**

##### *A. Background*

In order to designate items (generic groupings of specific products such as crankcase oils or products that contain qualifying biobased fibers) for preferred procurement, section 9002 requires USDA to consider: (1) The availability of items and (2) the economic and technological feasibility of using the items, including the life-cycle costs of the items.

In considering an item’s availability, USDA uses several sources of information. USDA performs Internet searches, contacts trade associations (such as the Bio organization) and commodity groups, searches the Thomas Register (a database, used as a resource for finding companies and products manufactured in North America, containing over 173,000 entries), and contacts individual manufacturers and vendors to identify those manufacturers and vendors with biobased products within items being considered for designation. USDA uses the results of these same searches to determine if an item is generally available.

In considering an item’s economic and technological feasibility, USDA examines evidence pointing to the general commercial use of an item and its cost and performance characteristics. This information is obtained from the sources used to assess an item’s availability. Commercial use, in turn, is evidenced by any manufacturer and vendor information on the availability, relative prices, and performance of their products as well as by evidence of an item being purchased by a procuring agency or other entity, where available. In sum, USDA considers an item economically and technologically feasible for purposes of designation if products within that item are being offered and used in the marketplace.

In considering the life-cycle costs of items proposed for designation, USDA uses the BEES analytical tool to test individual products within each proposed item. The BEES analytical tool measures the environmental performance and the economic performance of a product.

Environmental performance is measured in the BEES analytical tool using the internationally-standardized and science-based, life-cycle assessment approach specified in the International Organization for Standardization (ISO) 14000 standards. The BEES environmental performance analysis, which includes human health as one of its components, is a “cradle-to-grave”

assessment of a product. In it, all stages in the life of a product are analyzed: Raw material production; manufacture; transportation; installation; use; and recycling and waste management. The time period over which environmental performance is measured begins with raw material production and ends with disposal (waste management). The BEES environmental performance analysis also addresses products made from biobased feedstocks.

Economic performance in the BEES analysis is measured using the ASTM Standard E917, “Standard Practice for Measuring Life-Cycle Costs of Buildings and Building Systems,” which covers the costs of initial investment, replacement, operation, maintenance and repair, and disposal. The time frame for economic performance extends from the purchase of the product to final disposal. USDA then utilizes the BEES results of individual products within a designated item in its consideration of the life-cycle costs at the item level.

The environmental performance results are reported as both an impact value and as an environmental performance score for 12 different environmental impact areas:

- Acidification,
- Criteria pollutants,
- Ecological toxicity,
- Eutrophication,
- Fossil fuel depletion,
- Global warming,
- Habitat alteration,
- Human health,
- Indoor air quality,
- Ozone depletion,
- Smog, and
- Water intake.

For each environmental impact area, BEES estimates the impact a product has in an area using certain units to standardize impacts. For example, acidification is measured as “millimoles of hydrogen equivalents,” while eutrophication is measured as “grams of nitrogen equivalents.” Thus, for acidification, BEES estimates how many millimoles of hydrogen equivalents and how many grams of nitrogen equivalents a product generates as the result of its production and use. These values are referred to as “impact values” and are calculated on a per functional unit basis. For example, the impact value for eutrophication for a chain and cable lubricant product was estimated to be 105 grams of nitrogen equivalents for one gallon of product (the functional unit).

The impact values for a product are then used to determine the environmental performance scores of a product within each of the 12 environmental impact areas. The

environmental performance score is a measure of the share a product contributes towards the annual per capita U.S. environmental impact in one of the 12 environmental impact areas. For example, the global warming impact value of a chain and cable lubricant product was estimated to be 9,710 grams of carbon dioxide equivalents. The total amount of carbon dioxide equivalents emitted in the United States in one year is divided by the U.S. population to yield a "global warming per person" value. The product's global warming impact value is then divided by the "global warming per person" value to derive the product's share of global warming. Specifically, for this example, the global warming environmental performance score is estimated to be 0.0061. That is, every one gallon of this chain and cable lubricant is estimated to contribute 0.0061 percent to the global warming per person value.

For both the impact values and the environmental performance scores, the BEES analysis uses a single unit of comparison associated with each designated item. The basis for the unit of comparison is the "functional unit," defined so that the products compared within an item are true substitutes for one another. If significant differences have been identified in the useful lives of alternative products within a designated item (e.g., if one product lasts twice as long as another), the functional unit includes reference to a time dimension to account for the frequency of product replacement. The functional unit also accounts for products used in different amounts for equivalent service. For example, one surface coating product may be environmentally and economically preferable to another on a pound-for-pound basis, but may require twice the mass to cover one square foot of surface, and last half as long, as the other product. To account for these performance differences, the functional unit for the surface coating item could be "one square foot of application for 20 years" instead of "one pound of surface coating product." The functional unit provides the critical reference point to which all BEES results for products within an item are scaled. Because functional units vary from item to item, performance comparisons are valid only among products within a designated item.

The complete results of the BEES analysis, extrapolated to the item level, for each item proposed for designation in today's proposed rule can be found in the technical support document for this proposed rule.

As discussed above, the BEES analysis includes information on the environmental performance, human health impacts, and economic performance. In addition, ASTM Standard D7075, which manufacturers may use in lieu of the BEES analytical tool, provides similar information. USDA is working with manufacturers and vendors to make this information available on the BioPreferred Web site in order to make the preferred procurement program more efficient.

As discussed earlier, USDA has also implemented, or will implement, several other steps intended to educate the manufacturers and other stakeholders on the benefits of this program and the need to make this information, including manufacturer contact information, available on the BioPreferred Web site in order to then make it available to procurement officials. Additional information on specific products within the items proposed for designation may also be obtained directly from the manufacturers of the products. USDA has also provided a link on the BioPreferred Web site to the Defense Standardization Program and to General Services Administration (GSA)-related standards lists used as guidance when procuring products. These lists can be accessed through the "Selling to the Federal Government" link on the BioPreferred Web site.

USDA recognizes that information related to the functional performance of biobased products is a primary factor in making the decision to purchase these products. USDA is gathering information on industry standard test methods and performance standards that manufacturers are using to evaluate the functional performance of their products. (Test methods are procedures used to provide information on a certain attribute of a product. For example, a test method might determine how many bacteria are killed. Performance standards identify the level at which a product must perform in order for it to be "acceptable" to the entity that set the performance standard. For example, a performance standard might require that a certain percentage (e.g., 95 percent) of the bacteria must be killed through the use of the product.) The primary source of information on these test methods and performance standards are manufacturers of biobased products within these items. Additional test methods and performance standards are also identified during meetings of the Interagency council and during the review process for each proposed rule. We have listed, under the detailed discussion of each item proposed for

designation (presented in Section IV.B), the functional performance test methods, performance standards, product certifications, and other measures of performance associated with the functional aspects of products identified during the development of this **Federal Register** notice for these items.

While this process identifies many of the relevant test methods and standards, USDA recognizes that those identified herein do not represent all of the methods and standards that may be applicable for a designated item or for any individual product within the designated item. As noted earlier in this preamble, USDA is requesting identification of any other relevant performance standards and measures of performance. As the program becomes fully implemented, these and other additional relevant performance standards will be available on the BioPreferred Web site.

In gathering information relevant to the analyses discussed above for this proposed rule, USDA has made extensive efforts to contact and request information and product samples within the items proposed for designation. For product information, USDA has attempted to contact representatives of the manufacturers of biobased products identified by the preferred procurement program. For product samples on which to conduct biobased content tests and BEES analysis, USDA has attempted to obtain samples and BEES input information for at least five different suppliers of products within each item in today's proposed rule. However, because the submission of information and samples is on a strictly voluntary basis, USDA was able to obtain information and samples only from those manufacturers who were willing voluntarily to invest the resources required to gather and submit the information and samples. The data presented are all the data that were submitted in response to USDA requests for information from manufacturers of the products within the items proposed for designation. While USDA would prefer to have complete data on the full range of products within each item, the data that were submitted are sufficient to support designation of the items in today's proposed rule.

To propose an item for designation, USDA must have sufficient information on a sufficient number of products within an item to be able to assess its availability and its economic and technological feasibility, including its life-cycle costs. For some items, there may be numerous products available. For other items, there may be very few

products currently available. Given the infancy of the market for some items, it is not unexpected that even single-product items will be identified. Further, given that the intent of section 9002 is largely to stimulate the production of new biobased products and to energize emerging markets for those products, USDA has determined it is appropriate to designate an item or subcategory for preferred procurement even when there is only a single product with a single supplier. However, USDA has also determined that in such situations it is appropriate to defer the effective preferred procurement date until such time that more than one supplier is identified in order to provide choice to procuring agencies. Similarly, the documented availability, benefits, and life-cycle costs of even a very small percentage of all products that may exist within an item are also considered sufficient to support designation.

#### *B. Items Proposed for Designation*

USDA uses a model (as summarized below) to identify and prioritize items for designation. Through this model, USDA has identified over 100 items for potential designation under the preferred procurement program. A list of these items and information on the model can be accessed on the BioPreferred Web site at <http://www.biopreferred.gov>.

In general, items are developed and prioritized for designation by evaluating them against program criteria established by USDA and by gathering information from other government agencies, private industry groups, and manufacturers. These evaluations begin by look at the cost, performance, and availability of products within each item. USDA then considers the following points:

- Are there manufacturers interested in providing the necessary test information on products within a particular item?
- Are there a number of manufacturers producing biobased products in this item?
- Are there products available in this item?
- What level of difficulty is expected when designating this item?
- Is there Federal demand for the product?
- Are Federal procurement personnel looking for biobased products?
- Will an item create a high demand for biobased feed stock?
- Does manufacturing of products within this item increase potential for rural development?

After completing this evaluation, USDA prioritizes the list of items for

designation. USDA then gathers information on products within the highest priority items and, as sufficient information becomes available for groups of approximately 10 items, a new rulemaking package is developed to designate the items within that group. USDA points out that the list of items may change, with items being added or dropped, and that the order in which items are proposed for designation is likely to change because the information necessary to designate an item may take more time to obtain than an item lower on the list.

In today's proposed rule, USDA is proposing to designate the following items for the preferred procurement program: Chain and cable lubricants; corrosion preventatives; food cleaners; forming lubricants; gear lubricants; general purpose household cleaners; industrial cleaners; multipurpose cleaners; and parts wash solutions. USDA has determined that each of these proposed items meets the necessary statutory requirements—namely, that they are being produced with biobased products and that their procurement by procuring agencies will carry out the following objectives of section 9002:

- To increase demand for biobased products, which would in turn increase demand for agricultural commodities that can serve as feedstocks for the production of biobased products;
- To spur development of the industrial base through value-added agricultural processing and manufacturing in rural communities; and
- To enhance the Nation's energy security by substituting biobased products for products derived from imported oil and natural gas.

Further, USDA has sufficient information on the items to determine their availability and to conduct the requisite analyses to determine their biobased content and their economic and technological feasibility, including life-cycle costs.

*Overlap with EPA's Comprehensive Procurement Guideline program for recovered content products.* In today's proposed rule, one item may overlap with the EPA-designated recovered content product "Re-refined Lubricating Oils." This item is "gear lubricants." For this item, USDA is requesting that information on the qualifying biobased "gear lubricants" be made available by their manufacturers to assist Federal agencies in determining if an overlap exists between "gear lubricants" and "Re-refined Lubricating Oils" (the applicable EPA-designated recovered content product).

As noted earlier in this preamble, USDA is requesting information on overlap situations to further help procuring agencies make informed decisions when faced with purchasing a recovered content material product or a biobased product. As this information is developed, USDA will make it available on the BioPreferred Web site.

*Exemptions.* As explained in the May 14, 2008 **Federal Register** notice (73 FR 27928) promulgating the Round 2 designated items, the National Aeronautics and Space Administration (NASA) and the Department of Defense (DoD) are exempt from the procurement preference requirements that would be afforded to the items contained in today's proposed rule with respect to products used in space applications and combat and combat-related applications, respectively. In other words, they would apply to operations underlying NASA's and DoD's mission, such as janitorial services contracts, but not to uses on the space shuttle and military equipment. These "blanket" exemptions are contained in subpart A of part 2902. Therefore, today's proposed rule would not apply to NASA and DoD, as provided in subpart A of part 2902.

Although each item in today's proposed rule would be exempt from the procurement preference requirement, this exemption does not extend to contractors performing work for NASA or DoD other than direct maintenance and support of the space shuttle and combat equipment. For example, if a contractor is producing a part for use on the space shuttle, the metalworking fluid the contractor uses to produce the part should be biobased (provided it meets the specifications for metalworking). The exemption does apply, however, if the product being purchased by the contractor is for use in combat or combat-related missions or for use in space applications. For example, if the part being produced by the contractor would actually be part of the space shuttle, then the exemption applies.

USDA points out that it is not the intent of these exemptions to imply that biobased products are inferior to non-biobased products. If manufacturers of biobased products can meet the concerns of these two agencies, USDA is willing to reconsider such exemptions on an item-by-item basis.

Each of the proposed designated items are discussed in the following sections.

#### *1. Chain and Cable Lubricants*

Chain and cable lubricants are products designed to provide lubrication for such applications as bar and roller chains, sprockets, and wire



ropes and cables. The products may also be designed to prevent rust and corrosion in these applications.

USDA identified 20 different manufacturers producing 37 individual biobased chain and cable lubricant products. These 20 manufacturers do not necessarily include all manufacturers of biobased chain and cable lubricants, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified two test methods (as shown below) used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance, applicable to products within this item, the two test methods identified by manufacturers of products within this item are:

#### Test Methods

- Shake Flask Test (CG-2000) used by the lubricant industry to evaluate biodegradability (Environmental Protection Agency #560/6-82-003); and
- Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Environmental Protection Agency #600/4-90-027).

