

SPECIFIER NOTE: THIS DOCUMENT IS INTENDED TO BE A GUIDE FOR RESEARCHING ENVIRONMENTAL ISSUES RELATIVE TO BUILDING PRODUCTS. ISSUES ARE ORGANIZED UNDER THREE PRIMARY CATEGORIES: RESOURCE MANAGEMENT, TOXICITY, AND PERFORMANCE.

## **ENVIRONMENTAL IMPACT QUESTIONNAIRE (EIQ)**

### **I. DIRECTIONS**

A. Complete the following questionnaire and submit for review to:

\_\_\_ *Stephanie Anderson* \_\_\_\_\_  
\_\_\_ *1500 St. Olaf Avenue* \_\_\_\_\_  
\_\_\_ *Northfield, MN 55057* \_\_\_\_\_  
\_\_\_\_\_

B. Relate information concerning only one product per questionnaire.

C. All questions may not apply to every product or manufacturer. It is not expected the manufacturer will have addressed all of the environmental concerns expressed in the EIQ.

1. Respond to every question even if response is "not available", "not applicable", or "no".
2. Attach additional sheets as required. Reference additional sheets to correspond with the question number.

### **II. IDENTIFICATION**

A. Material/Product: \_\_\_ *Wood cabinets* \_\_\_\_\_

Brand Name: \_\_\_ *EarthLine casework* \_\_\_\_\_

Manufacturer: \_\_\_ *Kewaunee Scientific Corporation* \_\_\_\_\_

What is the primary use or application for this product?

\_\_\_ *To store materials and provide a surface for laboratory experiments and demonstrations, etc.* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

B. Contact for EIQ:

Name: Jim Frederick Title: general sales manager

Address: 2700 W. Front St, Statesville, NC Zip Code: 28677

Telephone: 704-871-3210 FAX: \_\_\_\_\_ Date: 1/26/06

III. RESOURCE MANAGEMENT

A. Renewable Resources:

- 1. List renewable resources used as product raw materials. Provide percentage amounts in relation to complete (100 percent) product.

Table with 2 columns: Renewable Resource, Percentage. Rows include straw/wheat/fiberboard substrate material and Veneer options of bamboo or lyptus wood.

- 2. Does manufacturer obtain raw materials or fabricate this product outside of the United States: \_\_\_Y \_\_\_X\_\_\_N?

- a. If yes, are United States environmental standards or more strict standards followed in these countries: \_\_\_Y \_\_\_N?

- b. List countries involved.

B. Managed Resources:

- 1. Does extraction of product raw materials or fabrication of this product affect endangered specie(s): \_\_\_Y \_\_\_N? \_\_\_X\_\_\_ probably, but forests/mills are scattered around the country and it's difficult to say which species are affected.

- a. If yes, list species and describe effect, including methods for negative effects.

Table with 2 columns: Endangered Species, Effect.

2. Products Containing Wood: Are wood materials obtained from certified sustainable forestry operations: \_\_\_Y \_\_\_N? X they can be, but this request must be specified

a. If yes, provide name of certification organization for each wood species being used in this project.

<u>Species</u>	<u>Certification Organization</u>
<u>Oak, Maple</u>	<u>Forest Stewardship Council</u>
_____	_____
_____	_____

b. If no, state where the product resources are produced and describe forestry operations.

<u>Product Resources</u>	<u>Forestry Operations</u>
_____	_____
_____	_____
_____	_____

C. Recycled Content:

1. List recycled materials used as product raw materials; distinguish pre-consumer and post-consumer materials. Provide percentage amounts in relation to complete (100 percent) product.

<u>Recycled Material</u>	<u>% Pre-Consumer</u>	<u>% Post-Consumer</u>
<u>Steel used in shelves, drawers</u>	<u>up to 40-50%</u>	_____
_____	_____	_____
_____	_____	_____

D. Embodied Energy:

1. Product Transport:

a. Where are raw materials acquired? Identify state and country.

<u>Raw Material</u>	<u>Source (State and Country)</u>
<u>steel</u>	<u>Nucor Steel – southeastern U.S.</u>
<u>wood</u>	<u>Georgia-Pacific – southeastern U.S.</u>
_____	_____
_____	_____

b. Describe means of transporting raw materials to the manufacturing plant.

Raw Material

Transportation

\_all materials\_\_\_\_\_      \_truck\_\_\_\_\_  
\_\_\_\_\_

c. Where is product manufactured/fabricated? Identify state and country.

\_North Carolina\_\_\_\_\_

d. Is the product warehoused locally, regionally, or nationally?

\_national distributor is in Georgia; rest are in North Carolina\_\_\_\_\_

e. Describe means of transporting product to distribution facilities.

