

**Questionnaire Results: Bridgestone/Firestone, Inc.**

**SATURN +5 ISO 14000 PILOT PROJECT  
MEMBER ORGANIZATION QUESTIONNAIRE**

**Summary for  
Bridgestone/Firestone, Inc.  
Nashville, Tennessee**

**FOCUS:** *Uncover and compare means of managing environmental affairs of the respective member organizations*

**Preliminary Issues**

**1. Briefly describe the company's industry and products (i.e., automobile manufacturer, etc.).**

Bridgestone/Firestone, Inc. (BFS), a subsidiary of Bridgestone Corporation of Japan, manufactures, markets and sells tires for passenger, light truck, truck, bus, earthmoving and agricultural applications. BFS also manufactures and markets other products including building and industrial products, air springs, roofing materials, industrial fibers and textiles and synthetic rubber and latex.

**2. Briefly describe the company's size and number of plant and corporate locations.**

BFS is the principal subsidiary of Bridgestone Corporation of Japan, the world's largest tire and rubber company. BFS operates a total of 17 tire plants and 20 other manufacturing facilities in the United States, Canada, Mexico, Brazil, Argentina, Venezuela, Costa Rica and Chile. The company's corporate headquarters is in Nashville, Tennessee and its technical center is in Akron, Ohio. BFS has annual sales of over \$7.5 billion and employs nearly 45,000 persons.

**3. Briefly describe the major environmental aspects of the company's operations.**

The major environmental aspects of a typical BFS tire plant are:

- small quantity hazardous waste generator
- generate large volumes of non-hazardous solid waste
  - scrap rubber (green or not sufficiently cured)
  - plant trash
  - construction and demolition debris
- non-hazardous industrial wastes
  - special wastes (dried out process fines)
  - waste soaps (contain zinc)

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- large recycling and beneficial reuse projects (i.e., scrap tires, plastic, paper, cardboard, scrap metal, etc.)
- air emissions
  - two major permits (one for boilers/powerhouse and one for HAPs in the form of total (bubble or netting) emissions on a 12-month rolling average)
- water emissions
  - two NPDES permits
  - direct discharge (includes storm water)
  - indirect discharge to POTW
- energy use (i.e., purchased electricity, diesel, natural gas, LP, gasoline, batteries)
- water use (city water, well water)
- large volume consumption of raw materials (i.e., carbon black, rubber, chemicals, fabric, steel cord, oils, lubricants, solvents, etc.)

**4. Briefly describe the company's strategic business plan. Are environmental issues a part of that plan and, if so, what part?**

At present, Bridgestone Corporation of Japan, of which BFS is the largest subsidiary, owns approximately 18 \_ percent of the world tire market. The current strategic business plan is to increase the company's world market share to at least 20 percent while at the same time weathering the economic conditions in the Asian and South American markets. Environmental issues are a significant part of the company's strategic business plan due to the sensitivity to environmental issues in the company's South American markets and, especially since the last half of 1998, the United States market. BFS's customers are becoming more and more likely to be concerned with the company's environmental position.

## EMS Issues

**1. Does the company have what it considers a formal Environmental Management Systems (EMS) in place?**

Yes. BFS has at least a very adequate EMS that keeps its plants and facilities fully compliant. However, the company's EMS system is not as fully integrated into overall core company management as the company would like it to be and having its plants ISO 14000 certified will give us a healthy shove in that direction.

**2. If not, what is the status of company efforts to develop an EMS?**

In 1997, BFS's CEO committed the company, both domestically and internationally, to achieve ISO 14000 certification at all of its major manufacturing plants by the end of 1999. Over 30 BFS factories in the United States, Canada, Mexico and South America will have the certification. In addition, all Bridgestone Corporation tire plants (40 +) will have the certification within the year.