USDA contacted procurement officials with various procuring agencies

including the GSA, several offices within the Defense Logistics Agency, the OFEE, USDA Departmental Administration, the National Park Service, EPA, Oak Ridge National Laboratory, and OMB in an effort to gather information on the purchases of chain and cable lubricants and products within the other eight items proposed for designation today. Communications with these officials led to the conclusion that obtaining credible current usage statistics and specific potential markets within the Federal government for biobased products within the proposed designated items is not possible at this time.

Most of the contacted officials reported that procurement data are reported in higher level groupings of materials and supplies than the proposed designated items. Using terms that best match the items in today's proposed rule, USDA queried the GSA database for Federal purchases of products within today's proposed items. The results indicate purchases of products within items in today's proposed rule. The results of this inquiry can be found in the technical support document for this proposed rule. Also, the purchasing of such materials as part of contracted services and with individual purchase cards used to purchase products locally further obscures credible data on purchases of specific products.

USDA also investigated the Web site *FEDBIZOPPS.gov*, a site which lists Federal contract purchase opportunities greater than \$25,000. The information provided on this Web site, however, is for broad categories of products rather than the specific types of products that are included in today's proposed rule. Therefore, USDA has been unable to obtain data on the amount of chain and cable lubricants purchased by procuring agencies. However, Federal agencies perform, or procure contract services to perform, activities, such as maintenance, clean-up, and tree removal, in which chain and cable lubricants are used. For example, although quantities were not obtained, the National Park Service is known to be using biobased chain and cable lubricants at some of its parks. Thus, there is a need for chain and cable lubricants. Designation of "chain and cable lubricants" will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased chain and cable lubricants was performed for three of the products using the BEES analytical tool. The impact values for these three lubricants are presented in Table 1a. The environmental performance scores are presented in Table 1b and in Figure 1.

TABLE 1A—IMPACT VALUES FOR CHAIN AND CABLE LUBRICANTS

Environmental impact area	Units	Sample A	Sample B	Sample C
Acidification .....	millimoles of hydrogen ion equivalents .....	7,210	6,470	5,130
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	0.532	0.467	0.840
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	77.1	69.7	1,950
Eutrophication .....	grams of nitrogen equivalent .....	105	94.6	246
Fossil Fuel Depletion .....	megajoules of surplus energy .....	43.6	39.9	83.6
Global Warming .....	grams of carbon dioxide equivalents .....	9,710	8,660	29,500
Habitat Alteration .....	threatened and endangered species count .....	0	0	0
Human Health .....	grams of toluene equivalent .....	61,500	54,800	316,000
Indoor Air .....	grams of total volatile organic compounds .....	0	0	0
Ozone Depletion .....	grams of chloroflouro-carbon-11 equivalents .....	1.15E-07	9.69E-08	1.30E-04
Smog .....	grams of nitrogen oxide equivalents .....	124	112	95.9
Water Intake .....	liters of water .....	1,430	1,290	6,530
Functional Unit .....	1 gallon.			

TABLE 1B—ENVIRONMENTAL PERFORMANCE SCORES FOR CHAIN AND CABLE LUBRICANTS

Environmental impact area	Sample A	Sample B	Sample C
Total Environmental Performance Score <sup>1</sup> .....	0.0674	0.0606	0.4202
Acidification (5%) .....	0.0000	0.0000	0.0000
Criteria Air Pollutants (6%) .....	0.0002	0.0001	0.0003
Ecological Toxicity (11%) .....	0.0104	0.0094	0.2630
Eutrophication (5%) .....	0.0272	0.0246	0.0640
Fossil Fuel Depletion (5%) .....	0.0062	0.0056	0.0118
Global Warming (16%) .....	0.0061	0.0054	0.0184
Habitat Alteration (16%) .....	0.0000	0.0000	0.0000
Human Health (11%) .....	0.0043	0.0038	0.0219



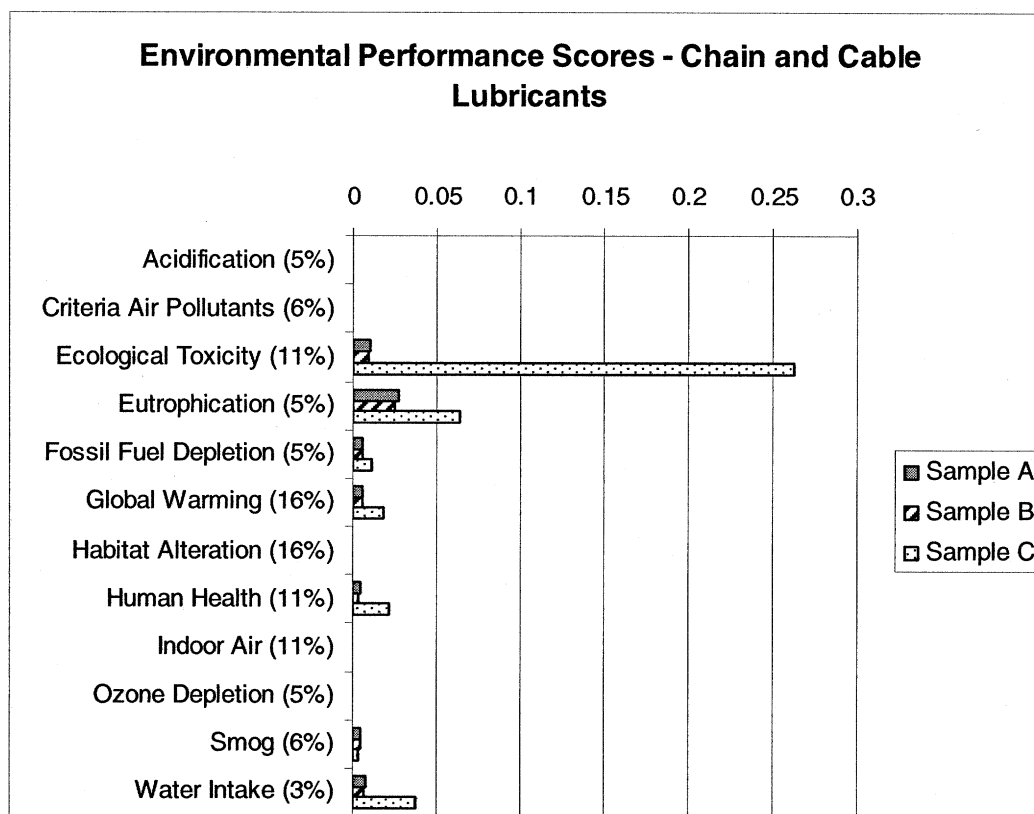
TABLE 1B—ENVIRONMENTAL PERFORMANCE SCORES FOR CHAIN AND CABLE LUBRICANTS—Continued

Environmental impact area	Sample A	Sample B	Sample C
Indoor Air (11%) .....	0.0000	0.0000	0.0000
Ozone Depletion (5%) .....	0.0000	0.0000	0.0000
Smog (6%) .....	0.0049	0.0044	0.0038
Water Intake (3%) .....	0.0081	0.0073	0.0370
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	10.17	13.78	20.20
First Cost .....	10.17	13.78	20.20
Future Cost (3.9%) .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Functional Unit .....	1 gallon.		

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.



**Figure 1. BEES Environmental Performance Scores for Chain and Cable Lubricants**

As seen in Table 1b, for the analyzed chain and cable lubricants, the total environmental performance score ranges from 0.0606 to 0.4202 points per gallon of product and the life-cycle costs range from \$10.17 to \$20.20 (present value dollars) per gallon of product.

When evaluating the environmental performance scores presented in Table 1b, as well as in the subsequent tables presented in this preamble, it should be noted that comparisons of the environmental performance scores are

valid only among products within a designated item. Thus, comparisons of the scores presented in Table 1b and the scores presented in tables for other proposed designated items are not meaningful. On the other hand, one can compare the impact values reported in Table 1a with those in the other, corresponding impact value tables. But such a comparison would only be useful if the compared products would be used as substitutes for each other.

The numbers in parentheses following each of the 12 environmental impacts listed in the tables presenting the environmental performance scores in this preamble indicate weighting factors. The weighting factors represent the relative importance of the 12 environmental parameters, including human health impacts, which contribute to the BEES environmental performance score. They are derived from lists of the relative importance of these parameters developed by the EPA

Science Advisory Board for the purpose of advising EPA as to how best to allocate its limited resources among environmental impact areas. Note that a lower environmental performance score is better than a higher score.

Life-cycle costs presented in the tables in this preamble are per the appropriate functional unit for the proposed designated item. Future costs are discounted to present value using the OMB discount rate of 3.9 percent.

Present value dollars presented in this preamble represent the sum of all costs associated with a product over a fixed period of time, including any applicable costs for purchase, installation, replacement, operation, maintenance and repair, and disposal. Present value dollars presented in this preamble reflect 2006 dollars. Dollars are expressed in present value terms to adjust for the effects of inflation. The complete results of the BEES analysis, extrapolated to the item level, for each item proposed for designation in today's proposed rule can be found at <http://www.biopreferred.gov>.

## 2. Corrosion Preventatives

Corrosion preventatives are products used to prevent the deterioration (corrosion) of metals.

USDA identified 15 different manufacturers producing 97 individual biobased corrosion preventatives

products. These 15 manufacturers do not necessarily include all manufacturers of biobased corrosion preventatives, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified several test methods and one performance standard used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance, applicable to products within this item, the test methods and performance standard identified by manufacturers of products within this item, are:

### Test Methods

- ASTM D1735, "Standard Practice for Testing Water Resistance of Coatings Using Water Fog Apparatus;"
- ASTM D1748, "Standard Test Method for Rust Protection by Metal Preservatives in the Humidity Cabinet;"
- ASTM D445, "Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity);"
- ASTM D92, "Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester;" and
- ASTM D97, "Standard Test Method for Pour Point of Petroleum Products."

### Performance Standards

- National Association of Corrosion Engineers #TM0374–2001, Laboratory Screening Tests to Determine the Ability of Scale Inhibitors to Prevent the Precipitation of Calcium Sulfate and Calcium Carbonate from Solution (for Oil and Gas Production Systems).

USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on "Chain and Cable Lubricants". These attempts were largely unsuccessful. However, various Federal agencies procure corrosion preventatives, or procure contract services such as maintenance services, that use corrosion preventatives. Thus, they have a need for corrosion preventatives. Designation of "corrosive preventatives" will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of corrosion preventatives was performed for two of the products using the BEES analytical tool. The impact values for these two corrosion preventatives are presented in Table 2a. The environmental performance scores are presented in Table 2b and in Figure 2.

TABLE 2A—IMPACT VALUES FOR CORROSION PREVENTATIVES

Environmental impact area	Units	Sample A	Sample B
Acidification .....	millimoles of hydrogen ion equivalents .....	13,300	26,000
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	1.79	2.18
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	141	291
Eutrophication .....	grams of nitrogen equivalent .....	120	360
Fossil Fuel Depletion .....	megajoules of surplus energy .....	652	301
Global Warming .....	grams of carbon dioxide equivalents .....	19,900	37,500
Habitat Alteration .....	threatened and endangered species count .....	0	0
Human Health .....	grams of toluene equivalent .....	559,000	2.36E+07
Indoor Air .....	grams of total volatile organic compounds .....	0	0
Ozone Depletion .....	grams of chlorofluoro-carbon-11 equivalents .....	1.98E-06	1.88E-05
Smog .....	grams of nitrogen oxide equivalents .....	245	454
Water Intake .....	liters of water .....	1,570	4,870
Functional Unit .....	5 gallons.		

TABLE 2B—ENVIRONMENTAL PERFORMANCE SCORES FOR CORROSION PREVENTATIVES

Environmental impact area	Sample A	Sample B
Total Environmental Performance Score <sup>1</sup> .....	0.2129	0.2684
Acidification (5%) .....	0	0
Criteria Air Pollutants (6%) .....	0.0006	0.0007
Ecological Toxicity (11%) .....	0.0190	0.0389
Eutrophication (5%) .....	0.0312	0.0937
Fossil Fuel Depletion (5%) .....	0.0924	0.0431
Global Warming (16%) .....	0.0124	0.0236
Habitat Alteration (16%) .....	0	0
Human Health (11%) .....	0.0387	0.0228
Indoor Air (11%) .....	0	0

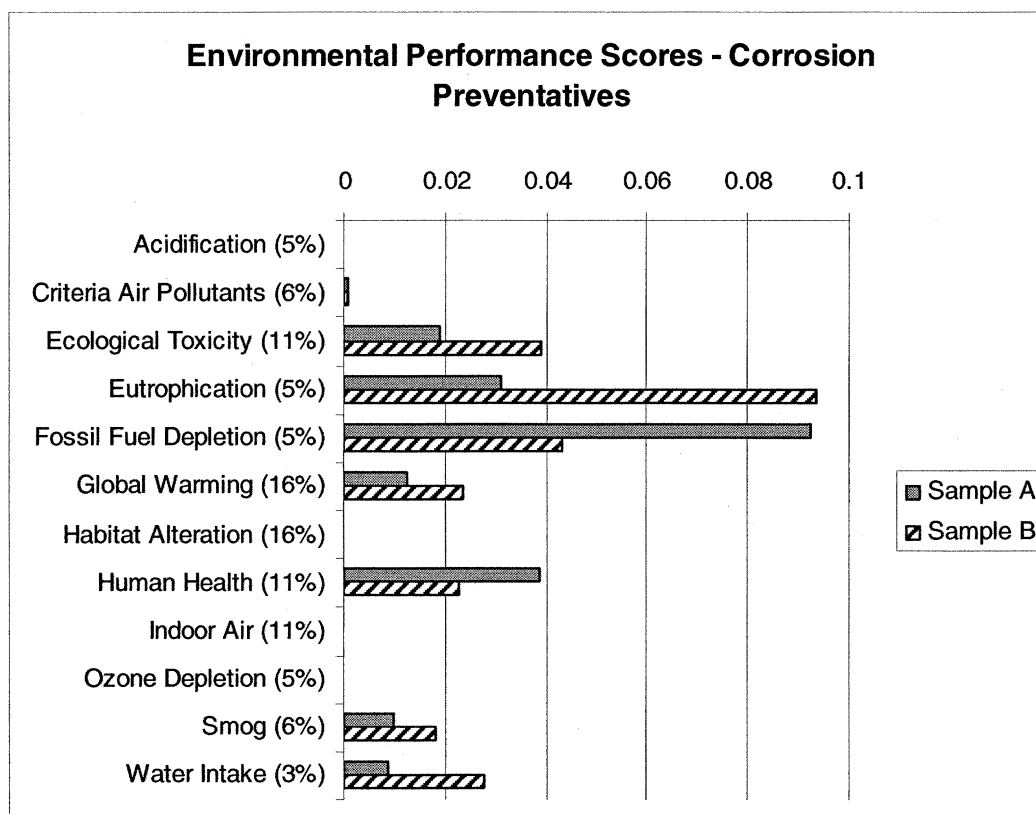
TABLE 2B—ENVIRONMENTAL PERFORMANCE SCORES FOR CORROSION PREVENTATIVES—Continued

Environmental impact area	Sample A	Sample B
Ozone Depletion (5%) .....	0	0
Smog (6%) .....	0.0097	0.0180
Water Intake (3%) .....	0.0089	0.0276
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	114.75	77.09
First Cost .....	114.75	77.09
Future Cost (3.9%) .....	<sup>(3)</sup>	
Functional Unit .....	5 gallons.	