\_trucks\_\_\_\_\_  
\_\_\_\_\_

2. Production Energy: List energy sources used in production process; indicate which are renewable energy sources (e.g. wind, solar). Provide percentage amounts in relation to complete (100 percent) product.

Energy Sources

Renewable

Percentage

\_natural gas-petroleum products\_\_\_\_\_      \_\_\_Y\_\_X\_\_N      \_100%\_\_\_\_\_  
\_\_\_\_\_      \_\_\_Y\_\_\_N      \_\_\_\_\_  
\_\_\_\_\_      \_\_\_Y\_\_\_N      \_\_\_\_\_

3. Provide an embodied energy study of the product from extraction of raw materials through production and assembly. Include an estimate for the total number of BTU's required per pound of finished products. Identify parameters for study.

\_\_\_\_\_  
\_\_\_\_\_

4. Describe measures the manufacturer has taken to minimize energy usage in the production process.

\_Information not available at this time\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**IV. TOXICITY/HAZARDOUS MATERIALS**

A. Toxic/Hazardous By-Products:

- 1. List the production wastes involved with the manufacture of this item. Distinguish the production wastes between toxic and non-toxic. Provide percentage amounts in relation to complete (100 percent) product.

<u>Toxic</u>	<u>Non-Toxic</u>	<u>Percentage</u>
_____	<u>water-based stains</u> _____	_____
<u>oil-based top coat finish</u> _____	_____	_____
_____	<u>sawdust (recycled)</u> _____	_____
_____	_____	_____

- 2. Estimate the quantity of production waste produced per unit of finished product.

\_\_\_\_\_

- 3. Is reclamation of production waste done on site: X Y N? With outside services: Y N?

- a. If outside services are used, list companies involved.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 4. Is waste water reclaimed by manufacturer: Y N?

- a. If yes, describe the process of recycling/reuse of waste water.

the production process creates no waste water\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Describe the manufacturer's active steps to minimize or eliminate production wastes; include process of liquid and solid waste material treatment or reclamation if performed at manufacturing site.

\_recycle sawdust \_\_\_\_\_

\_1<sup>st</sup> layer stains automatically sprayed in closed environment – no VOCs, solvents \_\_\_\_\_

\_top coat stains rolled, excess recycled by draining and reused – no VOCs, hazardous waste \_\_\_\_\_

6. Describe the manufacturing procedures and chemicals involved that would be considered better than industry standard.

\_the stain application process (described above) – very conscious of lowering VOCs and \_\_\_\_\_

\_emissions \_\_\_\_\_

B. Toxic/Hazardous Contents (carcinogens and other hazards inherent in product/material):

1. Provide a complete chemical profile of the item; include all chemical components and provide percentage amounts in relation to complete (100 percent) product; identify biocides (mildewcides or in-can preservatives) and carcinogens listed by any of the following:

- a. United States Environmental Protection Agency (EPA) Carcinogen Assessment Group (CAG) list of carcinogens.
- b. Clean Air Act Sections 109, 111, and 112.
- c. The National Toxicology Program's latest published "Annual Report on Carcinogens".
- d. IARC Human Carcinogens (Group 1, 2A, and 2B).
- e. California Proposition 65.

<u>Chemical</u>	<u>Carcinogen</u>	<u>Percentage</u>
<u>_none _____</u>	___ Y ___ N	_____
_____	___ Y ___ N	_____
_____	___ Y ___ N	_____
_____	___ Y ___ N	_____
_____	___ Y ___ N	_____
_____	___ Y ___ N	_____

C. Material Safety Data Sheet (MSDS):

1. Provide Material Safety Data Sheet (MSDS).

- a. Articles: Finished products which are manufactured off-site and shipped to the project for installation while conforming to Title 29 of the Code of Federal Regulations, OSHA Hazard Communication Regulation 29CFR 1910.1200, Section (b)5 and Section (c) are defined as articles. If by being defined as an article, a MSDS has not been developed for a particular product, then provide MSDS on raw materials, goods, and items used in the fabrication of that article.

D. Outgassing/Reactivity:

1. Chlorofluorocarbon (CFC):

- a. Are CFC's or HCFC's used in the manufacture and/or content of the item specified:

\_\_\_Y \_\_\_X\_\_\_N?

- b. If CFC's or HCFC's were previously used in the product and/or its manufacture, describe measures taken by manufacturer to eliminate their use.

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2. Indoor Air Quality:

- a. Does the product outgas (emit) carcinogens or other hazardous substances into the air after installation, including final curing/drying: \_\_\_Y \_\_\_X\_\_\_N? *(although possibly the stains*

*would outgas chemicals, but my contact might not have known that)*

- b. If yes, submit IAQ test report.