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3. *Does the company have a written EMS or a written policy statement on environmental management within the company?*

Yes. The company's Environmental Policy Statement is as follows:

**We will develop and produce competitive products and services to meet customer requirements while operating in an environmentally responsible manner. The CEO, President, officers, and associates are committed to an effective environmental management system designed to accomplish our strategic business objectives and fulfill our responsibility as a good corporate neighbor in the communities where we operate. To that end, we shall:**

- **Conduct business so that environmental challenges are managed as an integral part of current and changing business strategies.**
- **Communicate about environmental issues across organizational and functional lines.**
- **Comply with applicable federal, state, and local environmental laws, and meet other environmental commitments we make.**
- **Promote pollution prevention.**
- **Continually improve the environmental management system.**

**Implementing this policy is a primary management objective.**

4. *Would you prefer your EMS system to be integrated with your QM system or would you prefer them to run separately? Why or why not?*

As a policy matter, the company's CEO has stated that EMS is part of the QM system. On a practical level, however, the systems need to be tailored so that only those areas where it makes sense to integrate are integrated. Functions that do not belong together should be run separately; other functions where it makes good sense for integration should be integrated. The actual certification processes are separately managed within BFS.

5. *What perceived level of value does the top/upper level management of the company place on EMS and environmental issues faced by the company?*

At the CEO level, the level of value on EMS and environmental issues grows almost monthly. In the past, environmental issues would have to be raised with the CEO; more recently, the CEO raises environmental issues on his own. The decision to require ISO 14000 certification of the company's major manufacturing plants was an issue first raised by the CEO. With respect to other members of upper management, however, the value placed on environmental issues can be a mixed bag. Some upper management personnel integrate environmental thinking into their decision making process; some do not.

6. *What is the company's view of the utility of ISO 14001 certification?*

One aspect of the utility of ISO 14000 certification is the perception that the company's market will eventually be demanding such certification as a condition of doing business in the market. However, BFS perceives net benefits to ISO 14000 certification other than market based benefits. Improving the company's EMS should result in a better managed company. If the company is better managed, the company should produce a better product. A better managed company is also a better company to work for and allows the company to attract and retain better

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people. ISO 14000 certification is an indication that the company cares about excellence in management.

**7. *Does the company have any concerns about becoming ISO 14000 certified? If so, what are they? What potential downsides do the company feel ISO 14000 may bring?***

One concern is that ISO 14000 certification is susceptible to turning into nothing more than a bureaucratic exercise if a company is not careful. A company may achieve a market benefit by achieving certification but will not improve by obtaining the “certified” management system. The goal is to obtain the actual benefits of improved company management by obtaining ISO 14000 certification.

A second concern is that the ISO is already working on revising the standards for certification before most companies in the United States have had the opportunity to obtain certification. We cannot be sure what kind of effect the standard revisions may have.

**8. *What is the status of ISO 14000 certification with the company today?***

At this point, two BFS manufacturing facilities have actually received ISO 14000 certification – LaVergne, Tennessee and Sao Paulo, Brazil — and two others have been approved for certification — Warren County, Tennessee and Buenos Aires, Argentina. The other 30 plus BFS facilities are scheduled to obtain certification by the end of this year.

## Organizational Issues

**1. *Is there a manager dedicated solely (or primarily) to overseeing environmental management issues in the company?***

Yes, Jim Vines is the Executive Director and General Counsel for Environmental Affairs of BFS.

**2. *If not, what persons or departments in the company are considered “in charge” of overseeing and addressing environmental management issues faced by the company?***

Not applicable.

**3. *Is environmental management a distinct operating division within the firm, or are environmental tasks delegated to various members of different departments of the firm?***

Yes to both questions. The Environmental Affairs section of the Law Department handles environmental issues (legal, managerial, and technical) for the company. Also, environmental tasks are often delegated to different members of various departments. In addition, each plant has one or more individuals who are the environmental managers for that plant, although there is not a great degree of consistency in terms of the level of seniority or placement within the management hierarchy for each such person within each plant.

It can sometimes be problematic and cause confusion for the Environmental department to be within the ambit of a corporate law department. However, and somewhat of a unique circumstance in the tire industry, BFS’s environmental law department has significant clout within the company.