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.



**Figure 2. BEES Environmental Performance Scores for Corrosion Preventatives**

As seen in Table 2b, the total environmental performance scores for the two corrosion preventatives analyzed are 0.2194 and 0.2684 per five gallons of product and the respective life-cycle costs are \$114.75 and \$77.09 (present value dollars) per five gallons of product.

### 3. Food Cleaners

Food cleaners are anti-microbial products used to clean the outer layer of

various food products, such as fruits, vegetables, and meats.

USDA identified 11 different manufacturers producing 15 individual biobased food cleaner products. These 11 manufacturers do not necessarily include all manufacturers of biobased food cleaners, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and

stakeholders identified several test methods, one performance standard, and one other measure of performance used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

## Test Methods

• Federal Test Method Standard #536A, Soap and soap products (including synthetic detergents) sampling and testing.

## Performance Standards

• Boeing #D6-7127, Cleaning Interiors of Commercial Transport Aircraft; and

• South Coast Air Quality Management District, certification as a Clean Air Solvent.

## Product Certifications and Other Measures

• U.S. Navy #Navsea 6840—U.S. Navy surface ship (non-submarine) authorized chemical cleaning products and dispensing systems.

USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on “Chain and Cable Lubricants.” These attempts were largely unsuccessful. However, Federal agencies procure such products or contract for food

preparation services that use such products. Thus, there is a need for food cleaners. Designation of biobased “food cleaners” will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased food cleaners was performed for one of the products using the BEES analytical tool. The impact values for this food cleaner are presented in Table 3a. The environmental performance scores are presented in Table 3b and in Figure 3.

TABLE 3A—IMPACT VALUES FOR FOOD CLEANERS

Environmental impact area	Units	Sample A
Acidification .....	millimoles of hydrogen ion equivalents .....	81.8
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	0.0216
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	0.774
Eutrophication .....	grams of nitrogen equivalent .....	0.104
Fossil Fuel Depletion .....	megajoules of surplus energy .....	2.43
Global Warming .....	grams of carbon dioxide equivalents .....	148
Habitat Alteration .....	threatened and endangered species count .....	0
Human Health .....	grams of toluene equivalent .....	2,110
Indoor Air .....	grams of total volatile organic compounds .....	0
Ozone Depletion .....	grams of chlorofluoro-carbon-11 equivalents .....	7.98E-08
Smog .....	grams of nitrogen oxide equivalents .....	1.09
Water Intake .....	liters of water .....	4.39
Functional Unit .....	.....	1 gallon.

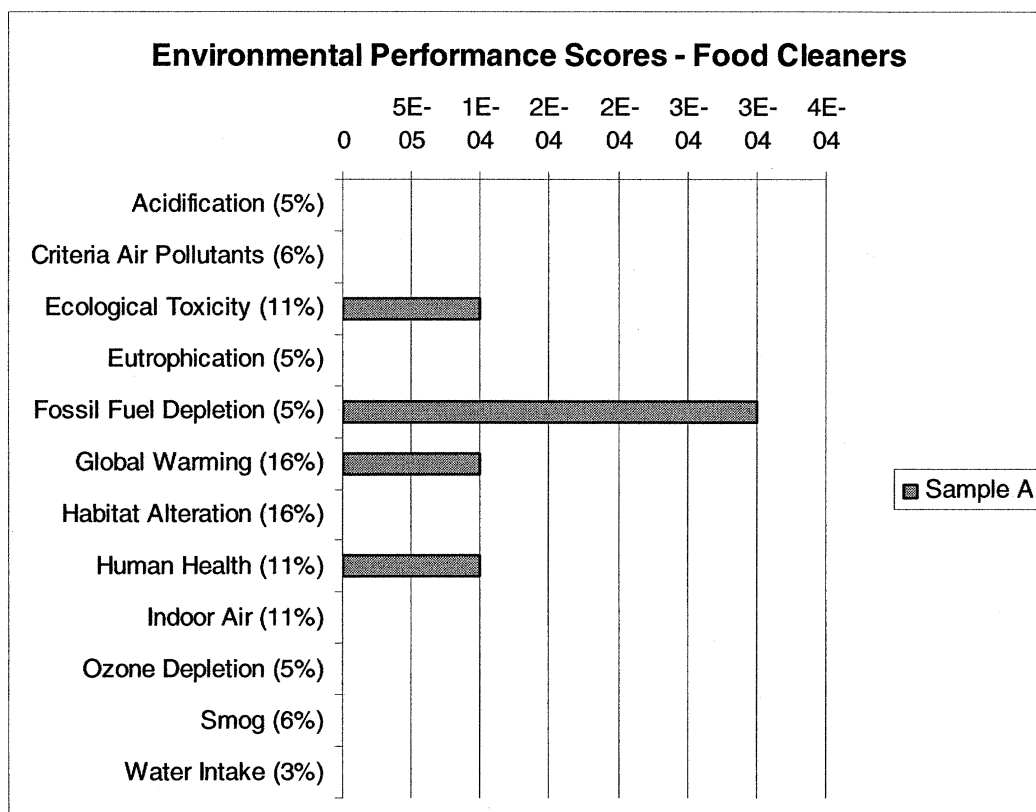
TABLE 3B—ENVIRONMENTAL PERFORMANCE SCORES FOR FOOD CLEANERS

Environmental impact area	Sample A
Total Environmental Performance Score <sup>1</sup> .....	0.0006
Acidification (5%) .....	0.0000
Criteria Air Pollutants (6%) .....	0.0000
Ecological Toxicity (11%) .....	0.0001
Eutrophication (5%) .....	0.0000
Fossil Fuel Depletion (5%) .....	0.0003
Global Warming (16%) .....	0.0001
Habitat Alteration (16%) .....	0.0000
Human Health (11%) .....	0.0001
Indoor Air (11%) .....	0.0000
Ozone Depletion (5%) .....	0.0000
Smog (6%) .....	0.0000
Water Intake (3%) .....	0.0000
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	4.00
First Cost .....	4.00
Future Cost (3.9%) .....	( <sup>3</sup> )
Functional Unit .....	Gallon of food cleaner

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.



**Figure 3. BEES Environmental Performance Scores for Food Cleaners**

As seen in Table 3b, the total environmental performance score and the life-cycle costs of the food cleaner analyzed are, respectively, 0.0006 points per gallon of product and \$4.00 (present value dollars) per gallon of product.

#### 4. Forming Lubricants

Forming lubricants are products designed to provide lubricity during metalworking applications that are performed under extreme pressure conditions. Such applications include tube bending, stretch forming, press braking, and swaging.

USDA identified three different manufacturers producing 13 individual biobased forming lubricant products. These three manufacturers do not necessarily include all manufacturers of biobased forming lubricants, merely those identified during USDA information gathering activities.

Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified two test methods (as shown below) used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

#### Test Methods

- Boeing #BAC 5001-4 Flareless Tube End Fabrication; and
- Testing of chemical substances under the Toxic Substances Control Act (EPA #560/6-82-003).

USDA attempted to gather data on the potential market for biobased products

within the Federal government using the procedure described in the section on "Chain and Cable Lubricants." These attempts were largely unsuccessful. However, Federal agencies own and operate metalworking machinery that operates under extreme pressure. In addition, Federal agencies contract for services involving the use of similar equipment. Thus, there is a need for forming lubricants. Designation of "forming lubricants" will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of forming lubricants was performed for one of the products using the BEES analytical tool. The impact values for this forming lubricant are presented in Table 4a. The environmental performance scores are presented in Table 4b and in Figure 4.

**TABLE 4A—IMPACT VALUES FOR FORMING LUBRICANTS**

Environmental impact area	Units	Sample A
Acidification .....	millimoles of hydrogen ion equivalents .....	1,320
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	0.267
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxyacetic acid .....	32.7
Eutrophication .....	grams of nitrogen equivalent .....	11.3
Fossil Fuel Depletion .....	megajoules of surplus energy .....	76.0

TABLE 4A—IMPACT VALUES FOR FORMING LUBRICANTS—Continued

Environmental impact area	Units	Sample A
Global Warming .....	grams of carbon dioxide equivalents .....	4,450
Habitat Alteration .....	threatened and endangered species count .....	0
Human Health .....	grams of toluene equivalent .....	60,000
Indoor Air .....	grams of total volatile organic compounds .....	0
Ozone Depletion .....	grams of chloroflouro-carbon-11 equivalents .....	2.59E-05
Smog .....	grams of nitrogen oxide equivalents .....	25.6
Water Intake .....	liters of water .....	164
Functional Unit .....		1 gallon.

TABLE 4B—ENVIRONMENTAL PERFORMANCE SCORES FOR FORMING LUBRICANTS

Environmental impact area	Sample A
Total Environmental Performance Score <sup>1</sup> .....	0.0271
Acidification (5%) .....	0.0000
Criteria Air Pollutants (6%) .....	0.0001
Ecological Toxicity (11%) .....	0.0044
Eutrophication (5%) .....	0.0029
Fossil Fuel Depletion (5%) .....	0.0108
Global Warming (16%) .....	0.0028
Habitat Alteration (16%) .....	0.0000
Human Health (11%) .....	0.0042
Indoor Air (11%) .....	0.0000
Ozone Depletion (5%) .....	0.0000
Smog (6%) .....	0.0010
Water Intake (3%) .....	0.0009
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	18.50
First Cost .....	18.50
Future Cost (3.9%) .....	( <sup>3</sup> )
Functional Unit .....	( <sup>4</sup> )

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

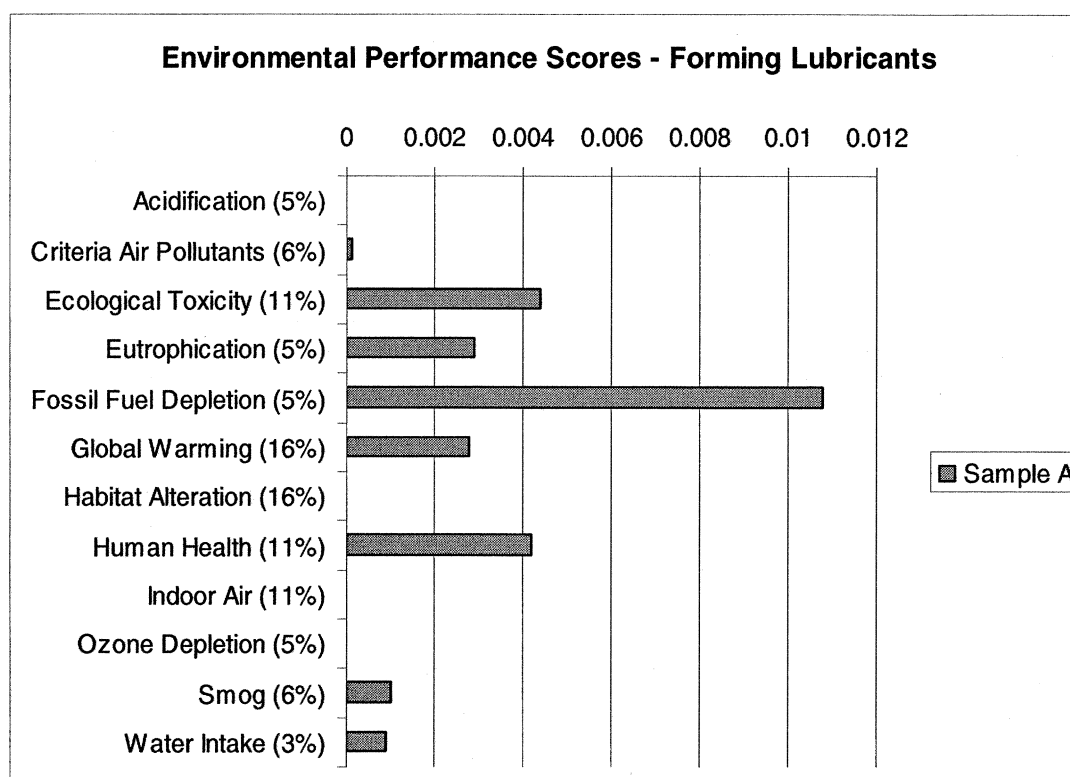
<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.

<sup>4</sup> One gallon of forming lubricant.

As seen in Table 4b, the total environmental performance score and the life-cycle cost of the submitted

forming lubricant are, respectively, 0.0271 points per gallon of product and

\$18.50 (present value dollars) per gallon of product.