E. Electromagnetic Radiation:

1. Does the product emit electromagnetic radiation: \_\_\_Y \_\_\_X\_\_\_N?

2. If yes, at what rate per hour? \_\_\_\_\_

3. If yes, describe methods for installation, use, and maintenance of product to minimize generation of and occupant exposure to electromagnetic radiation.

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F. Compliance with Regulations (Environmental Statutory Compliance):

1. Does the manufacturer meet all federal, state, and local environmental laws, including laws governing air emissions, waste water treatment, and solid waste disposal/treatment:

\_\_\_Y \_\_\_N? *-unknown at this time*

2. Has the manufacturer met the above criteria for the previous five years: \_\_\_Y \_\_\_N?

3. List the applicable standard.

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4. Does the product meet applicable industry standards, such as ASTM, Green Seal, manufacturing standards, LA or NY research report numbers, and UL approvals: \_\_\_Y \_\_\_N? List these standards.

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V. **PERFORMANCE - INSTALLATION**

A. Environmental Procedures/Precautions:

1. Describe special procedures and precautions to be used while handling and installing the product:

*\_The product is all assembled by the manufacture and shipped ready-made, so there is no \_\_\_  
\_installation procedures or side-effects other than positioning it securely in the building.\_\_\_\_\_*

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2. Identify accessories, such as fasteners, sealers, and adhesives that are non-toxic (or less toxic than industry standard), energy efficient, or recycled or recyclable products?

*\_unknown at this time\_\_\_\_\_*

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B. Installation Energy:

1. Product Transport: List the means to transport the finished product to the construction site.

*\_Trucks bring the cabinets to the site, usually wrapped in blankets which are returned to the \_\_\_\_\_ company after use to be used as packaging again.\_*

2. Installation: List energy means and describe energy requirements for installation of the product.

*\_Basic furniture moving appliances and procedures; possibly bobcats/forklifts, or simply \_ furniture movers.\_*

C. Construction Waste:

1. List the recommended method(s) for proper products disposal; stipulate preferred method and restrictions which might apply.

*\_unknown at this time\_*

2. Comment on the environmental impact of the product as a waste material.

*\_also unknown\_*

3. Packaging:

a. Describe packaging for the product.

*\_Packaging involves reusable blankets when dealing with large orders; sometimes \_ cardboard is used for small orders, but generally they use blankets to wrap cabinets.\_*

b. Does manufacturer accept return of used packaging for reuse:  X  Y  N?

c. If yes, state limitations and procedures for packaging return.

*\_blankets are returned with trucks\_*

**VI. PERFORMANCE - OPERATIONS**

**A. Maintenance**

- 1. Describe the recommended cleaning and maintenance for the product using products which have minimal VOC emission.

*\_Depends on consumer preference, but can use general household furniture cleaner.\_* \_\_\_\_\_

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- 2. Estimate the “useful life” expectancy for this product.

*\_30-40 years or more – still have some productive examples from 1939 in their showrooms\_*\_\_\_\_\_

- 3. Are replacement parts available: X Y N?

a. If yes, can replacement parts be installed in the field: Y N?

- 4. Provide a copy of the life cycle analysis for this product.
- 5. Provide a copy of the manufacturer’s warranty for this product.

**B. Energy Efficiency (energy required to operate/maintain): *It’s a cabinet, and does not require energy to be productive.***

- 1. Estimate BTU’s required to operate the product when new? \_\_\_\_\_; after five years? \_\_\_\_\_; after ten years? \_\_\_\_\_

**C. Compliance with Regulations (Environmental Statutory Compliance):**

- 1. Does the product meet all federal, state, and local environmental laws, including laws governing energy efficiency and air emissions: Y N? *-also unknown at this time*
- 2. Has the product met the above criteria for the previous five years: Y N?
- 3. List the applicable standards.

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## **VII. CORPORATE COMMITMENT**

### **A. Corporate Environmental Policy:**

1. Provide copy of manufacturer's stated environmental policies.

### **Environmental Statement**

Kewaunee Scientific Corporation recognizes that our environment is the responsibility of not only the individual, but the corporate community as well. The success of our customers, our employees, and our company depends on the ability of us all to sustain the resources that underlie the products and services we offer and use.

1. To provide laboratory furniture, fume hoods, and accessories that minimize energy consumption and adverse environmental impact by designing, engineering, and manufacturing products
  - o that use renewable and recyclable resources,
  - o that use less energy and resources to install and operate, and,
  - o that match the building life cycle, withstanding the rigors of decades of use, relocation and reuse.
2. To manufacture these products in an environmentally responsible manner.

<<http://www.kewaunee.com/environment.asp>>

**END OF ENVIRONMENTAL IMPACT QUESTIONNAIRE**