**Figure 4. BEES Environmental Performance Scores for Forming Lubricants**

#### 5. Gear Lubricants

Gear lubricants are substances, such as greases and oils, which reduce friction when applied to a toothed machine part (such as a wheel or cylinder) that meshes with another toothed part to transmit motion or to change speed or direction. Unlike penetrating lubricants, which would be applied to frozen gears to loosen them, gear lubricants are designed to be applied to functional gears to reduce friction while in operation.

Qualifying products within this item may overlap with the EPA-designated recovered content product: "Re-refined Lubricating Oils".

USDA identified nine different manufacturers producing 24 individual biobased gear lubricant products. These nine manufacturers do not necessarily include all manufacturers of biobased gear lubricants, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified test methods, performance standards, and other measures of performance used in evaluating the performance of products within this item. While there may be

additional test methods, as well as performance standards, product certifications, and other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

##### Test Methods

- ASTM D1404/D1404M, "Standard Test Method for Estimation of Deleterious Particles for Lubricating Grease;"
- ASTM D2270, "Standard Practice for Calculating Viscosity Index from Kinematic Viscosity at 40 and 100 °C;"
- ASTM D2619, "Standard Test Method for Hydrolytic Stability of Hydraulic Fluids (Beverage Bottle Method);"
- ASTM D2711, "Standard Test Method for Demulsibility Characteristics of Lubricating Oils;"
- ASTM D445, "Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity);"
- ASTM D5864, "Standard Test Method for Determining Aerobic Aquatic Biodegradation of Lubricants or Their Components;"
- ASTM D665, "Standard Test Method for Rust-Preventing

Characteristics of Inhibited Mineral Oil in the Presence of Water;"

- ASTM D892, "Standard Test Method for Foaming Characteristics of Lubricating Oils;"
- ASTM D92, "Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester;"
- ASTM D97, "Standard Test Method for Pour Point of Petroleum Products;"
- ASTM D974, "Standard Test Method for Acid and Base Number by Color-Indicator Titration;"
- ASTM D2266, "Standard Test Method for Wear Preventive Characteristics of Lubricating Grease (Four-Ball Method);"
- Testing of chemical substances under the Toxic Substances Control Act (EPA #560/6-82-003);
- International Organization for Standardization #ISO 150—Specifies the requirements and the corresponding methods of test for raw, refined, and boiled linseed oils for paints and varnishes;
- DIN 51517—Lubricants—Lubricating oils—Part 1: Lubricating oils C Requirements;
- FGZ (DIN51354), Gear wheel twisting/tension testing machine for lubricants;
- ISO 46—oil viscosity grade;
- SAE 30—viscosity grade;



- SAE GearGrade 80W90—viscosity grade; and
- ISO 90—oil viscosity grade.

## Performance Standards

- American Petroleum Institute #API GL-3—Lubricant with light EP effect for transmissions and non-hypoid gear drives;
- American Petroleum Institute #API GL-4—Generally equivalent to military specification MIL-L-2105 for manual transmissions and spiral bevel gears engaged in moderate service (API GL-4 rates a gear lubricant's performance);
- AGMA 2-8A, R&O and EP gear lubes grades;
- ANSI/AGMA 9005-E02, Industrial Gear Lubricant; and
- DB s1.53.101, Meets or exceeds requirements of David Brown performance requirement.

## Product Certifications and Other Measures

- American Petroleum Institute #API GL-1—Designates the type of service characteristics of automotive spiral-bevel and worm gear axles as well as some manually-operated transmissions operating under such mild conditions of low unit pressures and sliding velocities that straight mineral oil can be used satisfactorily; and
- American Petroleum Institute #API GL-2—Designates the type of service characteristics of automotive type worm gear axles operating under such conditions of load, temperature, and sliding velocities that lubricants satisfactory for API GL-1 service will not suffice (obsolete).

USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on "Chain and Cable Lubricants." These

attempts were largely unsuccessful. However, many Federal agencies own or operate machinery, or procure contract services that require the use of machinery, that require gear lubricants. When EPA researched its designation of re-refined lubricating oils, including gear oil, the Defense Logistic Agency informed EPA that it had specifications for, and sold, gear oils. Thus, there is a need for gear lubricants. Designation of biobased "gear lubricants" will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased gear lubricants was performed for two of the products using the BEES analytical tool. The impact values for these two gear lubricants are presented in Table 5a. The environmental performance scores are presented in Table 5b and in Figure 5.

TABLE 5A—IMPACT VALUES FOR GEAR LUBRICANTS

Environmental impact area	Units	Sample A	Sample B
Acidification .....	millimoles of hydrogen ion equivalents .....	25,000	10,200
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	2.79	2.96
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	242	287
Eutrophication .....	grams of nitrogen equivalent .....	308	47.0
Fossil Fuel Depletion .....	megajoules of surplus energy .....	479	453
Global Warming .....	grams of carbon dioxide equivalents .....	35,800	34,200
Habitat Alteration .....	threatened and endangered species count .....	0	0
Human Health .....	grams of toluene equivalent .....	1,250,000	553,000
Indoor Air .....	grams of total volatile organic compounds .....	0	0
Ozone Depletion .....	grams of chlorofluoro-carbon-11 equivalents .....	1.35E-06	1.04E-05
Smog .....	grams of nitrogen oxide equivalents .....	413	163
Water Intake .....	liters of water .....	5,900	633
Functional Unit .....		5 gallons.	

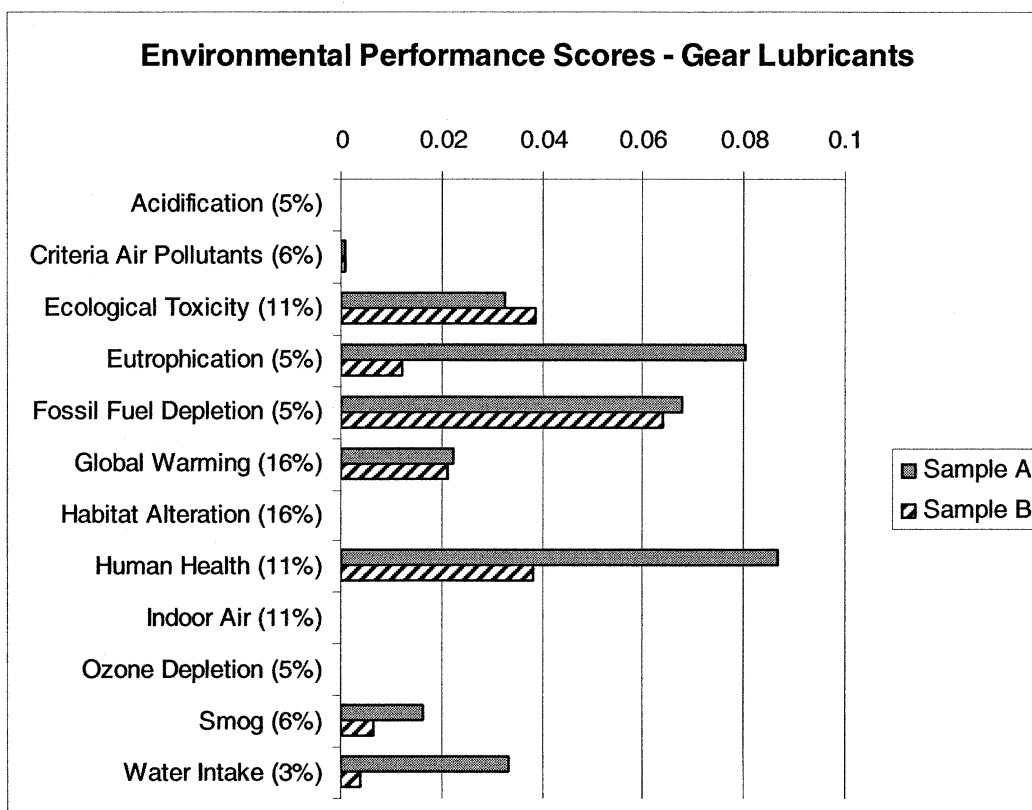
TABLE 5B—ENVIRONMENTAL PERFORMANCE SCORES FOR GEAR LUBRICANTS

Environmental impact area	Sample A	Sample B
Total Environmental Performance Score <sup>1</sup> .....	0.3405	0.1856
Acidification (5%) .....	0.0000	0.0000
Criteria Air Pollutants (6%) .....	0.0009	0.0009
Ecological Toxicity (11%) .....	0.0326	0.0387
Eutrophication (5%) .....	0.0802	0.0122
Fossil Fuel Depletion (5%) .....	0.0679	0.0641
Global Warming (16%) .....	0.0224	0.0214
Habitat Alteration (16%) .....	0.0000	0.0000
Human Health (11%) .....	0.0867	0.0383
Indoor Air (11%) .....	0.0000	0.0000
Ozone Depletion (5%) .....	0.0000	0.0000
Smog (6%) .....	0.0164	0.0064
Water Intake (3%) .....	0.0334	0.0036
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	63.08	87.50
First Cost .....	63.08	87.50
Future Cost (3.9%) .....	( <sup>3</sup> )	( <sup>3</sup> )
Functional Unit .....	5 gallons of gear lubricant.	

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.



**Figure 5. BEES Environmental Performance Scores for Gear Lubricant**

As seen in Table 5b, the total environmental performance scores are 0.1856 and 0.3405 points per five gallons of product. The life-cycle costs of the submitted biobased gear lubricants are \$63.08 to \$87.50 (present value dollars) per five gallons of product.

#### 6. General Purpose Household Cleaners

General purpose household cleaners are substances used to clean common household surfaces found in the living spaces and on the possessions located in households or similar settings. Household cleaner products included in this item are those general purpose household cleaners specifically marketed as suitable for cleaning common household surfaces. In today's proposed rule, the definition of general purpose household cleaners excludes products that are formulated for use as disinfectants. Other products not included in this item are task-specific household cleaners, such as scouring cleaners, toilet bowl cleaners, upholstery cleaners, laundry and dishwashing detergents, spot/stain

removers, oven cleaners, and drain cleaners.

Procuring agencies should note that, as discussed in Section II of this preamble, not all biobased cleaning products are "environmentally preferable" to non-biobased products. Unless cleaning products have been formulated to contain no (or reduced levels of) metals and toxic and hazardous constituents, they can be harmful to aquatic life, the environment, and/or workers. When purchasing environmentally preferable cleaning products, Federal agencies should compare the "cradle-to-grave" impacts of the manufacture, use, and disposal of both biobased and non-biobased products in order to determine which product is environmentally preferable.

USDA identified 16 different manufacturers producing 24 individual biobased general purpose household cleaner products. These 16 manufacturers do not necessarily include all manufacturers of biobased general purpose household cleaners, merely those identified during USDA information gathering activities.

Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified several test methods, a performance standard, and one other measure of performance (as shown below) used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

#### Test Methods

- Boeing #D6-7127, Cleaning Interiors of Commercial Transport Aircraft;
- ASTM D1308, "Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes";
- Federal Test Method Standard #536A, Soap and Soap Products (Including Synthetic Detergents) sampling and testing; and

• South Coast Air Quality Management District, certification as a “Clean Air Solvent.”

#### Performance Standards

- Green Seal #8 (GS-8), Green Seal Environmental Standard for Household Cleaners; and
- Boeing #D6-7127, Cleaning Interiors of Commercial Transport Aircraft. Product Certifications and Other Measures
- United States Navy Navsea #6840—Surface ship (non-submarine) authorized chemical cleaning products and dispensing systems; and

• Green Seal #8 (GS-8), Green Seal Environmental Standard for Household Cleaners.

USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on “Chain and Cable Lubricants.” These attempts were largely unsuccessful. However, Federal agencies routinely perform cleaning and maintenance activities, or procure cleaning and maintenance services, that use these materials. Thus, they have a need for general purpose household cleaners and for services that require the use of

household cleaners. Designation of “general purpose household cleaners” will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased general purpose household cleaners was performed for two of the products using the BEES analytical tool. The impact values for these two general purpose household cleaners are presented in Table 6a. The environmental performance scores are presented in Table 6b and in Figure 6.

TABLE 6A—IMPACT VALUES FOR GENERAL PURPOSE HOUSEHOLD CLEANERS

Environmental impact area	Units	Sample A	Sample B
Acidification .....	millimoles of hydrogen ion equivalents .....	4,080	1,510
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	1.03	0.657
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	351	8.76
Eutrophication .....	grams of nitrogen equivalent .....	27.8	3.24
Fossil Fuel Depletion .....	megajoules of surplus energy .....	175	38.8
Global Warming .....	grams of carbon dioxide equivalents .....	13,600	3,000
Habitat Alteration .....	threatened and endangered species count .....	0	0
Human Health .....	grams of toluene equivalent .....	109,000	30,600
Indoor Air .....	grams of total volatile organic compounds .....	0	0
Ozone Depletion .....	grams of chlorofluoro-carbon-11 equivalents .....	1.95E-04	2.28E-06
Smog .....	grams of nitrogen oxide equivalents .....	69.3	23.6
Water Intake .....	liters of water .....	389	20.9
Functional Unit .....	5 gallons.		

TABLE 6B—ENVIRONMENTAL PERFORMANCE SCORES FOR GENERAL PURPOSE HOUSEHOLD CLEANERS

Environmental impact area	Sample A	Sample B
Total Environmental Performance Score <sup>1</sup> .....	0.1005	0.0127
Acidification (5%) .....	0.0000	0.0000
Criteria Air Pollutants (6%) .....	0.0003	0.0002
Ecological Toxicity (11%) .....	0.0473	0.0012
Eutrophication (5%) .....	0.0072	0.0008
Fossil Fuel Depletion (5%) .....	0.0247	0.0055
Global Warming (16%) .....	0.0085	0.0019
Habitat Alteration (16%) .....	0.0000	0.0000
Human Health (11%) .....	0.0076	0.0021
Indoor Air (11%) .....	0.0000	0.0000
Ozone Depletion (5%) .....	0.0000	0.0000
Smog (6%) .....	0.0027	0.0009
Water Intake (3%) .....	0.0022	0.0001
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	65.63	27.50
First Cost .....	65.63	27.50
Future Cost (3.9%) .....	( <sup>3</sup> )	( <sup>3</sup> )
Functional Unit .....	5 gallons.	

<sup>1</sup> Numbers in parentheses indicate weighting factor.

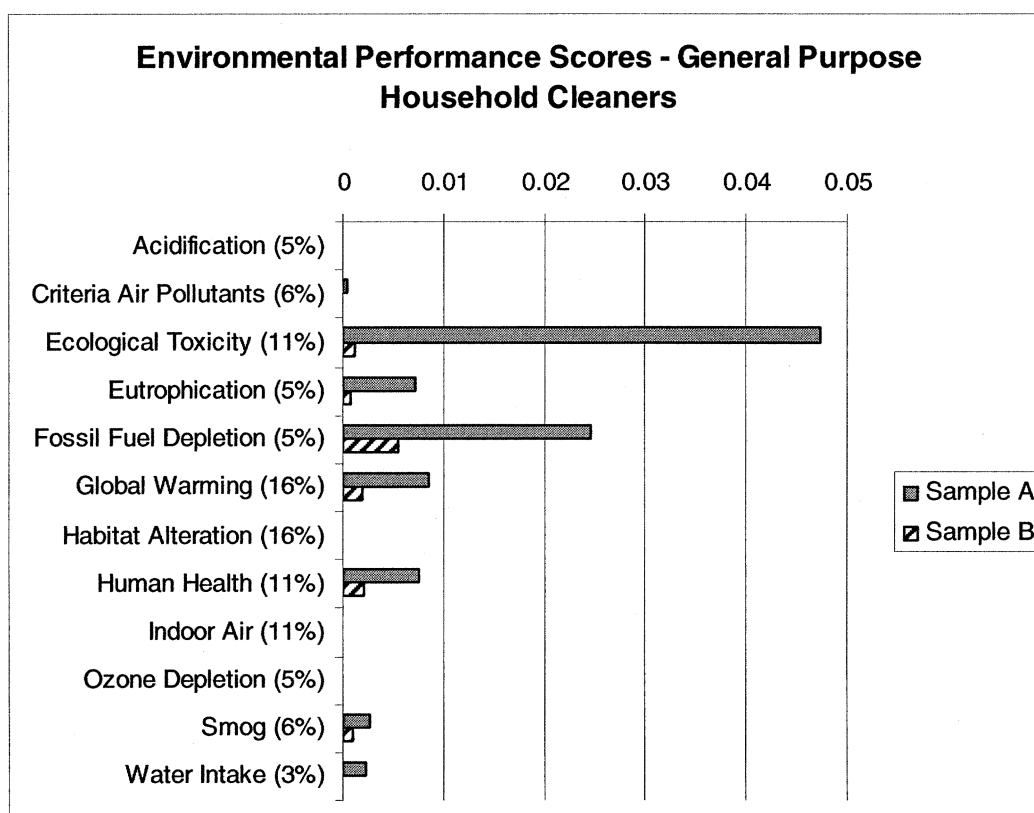
<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.

As seen in Table 6b, the total environmental performance scores are 0.0127 and 0.1005 points per five

gallons of product. The life-cycle costs of the submitted household cleaners are

\$27.50 and \$65.63 (present value dollars) per five gallons of product.



**Figure 6. BEES Environmental Performance Scores for General Purpose Household Cleaners**

## 7. Industrial Cleaners

Industrial cleaners are products used to remove contaminants, such as adhesives, inks, paint, dirt, soil, and grease, from parts, products, tools, machinery, equipment, vessels, floors, walls, and other production-related work areas. Cleaning operations are performed for a variety of reasons, such as safety and operability, and to avoid contamination of the products being manufactured or repaired at the facility. The cleaning products within this item are usually solvents, but may take other forms. They may be used in either straight solution or diluted with water in pressure washers, or in hand wiping applications in industrial or manufacturing settings, such as inside vessels.

Cleaners within this item are used in industrial settings in which production processes take place. This distinguishes these types of cleaners from institutional cleaners, which are used in settings where production processes do not take place.

Procuring agencies should note that, as discussed in Section II of this preamble, not all biobased cleaning products are “environmentally preferable” to non-biobased products.

Unless cleaning products have been formulated to contain no (or reduced levels of) metals and toxic and hazardous constituents, they can be harmful to aquatic life, the environment, and/or workers. When purchasing environmentally preferable cleaning products, Federal agencies should compare the “cradle-to-grave” impacts of the manufacture, use, and disposal of both biobased and non-biobased products in order to determine which product is environmentally preferable.

USDA identified 59 different manufacturers producing 122 individual biobased industrial cleaner and/or solvent products. The 59 manufacturers do not necessarily include all manufacturers of biobased industrial cleaners, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified test methods, performance standards, and other measures of performance used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and

other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

### Test Methods

- ASTM D445, “Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity);”
- ASTM D92, “Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester;”
- ASTM D1364, “Standard Test Method for Water in Volatile Solvents (Karl Fischer Reagent Titration Method);” and
- Environmental Protection Agency Method #24—Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coating.

### Performance Standards

- ASTM D446, “Standard Specifications and Operating Instructions for Glass Capillary Kinematic Viscometers;”
- ASTM D13, “Standard Specification for Spirits of Turpentine;”
- ASTM D1836, “Standard Specification for Commercial Hexanes;”

- ASTM D235, “Standard Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Spirits);”
- ASTM D3278, “Standard Specification for 2-Ethoxyethyl Acetate (99% Grade);”
- Green Seal #GS-37, Green Seal Environmental Standard for General-Purpose, Bathroom, Glass, and Carpet Cleaners Used for Industrial and Institutional Purposes; and
- Boeing #BAC 5750, Solvent Cleaning.

#### Product Certifications and Other Measures

- Section 612 of EPA’s Significant New Alternatives Policy (SNAP);
  - Green Seal #GS-37, Green Seal Environmental Standard for General-Purpose, Bathroom, Glass, and Carpet Cleaners Used for Industrial and Institutional Purposes; and
  - EPA’s National Contingency Plan.
- USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on “Chain and Cable Lubricants.” These attempts were largely unsuccessful. However, Federal agencies routinely

use, or procure contract services, such as cleaning and maintenance services, that use industrial cleaners. Thus, there is a need for industrial cleaners. Designation of “industrial cleaners” will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased industrial cleaners was performed for three of the products using the BEES analytical tool. The impact values for these three products are presented in Table 7a. The environmental performance scores are presented in Table 7b and in Figure 7.

TABLE 7A—IMPACT VALUES FOR INDUSTRIAL CLEANERS

Environmental impact area	Units	Sample A	Sample B	Sample C
Acidification .....	millimoles of hydrogen ion equivalents .....	433	11,100	34,000
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	0.134	3.56	16.2
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	79.5	234	76.5
Eutrophication .....	grams of nitrogen equivalent .....	0.971	58.7	45.2
Fossil Fuel Depletion .....	megajoules of surplus energy .....	16.7	470	133
Global Warming .....	grams of carbon dioxide equivalents .....	953	32,600	158,000
Habitat Alteration .....	threatened and endangered species count .....	0	0	0
Human Health .....	grams of toluene equivalent .....	4,940	291,000	103,000
Indoor Air .....	grams of total volatile organic compounds .....	0	0	0
Ozone Depletion .....	grams of chloroflouro-carbon-11 equivalents .....	1.66E-08	2.21E-04	5.19E-06
Smog .....	grams of nitrogen oxide equivalents .....	15.5	139	198
Water Intake .....	liters of water .....	48.7	623	287
Functional Unit .....	5 gallons of product.			

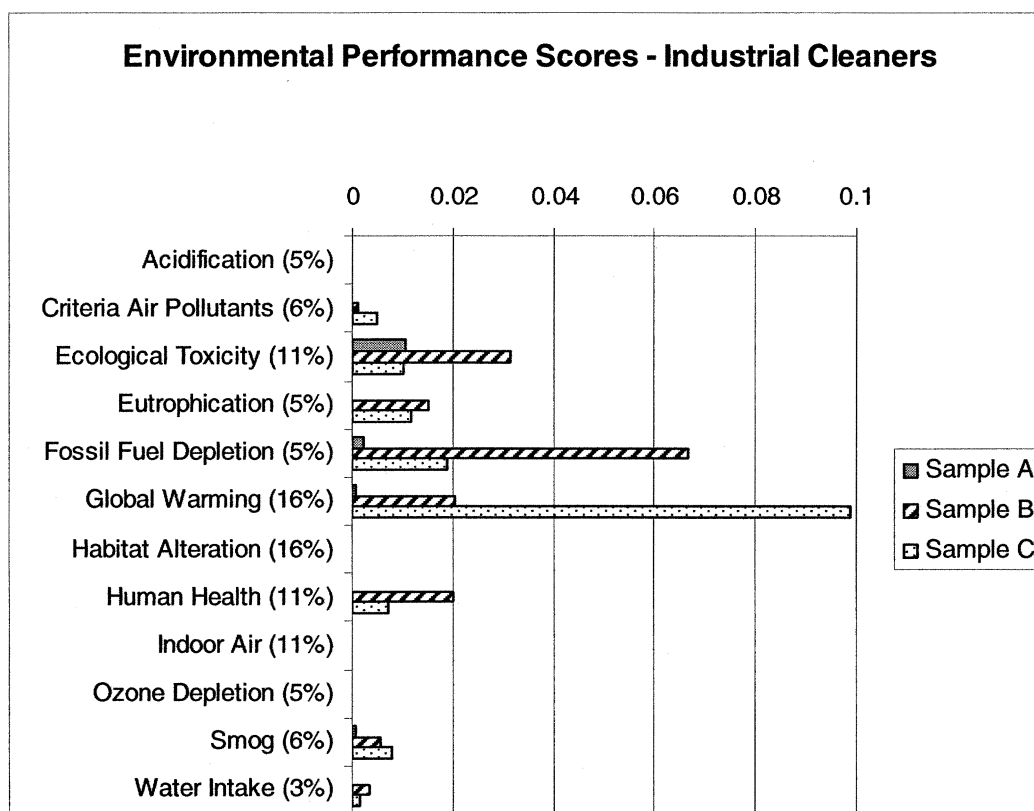
TABLE 7B—ENVIRONMENTAL PERFORMANCE SCORES FOR INDUSTRIAL CLEANERS

Environmental impact area	Sample A	Sample B	Sample C
Total Environmental Performance Score <sup>1</sup> .....	0.0152	0.1641	0.1615
Acidification (5%) .....	0.0000	0.0000	0.0000
Criteria Air Pollutants (6%) .....	0.0000	0.0011	0.0051
Ecological Toxicity (11%) .....	0.0107	0.0316	0.0103
Eutrophication (5%) .....	0.0003	0.0153	0.0118
Fossil Fuel Depletion (5%) .....	0.0024	0.0665	0.0189
Global Warming (16%) .....	0.0006	0.0204	0.0989
Habitat Alteration (16%) .....	0.0000	0.0000	0.0000
Human Health (11%) .....	0.0003	0.0202	0.0071
Indoor Air (11%) .....	0.0000	0.0000	0.0000
Ozone Depletion (5%) .....	0.0000	0.0000	0.0000
Smog (6%) .....	0.0006	0.0055	0.0078
Water Intake (3%) .....	0.0003	0.0035	0.0016
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	8.85	82.00	84.95
First Cost .....	8.85	82.00	84.95
Future Cost (3.9%) .....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )
Functional Unit .....	Five gallons of product.		

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.



**Figure 7. BEES Environmental Performance Scores  
for Industrial Cleaners**

As seen in Table 7b, the total environmental performance scores range from 0.0152 to 0.1641 per five gallons of product. The life-cycle costs of the submitted industrial cleaners range from \$8.85 to \$84.95 (present value dollars) per five gallons of product.

#### 8. Multipurpose Cleaners

Multipurpose cleaners are used to clean dirt, grease, and grime from a variety of items and are used in both industrial and domestic settings. Multipurpose cleaners are intended for broader applications than those cleaners designated as general purpose household cleaners, task-specific cleaners (e.g., bathroom and spa cleaners), and industrial cleaners. In today's proposed rule, the definition of multipurpose cleaners excludes products that are formulated for use as disinfectants.

Procuring agencies should note that, as discussed in Section II of this preamble, not all biobased cleaning products are "environmentally preferable" to non-biobased products. Unless cleaning products have been formulated to contain no (or reduced levels of) metals and toxic and hazardous constituents, they can be harmful to aquatic life, the environment,

and/or workers. When purchasing environmentally preferable cleaning products, Federal agencies should compare the "cradle-to-grave" impacts of the manufacture, use, and disposal of both biobased and non-biobased products in order to determine which product is environmentally preferable.

USDA identified 39 different manufacturers producing 61 individual biobased multipurpose cleaner products. These 39 manufacturers do not necessarily include all manufacturers of biobased multipurpose cleaners, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these products are being used commercially. In addition, manufacturers and stakeholders identified several test methods and other measures of performance and one performance standard used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

#### Test Methods

- ASTM D1298, "Standard Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method";
- ASTM D130, "Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test";
- ASTM D2500, "Standard Test Method for Cloud Point of Petroleum Products";
- ASTM D86, "Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure";
- Environmental Protection Agency Method #601, Purgeable Halocarbons;
- Environmental Protection Agency Method #602, Purgeable Aromatics;
- Environmental Protection Agency Method #608, Organochlorine Pesticides and PCBs;
- Organization for Economic Cooperation and Development #OECD 301B—CO<sub>2</sub> Evolution Test for Biodegradation;
- Society of Automotive Engineers #APR 1755B—Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method;
- Green Seal #GS-37, Green Seal Environmental Standard for General-

Purpose, Bathroom, Glass, and Carpet Cleaners Used for Industrial and Institutional Purposes; and

- Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA #600/4-90-027F).

Performance Standards

- Green Seal #GS-34—Standard Establishing Environmental Requirements for Cleaning/Degreasing Agents.

Product Certifications and Other Measures

- Choice Eco Logo (Canada);
- Acute Dermal Toxicity; and
- Acute Oral Toxicity.

USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on “Chain and Cable Lubricants.” These attempts were largely unsuccessful. However, Federal agencies routinely use, or procure contract services that use, multipurpose cleaners in a variety of cleaning and maintenance activities.

Thus, there is a need for multipurpose cleaners. Designation of “multipurpose cleaners” will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased multipurpose cleaners was performed for one of the products using the BEES analytical tool. The impact values for this multipurpose cleaner are presented in Table 8a. The environmental performance scores are presented in Table 8b and in Figure 8.

TABLE 8A—SUMMARY OF BEES RESULTS FOR MULTIPURPOSE CLEANERS—IMPACT VALUES

Environmental impact area	Units	Sample A
Acidification .....	millimoles of hydrogen ion equivalents .....	2,910
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	1.19
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	158
Eutrophication .....	grams of nitrogen equivalent .....	17.5
Fossil Fuel Depletion .....	megajoules of surplus energy .....	5.12
Global Warming .....	grams of carbon dioxide equivalents .....	4,680
Habitat Alteration .....	threatened and endangered species count .....	0
Human Health .....	grams of toluene equivalent .....	47,100
Indoor Air .....	grams of total volatile organic compounds .....	0
Ozone Depletion .....	grams of chlorofluoro-carbon-11 equivalents .....	4.53E-06
Smog .....	grams of nitrogen oxide equivalents .....	65.1
Water Intake .....	liters of water .....	4,000
Functional Unit .....		(1)

<sup>1</sup> 1,000 gallons of diluted and ready to use multipurpose cleaner.

TABLE 8B—ENVIRONMENTAL PERFORMANCE SCORES FOR MULTIPURPOSE CLEANERS

Environmental impact area	Sample A
BEES Environmental Performance—Total Score <sup>1</sup> .....	0.0649
Acidification (5%) .....	0.0000
Criteria Air Pollutants (6%) .....	0.0004
Ecological Toxicity (11%) .....	0.0213
Eutrophication (5%) .....	0.0046
Fossil Fuel Depletion (5%) .....	0.0072
Global Warming (16%) .....	0.0029
Habitat Alteration (16%) .....	0.0000
Human Health (11%) .....	0.0033
Indoor Air (11%) .....	0.0000
Ozone Depletion (5%) .....	0.0000
Smog (6%) .....	0.0026
Water Intake (3%) .....	0.0226
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	5,950.00
First Cost .....	5,950.00
Future Cost (3.9%) .....	( <sup>3</sup> )
Functional Unit .....	( <sup>4</sup> )

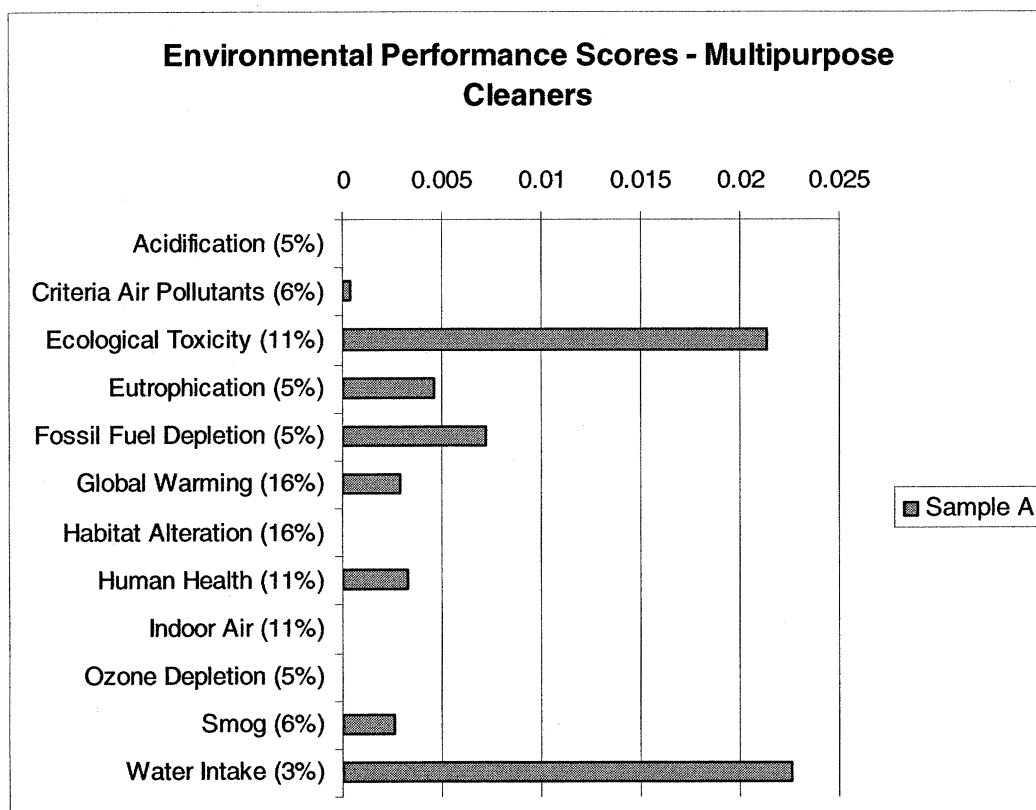
<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.

<sup>4</sup> 1,000 gallons of diluted and ready to use multipurpose cleaner.





**Figure 8. BEES Environmental Performance Scores for Multipurpose Cleaners**

As seen in Table 8b, the total environmental performance score and the life-cycle cost for the submitted multipurpose cleaner are, respectively, 0.0649 points per 1,000 gallons of diluted and ready to use product and \$5,950.00 per 1,000 gallons of diluted and ready to use product.

#### 9. Parts Wash Solutions

Parts wash solutions are products used in cleaning and machining parts to remove dirt and grease buildup on used parts. The products are intended to be used in manual or automatic cleaning systems including, but not limited to, soak vats and tanks, ultrasonic cleaners, and cabinet washers.

USDA identified 16 different manufacturers producing 22 individual biobased parts wash solution products. These 16 manufacturers do not necessarily include all manufacturers of biobased parts wash solutions, merely those identified during USDA information gathering activities. Information supplied by these manufacturers indicates that these

products are being used commercially. In addition, manufacturers and stakeholders identified four test methods used in evaluating products within this item. While there may be additional test methods, as well as performance standards, product certifications, and other measures of performance applicable to products within this item, those identified by manufacturers of products within this item are:

#### Test Methods

- ASTM D445, "Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)";
- ASTM D446, "Standard Specifications and Operating Instructions for Glass Capillary Kinematic Viscometers";
- ASTM D877, "Standard Test Method for Dielectric Breakdown Voltage of Insulating Liquids Using Disk Electrodes"; and
- ASTM D92, "Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester".

USDA attempted to gather data on the potential market for biobased products within the Federal government using the procedure described in the section on "Chain and Cable Lubricants." These attempts were largely unsuccessful. USDA is aware of biobased parts wash solutions being used by at least one U.S. Air Force base that overhauls aircraft parts. However, Federal agencies or their services contractors routinely perform, and procure services that perform, the types of cleaning and maintenance activities that utilize parts wash solutions. Thus, there is a need for parts wash solutions. Designation of "parts wash solutions" will promote the use of biobased products, furthering the objectives of this program.

An analysis of the environmental and human health benefits and the life-cycle costs of biobased parts wash solutions was performed for two of the products using the BEES analytical tool. The impact values for these two parts wash solutions are presented in Table 9a. The environmental performance scores are presented in Table 9b and in Figure 9.

TABLE 9A—IMPACT VALUES FOR PARTS WASH SOLUTIONS

Environmental impact area	Units	Sample A	Sample B
Acidification .....	millimoles of hydrogen ion equivalents .....	2,870	1,960
Criteria Air Pollutants .....	micro Disability-Adjusted Life Years .....	1.12	0.594
Ecological Toxicity .....	grams of 2,4-dichloro-phenoxy-acetic acid .....	71.4	40.1
Eutrophication .....	grams of nitrogen equivalent .....	8.83	10.7
Fossil Fuel Depletion .....	megajoules of surplus energy .....	130	76.4
Global Warming .....	grams of carbon dioxide equivalents .....	7,560	5,100
Habitat Alteration .....	threatened and endangered species count .....	0	0
Human Health .....	grams of toluene equivalent .....	75,400	55,200
Indoor Air .....	grams of total volatile organic compounds .....	0	0
Ozone Depletion .....	grams of chloroflouro-carbon-11 equivalents .....	1.10E-05	2.03E-06
Smog .....	grams of nitrogen oxide equivalents .....	30.3	21.5
Water Intake .....	liters of water .....	92.6	117
Functional Unit .....		1 gallon	

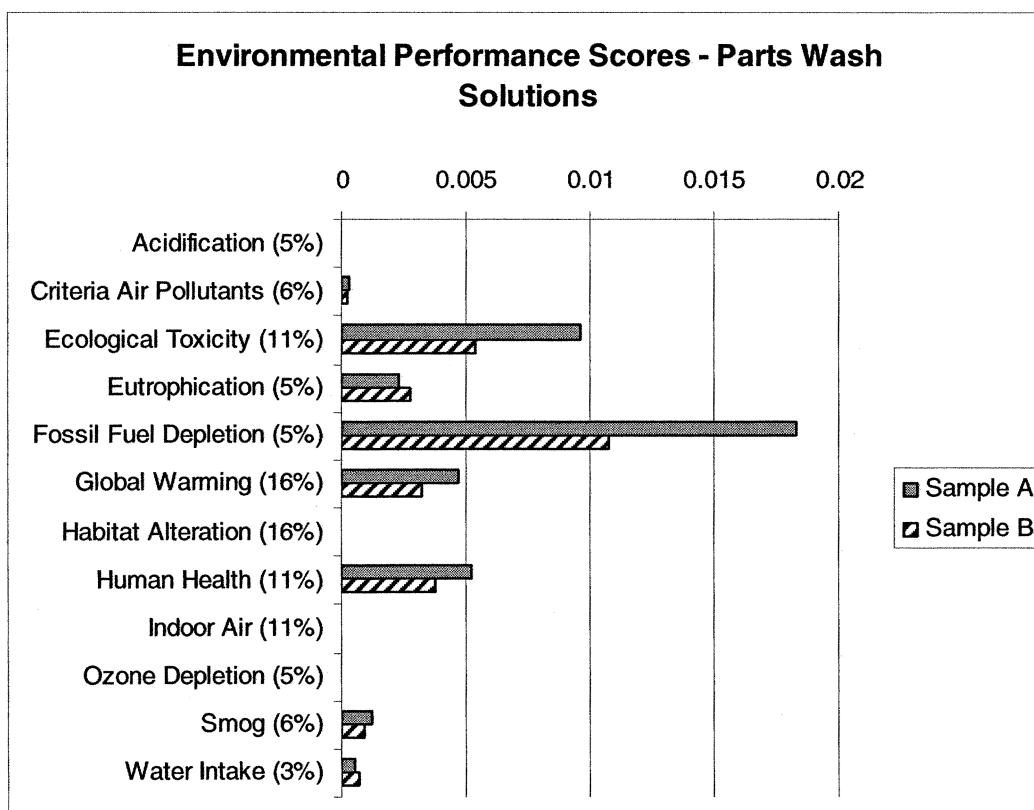
TABLE 9B—SUMMARY OF BEES RESULTS FOR PARTS WASH SOLUTIONS—ENVIRONMENTAL PERFORMANCE SCORES

Environmental impact area	Sample A	Sample B
Total Environmental Performance Score <sup>1</sup> .....	0.0421	0.0278
Acidification (5%) .....	0.0000	0.0000
Criteria Air Pollutants (6%) .....	0.0003	0.0002
Ecological Toxicity (11%) .....	0.0096	0.005
Eutrophication (5%) .....	0.0023	0.0028
Fossil Fuel Depletion (5%) .....	0.0183	0.0108
Global Warming (16%) .....	0.0047	0.0032
Habitat Alteration (16%) .....	0.0000	0.0000
Human Health (11%) .....	0.0052	0.0038
Indoor Air (11%) .....	0.0000	0.0000
Ozone Depletion (5%) .....	0.0000	0.0000
Smog (6%) .....	0.0012	0.0009
Water Intake (3%) .....	0.0005	0.0007
Economic Performance (Life-cycle Costs (\$)) <sup>2</sup> .....	10.43	16.99
First Cost .....	10.43	16.99
Future Cost (3.9%) .....	( <sup>3</sup> )	( <sup>3</sup> )
Functional Unit .....	gallon of parts wash solution	

<sup>1</sup> Numbers in parentheses indicate weighting factor.

<sup>2</sup> Costs are per functional unit.

<sup>3</sup> For this item, no significant/quantifiable performance or durability differences were identified among competing alternative products. Therefore, future costs were not calculated.



**Figure 9. BEES Environmental Performance Scores for Parts Wash Solutions**

As seen in Table 9b, the total environmental performance scores are 0.0278 and 0.0421 points per gallon of product. The life-cycle costs of the submitted parts wash solutions are \$10.43 and \$16.99 (present value dollars) per gallon of product.

#### *C. Minimum Biobased Contents*

USDA has determined that setting a minimum biobased content for designated items is appropriate. Establishing a minimum biobased content will encourage competition among manufacturers to develop products with higher biobased contents and will prevent products with de minimus biobased content from being purchased as a means of satisfying the requirements of section 9002. USDA believes that it is in the best interest of the preferred procurement program for minimum biobased contents to be set at levels that will realistically allow products to possess the necessary performance attributes and allow them to compete with non-biobased products in performance and economics. Setting the minimum biobased content for an item at a level met by several of the tested products will provide more products from which procurement officials may choose, will encourage the

most widespread usage of biobased products by procuring agencies, and is expected to accomplish the objectives of section 9002.

As discussed in Section IV.A of this preamble, USDA relied entirely on manufacturers' voluntary submission of samples to support the proposed designation of these items. The data presented in the following paragraphs are the test results from all of the product samples that were submitted for analysis.

As a result of public comments received on the first designated items rulemaking proposal, USDA decided to account for the slight imprecision in the analytical method used to determine biobased content of products when establishing the minimum biobased content. Thus, rather than establishing the minimum biobased content for an item at the tested biobased content of the product selected as the basis for the minimum value, USDA is establishing the minimum biobased content at a level three (3) percentage points less than the tested value. USDA believes that this adjustment is appropriate to account for the expected variations in analytical results.

USDA encourages procuring agencies to seek products with the highest

biobased content that is practicable in all of the proposed designated items. To assist the procuring agencies in determining which products have the highest biobased content, USDA will update the information in the biobased products catalog to include the biobased content of each product. Those products within each designated item that have the highest biobased content will be listed first and others will be listed in descending order. USDA is specifically requesting comments on the proposed minimum biobased contents of designated items and also requests additional data that can be used to re-evaluate the appropriateness of the proposed minimum biobased contents. As the market for biobased products develops and USDA obtains additional biobased content data, it will re-evaluate the established minimum biobased contents of designated items and consider raising them whenever justified.

The following paragraphs summarize the information that USDA used to propose minimum biobased contents within each proposed designated item.

#### *1. Chain and Cable Lubricants*

Nine of the 37 biobased chain and cable lubricants identified have been

tested for biobased content using ASTM D6866.<sup>2</sup> The biobased contents of these nine biobased chain and cable lubricants ranged from 80 percent to 100 percent, as follows: 80, 81, 86, 89, 96, 99, 100, 100, and 100.

The biobased contents for the tested products fall within a fairly narrow range with no significant breaks or gaps in the data. Therefore, USDA is proposing to set the minimum biobased content for this item at 77 percent, based on the product with a tested biobased content of 80 percent. The tested 80 percent value is adjusted to 77 percent to account for possible variability in the results of ASTM D6866, as discussed earlier.

## 2. Corrosion Preventatives

Ten of the 97 available biobased corrosion preventatives have been tested for biobased content using ASTM D6866. The biobased contents of these ten biobased corrosion preventatives ranged from 26 percent to 94 percent as follows: 26, 26, 56, 59, 61, 74, 85, 91, 92, and 94.

As seen, the tested biobased contents cover a wide range, from 26 percent to 94 percent, with a significant gap in the range between the 26 and 56 percent products and another between the 61 and 74 percent products. USDA reviewed the product information for the two products with 26 percent biobased content to determine if there was any justification for creating a subcategory within the item or for considering these products when setting the proposed minimum biobased content. USDA did not identify any performance or applicability features of these products that justified creating a subcategory or setting the minimum biobased content at a level that would include them. USDA next evaluated the available information for the group of products with biobased contents between 56 and 61 percent. USDA found that the manufacturer of the product with a biobased content of 61 percent indicates that their product meets the ASTM D665 Turbine Oil Rust Test. The manufacturers of the products with higher biobased contents have not indicated that their products meet this performance level. USDA does not have sufficient information to otherwise distinguish among the products in the

group of products whose biobased contents range from 56 to 61 percent. For these reasons, USDA is proposing to set the minimum biobased content for this item at 53 percent, based on the product with the lowest biobased content in the group of products with tested biobased contents of 56 to 61 percent.

## 3. Food Cleaners

Five of the 15 biobased food cleaners identified have been tested for biobased content using ASTM D6866. The biobased contents of these five biobased food cleaners ranged from 56 percent to 98 percent as follows: 56, 61, 65, 76, and 98.

While this is a fairly wide range of biobased contents between the lowest biobased content and the highest biobased content among the tested products, the only significant gap in the data is between the 76 and the 98 percent products. Because most of the biobased contents are grouped towards the lower end of the range, USDA evaluated the available information for these products to determine if there was justification for creating separate subcategories for these products and for the one product with 98 percent biobased content. USDA found that there was not sufficient information on performance or applicability of the products to support the creation of subcategories. Therefore, USDA is proposing to set the minimum biobased content for this item at 53 percent, based on the product with the lowest biobased content in the group of products with tested biobased contents ranging from 56 to 65 percent.

## 4. Forming Lubricants

Five of the 13 biobased forming lubricants identified have been tested for biobased content using ASTM D6866. The biobased contents of these five biobased forming lubricants ranged from 38 percent to 99 percent as follows: 38, 71, 85, 85, and 99.

Considering that there is a significant gap in the data points between the 38 and 71 percent biobased products, USDA evaluated the information available on these products to determine if there was justification for creating subcategories. USDA found that there was not sufficient information to create subcategories or to include the 38 percent biobased product when setting the minimum biobased content for the item. USDA found that the product with 71 percent biobased content was product claimed by its manufacturer to be biodegradable, while the manufacturers of the 85 and 99 percent biobased products did not make such

claims for their products. Because biodegradability is a desired feature, USDA is proposing to set the minimum biobased content for this item at 68 percent, based on the product with a tested biobased content of 71 percent.

## 5. Gear Lubricants

Eight of the 24 biobased gear lubricants identified have been tested for biobased content using ASTM D6866. The biobased contents of these eight biobased gear lubricants ranged from 4 percent to 100 percent as follows: 4, 61, 69, 81, 87, 89, 97, and 100.

Because there is a significant gap in biobased content between the products with 4 and 61 percent biobased content, USDA evaluated the 4 percent biobased product to determine if it possessed performance or applicability features that the other products did not. USDA found no performance or applicability characteristics that set this product apart from other products in this item. Therefore, USDA dropped this product from consideration in setting the minimum biobased content for this item.

The tested biobased content of the remaining six products, as shown above, ranged from 61 percent to 100 percent. USDA found that the manufacturers of the products with 61 and 69 percent biobased content have tested their products against numerous performance standards and that the remaining manufacturers do not claim to have done so. To ensure that products are available within this item that meet a range of performance standards, USDA is proposing to set the minimum biobased content for this item at 58 percent, based on the product with a tested biobased content of 61 percent.

## 6. General Purpose Household Cleaners

Nine of the 24 biobased general purpose household cleaners identified have been tested for biobased content using ASTM D6866. The biobased contents of these nine biobased general purpose household cleaners ranged from 10 percent to 95 percent as follows: 10, 42, 54, 61, 72, 81, 82, 91, and 95.

The biobased content of the 10 percent product is substantially below the next lowest tested product (42 percent) and USDA found no performance or applicability characteristics that set the 10 percent product apart from other products in this item. Therefore, USDA dropped this product from consideration in setting the minimum biobased content for this item.

<sup>2</sup> ASTM D6866, "Standard Test Methods for Determining the Biobased Content of Natural Range Materials Using Radiocarbon and Isotope Ratio Mass Spectrometry Analysis," is used to distinguish between carbon from fossil resources (non-biobased carbon) and carbon from renewable sources (biobased carbon). The biobased content is expressed as the percentage of total carbon that is biobased carbon.

The tested biobased contents of the remaining eight products, as shown above, ranged from 42 percent to 95 percent. Because this is a wide range of values, USDA considered the possibility of creating subcategories within this item. However, USDA does not have sufficient data on the performance and applicability of products within this item to support the creation of subcategories. USDA will continue to request product performance data and, if sufficient supporting data can be obtained, will consider creating subcategories within this item in the final rule. Because of the lack of supporting data for subcategorization and because there are no significant gaps in the biobased content of the eight products being considered, USDA is proposing to set the minimum biobased content for general purpose household cleaners at 39 percent, based on the product with a tested biobased content of 42 percent.

#### 7. Industrial Cleaners

Thirty-two of the 121 biobased industrial cleaners identified have been tested for biobased content using ASTM D6866. The tested biobased contents for these 32 biobased industrial cleaners ranged from 2 percent to 100 percent, as follows: 2, 18, 18, 44, 49, 52, 61, 69, 73, 74, 77, 79, 80, 80, 82, 85, 91, 92, 92, 94, 95, 95, 96, 96, 97, 97, 98, and 100 (five products).

Because there is a significant gap between the 18 and the 44 percent biobased content products, USDA reviewed the information on the three products with tested biobased contents of 2 percent and 18 percent to determine if subcategorization was justified. USDA found no performance or applicability characteristics that set these products apart from other products in this item and, thus, they were eliminated from consideration for establishing the minimum biobased content.

The tested biobased contents of the remaining 26 products, as shown above, ranged from 44 percent to 100 percent. Because of the variability of the substrates to be cleaned and of the contaminants that are encountered on those substrates, USDA considered subcategorizing this item. However, at the present time USDA does not have sufficient data to segregate the various products into subcategories based on formulation or performance. As a result, USDA is proposing to maintain industrial cleaners as a single item. Because there are no significant gaps in the 26 biobased content data points being considered, USDA proposes to set the minimum biobased content for this item at 41 percent, based on the product

with a tested biobased content of 44 percent. If sufficient data become available after proposal, USDA will re-evaluate the possibility of subcategorizing this item.

#### 8. Multipurpose Cleaners

Eighteen of the 62 biobased multipurpose cleaners identified have been tested for biobased content using ASTM D6866. The biobased contents of these 18 biobased multipurpose cleaners ranged from 11 percent to 96 percent as follows: 11, 15, 25, 28, 31, 37, 45, 49, 59, 65, 69, 72, 78, 79, 84, 88, 96, and 96.

As with the industrial cleaners item, USDA considered subcategorizing this item based on factors such as product formulations, the variability of the substrates to be cleaned, and the contaminants that are encountered. However, at the present time USDA does not have sufficient data to segregate the various products into subcategories based on formulation or performance. As a result, USDA is proposing to maintain multipurpose cleaners as a single item. Although there are no large gaps in the range of biobased content data points, USDA considered the 10-point gap between the 49 and the 59 percent biobased content products to be sufficient for creating two groups of products; one with biobased contents of 49 percent and lower and one with biobased contents of 59 percent and higher. USDA evaluated the product information available for each product within the two product groups and was unable to identify performance or applicability features in the 49 percent and lower group that were not available in the 59 percent and higher group. Thus, USDA proposes to set the minimum biobased content for this item at 56 percent, based on the 59 percent biobased product from the group of products with the higher biobased contents. If sufficient data become available after proposal, USDA will re-evaluate the possibility of subcategorizing this item.

#### 9. Parts Wash Solutions

Seven of the 22 biobased parts wash solutions identified have been tested for biobased content using ASTM D6866. The biobased contents of these seven biobased parts wash solutions ranged from 12 percent to 96 percent as follows: 12, 13, 68, 83, 89, 94, and 96.

Because there is a significant gap between the 13 and the 68 percent biobased content products, USDA reviewed the information on the products with tested biobased contents of 12 percent and 13 percent to determine if subcategorization was justified. USDA found no performance

or applicability characteristics that set these products apart from other products in this item and, thus, they were eliminated from consideration for establishing the minimum biobased content.

Because the overall range of the five remaining data points is fairly narrow, and the available product information does not support any subcategorization of this item, USDA is proposing to set the minimum biobased content for parts wash solutions at 65 percent, based on the product with a tested biobased content of 68 percent.

#### *D. Compliance Date for Procurement Preference and Incorporation Into Specifications*

USDA intends for the final rule to take effect thirty (30) days after publication of the final rule. However, as proposed, procuring agencies would have a one-year transition period, starting from the date of publication of the final rule, before the procurement preference for biobased products within a designated item would take effect.

USDA is proposing a one-year period before the procurement preferences would take effect based on recognizing that Federal agencies will need time to incorporate the preferences into procurement documents and to revise existing standardized specifications. Section 9002(a)(3), as amended by the FCEA of 2008, and section 2902(c) of 7 CFR part 2902 explicitly acknowledge the latter need for Federal agencies to have sufficient time to revise the affected specifications to give preference to biobased products when purchasing the designated items. Procuring agencies will need time to evaluate the economic and technological feasibility of the available biobased products for their agency-specific uses and for compliance with agency-specific requirements, including manufacturers' warranties for machinery in which the biobased products would be used.

By the time these items are promulgated for designation, Federal agencies will have had a minimum of 18 months (from the date of this **Federal Register** notice), and much longer considering when the Guidelines were first proposed and these requirements were first laid out, to implement these requirements.

For these reasons, USDA proposes that the mandatory preference for biobased products under the designated items take effect one year after promulgation of the final rule. The one-year period provides these agencies with ample time to evaluate the economic and technological feasibility of biobased products for a specific use

and to revise the specifications accordingly. However, some agencies may be able to complete these processes more expeditiously, and not all uses will require extensive analysis or revision of existing specifications. Although it is allowing up to one year, USDA encourages procuring agencies to implement the procurement preferences as early as practicable for procurement actions involving any of the designated items.

## V. Where Can Agencies Get More Information on These USDA-Designated Items?

Information used to develop this proposed rule can be found in the technical support document, which can be accessed on the BioPreferred Web site, which is located at: <http://www.biopreferred.gov>. At the BioPreferred Web site, click on the Proposed and Final Regulations link on the left side of the page. At the next screen, click on the Supporting Documentation link under Round 5 Designated Items under the Proposed Regulations section.

Further, once the item designations in today's proposal become final, manufacturers and vendors voluntarily may make available information on specific products, including product and contact information, for posting by USDA on the BioPreferred Web site. USDA will periodically audit the information displayed on the BioPreferred Web site and, where questions arise, contact the manufacturer or vendor to verify, correct, or remove incorrect or out-of-date information. Procuring agencies should contact the manufacturers and vendors directly to discuss specific needs and to obtain detailed information on the availability and prices of biobased products meeting those needs.

By accessing the BioPreferred Web site, agencies will also be able to obtain the voluntarily posted information on each product concerning: Relative price; life-cycle costs; hot links directly to a manufacturer's or vendor's Web site (if available); performance standards (industry, government, military, ASTM/ISO) that the product has been tested against; and environmental and public health information from the BEES analysis or the alternative analysis embedded in ASTM Standard D7075, "Standard Practice for Evaluating and Reporting Environmental Performance of Biobased Products."

USDA has linked the BioPreferred Web site to DoD's list of specifications and standards, which can be used as guidance when procuring products. To

access this list, go to the BioPreferred Web site and click on the "Selling to Federal Government" tab and look for the DoD Specifications link.

## VI. Regulatory Information

### A. Executive Order 12866: Regulatory Planning and Review

Executive Order 12866 requires agencies to determine whether a regulatory action is "significant." The Order defines a "significant regulatory action" as one that is likely to result in a rule that may: "(1) Have an annual effect on the economy of \$100 million or more or adversely affect, in a material way, the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order."

Today's proposed rule has been determined significant for purposes of Executive Order 12866 and, therefore, has been reviewed by the Office of Management and Budget. We are not able to quantify the annual economic effect associated with today's proposed rule. As discussed earlier in this preamble, USDA made extensive efforts to obtain information on the Federal agencies' usage within today's designated items, including their subcategories. These efforts were largely unsuccessful. Therefore, attempts to quantify the economic impact of today's proposed rule would require estimation of the anticipated market penetration of biobased products based upon many assumptions. In addition, because agencies have the option of not purchasing designated items if costs are "unreasonable," the product is not readily available, or the product does not demonstrate necessary performance characteristics, certain assumptions may not be valid. While facing these quantitative challenges, USDA relied upon a qualitative assessment to determine the impacts of today's proposed rule. This assessment was based primarily on the offsetting nature of the program (an increase in biobased products purchased with a corresponding decrease in fossil energy-based products (including petroleum, coal and natural gas) purchased).

Consideration was also given to the fact that agencies may choose not to procure designated items due to unreasonable costs.

### 1. Summary of Impacts

Today's proposed rule is expected to have both positive and negative impacts on individual businesses, including small businesses. USDA anticipates that the biobased preferred procurement program will provide additional opportunities for businesses and manufacturers to begin supplying products under the proposed designated biobased items to Federal agencies and their contractors. However, other businesses and manufacturers that supply only non-qualifying products and do not offer biobased alternatives may experience a decrease in demand from Federal agencies and their contractors. USDA is unable to determine the number of businesses, including small businesses, which may be adversely affected by today's proposed rule. The proposed rule, however, will not affect existing purchase orders, nor will it preclude businesses from modifying their product lines to meet new requirements for designated biobased products. Because the extent to which procuring agencies will find the performance and costs of biobased products acceptable is unknown, it is impossible to quantify the actual economic effect of the rule.

### 2. Benefits of the Proposed Rule

The designation of these items provides the benefits outlined in the objectives of section 9002: To increase domestic demand for many agricultural commodities that can serve as feedstocks for production of biobased products; to spur development of the industrial base through value-added agricultural processing and manufacturing in rural communities; to enhance the Nation's energy security by substituting biobased products for products derived from imported oil and natural gas; and to substitute products with a possibly more benign or beneficial environmental impact, as compared to the use of fossil energy-based products. On a national and regional level, today's proposed rule can result in expanding and strengthening markets for biobased materials used in these items.

### 3. Costs of the Proposed Rule

Like the benefits, the costs of today's proposed rule have not been quantified. Two types of costs are involved: Costs to producers of products that will compete with the preferred products and costs to Federal agencies to provide

procurement preference for the preferred products. Producers of competing products may face a decrease in demand for their products to the extent Federal agencies refrain from purchasing their products. However, it is not known to what extent this may occur. Procurement costs for Federal agencies may rise as they evaluate the availability and relative cost of preferred products before making a purchase.

#### *B. Regulatory Flexibility Act (RFA)*

The RFA, 5 U.S.C. 601–602, generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

USDA evaluated the potential impacts of its proposed designation of these items to determine whether its actions would have a significant impact on a substantial number of small entities. Because the preferred procurement program established under section 9002, as amended by the FCEA of 2008, applies only to Federal agencies and their contractors, small governmental (city, county, etc.) agencies are not affected. Thus, the proposal, if promulgated, will not have a significant economic impact on small governmental jurisdictions. USDA anticipates that this program will affect entities, both large and small, that manufacture or sell biobased products. For example, the designation of items for preferred procurement will provide additional opportunities for businesses to manufacture and sell biobased products to Federal agencies and their contractors. Similar opportunities will be provided for entities that supply biobased materials to manufacturers. Conversely, the biobased procurement program may decrease opportunities for businesses that manufacture or sell non-biobased products or provide components for the manufacturing of such products. However, the proposed rule will not affect existing purchase orders and it will not preclude procuring agencies from continuing to purchase non-biobased items under certain conditions relating to the availability, performance, or cost of biobased items. Today's proposed rule will also not preclude businesses from modifying their product lines to meet new specifications or solicitation requirements for these products

containing biobased materials. Thus, the economic impacts of today's proposed rule are not expected to be significant.

The intent of section 9002 is largely to stimulate the production of new biobased products and to energize emerging markets for those products. Because the program is still in its infancy, however, it is unknown how many businesses will ultimately be affected. While USDA has no data on the number of small businesses that may choose to develop and market products within the items proposed for designation by today's proposed rule, the number is expected to be small. Because biobased products represent an emerging market, only a small percentage of all manufacturers, large or small, are expected to develop and market biobased products. Thus, the number of small businesses affected by today's proposed rule is not expected to be substantial.

After considering the economic impacts of today's proposed rule on small entities, USDA certifies that this action will not have a significant economic impact on a substantial number of small entities. Today's proposed rule, therefore, does not require a regulatory flexibility analysis.

While not a factor relevant to determining whether the proposed rule will have a significant impact for RFA purposes, USDA has concluded that the effect of today's proposed rule would be to provide positive opportunities to businesses engaged in the manufacture of these biobased products. Purchase and use of these biobased products by procuring agencies may increase demand for these products and result in private sector development of new technologies, creating business and employment opportunities that enhance local, regional, and national economies. Technological innovation associated with the use of biobased materials can translate into economic growth and increased industry competitiveness worldwide, thereby, creating opportunities for small entities.

#### *C. Executive Order 12630: Governmental Actions and Interference With Constitutionally Protected Property Rights*

This proposed rule has been reviewed in accordance with Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights, and does not contain policies that would have implications for these rights.

#### *D. Executive Order 12988: Civil Justice Reform*

This proposed rule has been reviewed in accordance with Executive Order 12988, Civil Justice Reform. This proposed rule does not preempt State or local laws, is not intended to have retroactive effect, and does not involve administrative appeals.

#### *E. Executive Order 13132: Federalism*

This proposed rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment. Provisions of this proposed rule will not have a substantial direct effect on States or their political subdivisions or on the distribution of power and responsibilities among the various government levels.

#### *F. Unfunded Mandates Reform Act of 1995*

This proposed rule contains no Federal mandates under the regulatory provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538, for State, local, and tribal governments, or the private sector. Therefore, a statement under section 202 of UMRA is not required.

#### *G. Executive Order 12372: Intergovernmental Review of Federal Programs*

For the reasons set forth in the Final Rule Related Notice for 7 CFR part 3015, subpart V (48 FR 29115, June 24, 1983), this program is excluded from the scope of Executive Order 12372, which requires intergovernmental consultation with State and local officials. This program does not directly affect State and local governments.

#### *H. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Today's proposed rule does not significantly or uniquely affect "one or more Indian tribes, \* \* \* the relationship between the Federal Government and Indian tribes, or \* \* \* the distribution of power and responsibilities between the Federal Government and Indian tribes." Thus, no further action is required under Executive Order 13175.

#### *I. Paperwork Reduction Act*

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 through 3520), the information collection under this proposed rule is currently approved under OMB control number 0503–0011.



### *J. Government Paperwork Elimination Act Compliance*

USDA is committed to compliance with the Government Paperwork Elimination Act (GPEA) (44 U.S.C. 3504 note), which requires Government agencies in general to provide the public the option of submitting information or transacting business electronically to the maximum extent possible. USDA is implementing an electronic information system for posting information voluntarily submitted by manufacturers or vendors on the products they intend to offer for preferred procurement under each designated item. For information pertinent to GPEA compliance related to this rule, please contact Shana Love at (202) 205-4008.

### **List of Subjects in 7 CFR Part 2902**

Biobased products, Procurement.

For the reasons stated in the preamble, the Department of Agriculture proposes to amend 7 CFR chapter XXIX as follows:

## **CHAPTER XXIX—OFFICE OF ENERGY POLICY AND NEW USES**

### **PART 2902—GUIDELINES FOR DESIGNATING BIOBASED PRODUCTS FOR FEDERAL PROCUREMENT**

1. The authority citation for part 2902 continues to read as follows:

**Authority:** 7 U.S.C. 8102.

#### **Subpart B**

2. Add §§ 2902.43 through 2902.51 to subpart B to read as follows:

Sec.	
2902.43	Chain and cable lubricants.
2902.44	Corrosion preventatives.
2902.45	Food cleaners.
2902.46	Foaming lubricants.
2902.47	Gear lubricants.
2902.48	General purpose household cleaners.
2902.49	Industrial cleaners.
2902.50	Multipurpose cleaners.
2902.51	Parts wash solutions.

#### **§ 2902.43 Chain and cable lubricants.**

(a) *Definition.* Products designed to provide lubrication in such applications as bar and roller chains, sprockets, and wire ropes and cables. Products may also prevent rust and corrosion in these applications.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 77 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased chain and cable lubricants. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased chain and cable lubricants.

#### **§ 2902.44 Corrosion preventatives.**

(a) *Definition.* Products designed to prevent the deterioration (corrosion) of metals.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 53 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased corrosion preventatives. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased corrosion preventatives.

#### **§ 2902.45 Food cleaners.**

(a) *Definition.* Anti-microbial products designed to clean the outer layer of various food products, such as fruit, vegetables, and meats.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 53 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased food cleaners. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased food cleaners.

#### **§ 2902.46 Forming lubricants.**

(a) *Definition.* Products designed to provide lubrication during

metalworking applications that are performed under extreme pressure. Such metalworking applications include tube bending, stretch forming, press braking, and swaging.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 68 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased forming lubricants. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased forming lubricants.

#### **§ 2902.47 Gear lubricants.**

(a) *Definition.* Products, such as greases or oils, that are designed to reduce friction when applied to a toothed machine part (such as a wheel or cylinder) that meshes with another toothed part to transmit motion or to change speed or direction.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 58 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased gear lubricants. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of gear lubricants.

(d) *Determining overlap with an EPA-designated recovered content product.* Qualifying biobased products that fall under this item may, in some cases, overlap with the following EPA-designated recovered content product: Re-refined lubricating oils. USDA is requesting that manufacturers of these qualifying biobased products provide information for the BioPreferred Web site of qualifying biobased products about the intended uses of the product, information on whether or not the product contains any recovered material, in addition to biobased

ingredients, and performance standards against which the product has been tested. This information will assist Federal agencies in determining whether or not a qualifying biobased product overlaps with EPA-designated re-refined lubricating oils and which product should be afforded the preference in purchasing.

**Note to paragraph (d):** Biobased gear lubricant products within this designated item can compete with similar gear lubricant products with recycled content. Under the Resource Conservation and Recovery Act of 1976, section 6002, the U.S. Environmental Protection Agency designated re-refined lubricating oils containing recovered materials as items for which Federal agencies must give preference in their purchasing programs. The designation can be found in the Comprehensive Procurement Guideline, 40 CFR 247.11.

#### **§ 2902.48 General purpose household cleaners.**

(a) *Definition.* Products designed to clean multiple common household surfaces. This designated item does not include products that are formulated for use as disinfectants. Task-specific cleaning products, such as spot and stain removers, upholstery cleaners, bathroom cleaners, glass cleaners, etc., are not included in this item.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 39 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased general purpose household cleaners. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of

biobased general purpose household cleaners.

#### **§ 2902.49 Industrial cleaners.**

(a) *Definition.* Products used to remove contaminants, such as adhesives, inks, paint, dirt, soil, and grease, from parts, products, tools, machinery, equipment, vessels, floors, walls, and other production-related work areas. The cleaning products within this item are usually solvents, but may take other forms. They may be used in either straight solution or diluted with water in pressure washers, or in hand wiping applications in industrial or manufacturing settings, such as inside vessels. Task-specific cleaners used in industrial settings, such as parts wash solutions, are not included in this definition.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 41 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased industrial cleaners. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased industrial cleaners.

#### **§ 2902.50 Multipurpose cleaners.**

(a) *Definition.* Products used to clean dirt, grease, and grime from a variety of items in both industrial and domestic settings. This designated item does not include products that are formulated for use as disinfectants.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 56 percent, which shall be based

on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased multipurpose cleaners. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased multipurpose cleaners.

#### **§ 2902.51 Parts wash solutions.**

(a) *Definition.* Products that are designed to clean parts in manual or automatic cleaning systems. Such systems include, but are not limited to, soak vats and tanks, cabinet washers, and ultrasonic cleaners.

(b) *Minimum biobased content.* The preferred procurement product must have a minimum biobased content of at least 65 percent, which shall be based on the amount of qualifying biobased carbon in the product as a percent of the weight (mass) of the total organic carbon in the finished product.

(c) *Preference compliance date.* No later than [date one year after the date of publication of the final rule], procuring agencies, in accordance with this part, will give a procurement preference for qualifying biobased parts wash solutions. By that date, Federal agencies that have the responsibility for drafting or reviewing specifications for items to be procured shall ensure that the relevant specifications require the use of biobased parts wash solutions.

Dated: October 16, 2008.

**Boyd Rutherford,**

*Assistant Secretary for Administration, U.S. Department of Agriculture.*

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