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**4. *Are there cross-functional teams focusing specifically on environmental issues within the company?***

BFS has a wide variety of cross-function teams revolving around specific compliance issues or strategic planning. One of the company's themes in environmental management is cross-functional approaches and interdisciplinary teams.

**5. *If some distinct environmental departments exist, how are the departments structured? What tasks are performed within that structure?***

See the response to question 3 (Organizational Issues) above.

**6. *Do environmental managers consider staffing to be adequate for the tasks that must be performed by the environmental structure of the firm? Does upper management consider staffing to be adequate for the same purpose?***

Environmental Managers: With respect to basic compliance, the answer is yes. We are adequately staffed to maintain regulatory compliance. However, with respect to long-term strategic issues and planning, the answer is no. We would like to be more fully integrated into core management planning in this regard.

Upper management: Yes, because basic compliance is not a problem. However, this view does not take into account long term strategic focus for integrating environmental into core business management of company.

**7. *What type of software systems does the company use to manage environmental information?***

Environmental Auditing: Dakota Software

Reporting, Waste Tracking, MSDS and/or other chemicals tracking: (Plant Specific) – E.G. Mockingbird (synthetics); Lotus Notes Database (Industrial Products); Access or Excel spreadsheets (Tire Division); SAP R3 pilot programs (Des Moines and Oklahoma City)

Further Costs, Disposal, Waste Tracking, Reporting: We are working with SAP implementation leaders to combine SAP data with a yet to be determined off the shelf product to consolidate real cost information.

**8. *How does the company operationally track information such as material flow, purchasing, etc. that relates to environmental issues?***

Currently some of our plants use SAP R3 for tracking materials. Eventually, the company wants to use SAP R3 in all its facilities. Today, different facilities track material flow and purchasing using different instruments. Some facilities use a pen and paper system while others use sophisticated SAP R3 modules.

Most of our facilities record their trends in some sort of Excel or Access database. The facilities report their trends to their respective divisions in a common questionnaire format. The facilities also post their results graphically within their facilities.

**9. *How does the company compile and disseminate critical information that affects the company's business and projects?***

The quality of dissemination of critical information is almost totally dependent upon each manager bringing together the right people to deal with certain issues. Who do these managers

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invite to what meetings and what roles do these individuals play? Notebooks, manuals and software convey basic information, but critical information usually is communicated person to person.

***10. Describe the chain of command within the environmental management structure of the company (including facility vs. corporate headquarters structure).***

BFS is officially a “decentralized” company. Therefore, “chain of command” can be more informal than in other companies. Jim Vines is the Executive Director of Environmental Affairs for the company and many facility environmental managers virtually always seek advice from Jim’s office before making decisions. However, no facility manager “officially” reports to Jim Vines and some do not always consult with or seek advice from the Environmental Affairs office as part of their respective decision making processes.

That having been said, the fact that the Department of Environmental Affairs is so heavily supported by the CEO and others in upper management results in the “unofficial chain of command” at BFS being rather strong.

***11. Describe any issues of concern regarding communication between facility and corporate offices on environmental management issues.***

Communication is the key to the integration issue. Integration of environmental management into core business strategy and planning cannot take place without a free flowing chain of communication.

One concern is that some parts of the company in the environmental chain are isolationists; they will not seek advice before acting. Other parts of the environmental chain are the opposite and that is where environmental management performs at its best at BFS.

***12. Describe the chain of command from environmental management to top/upper level management of the company.***

Jim Vines reports to BFS’s Executive Vice President, General Counsel and Corporate Secretary (same person) who reports to the CEO. Jim Vines also reports to the corporate Board of Directors through the Executive Vice President’s separate role as a member of the Board. However, the Executive Vice President’s role in reporting to the CEO is more important than the role of reporting to the Board of Directors.

***13. Generally, where does primary decision making authority over environmental issues reside within the firm? What type of decisions require approval outside of the environmental management structure (i.e., from top/upper level management)?***

There are not a lot of hard and fast rules in this area. Decision making authority can reside everywhere depending upon the time, place and issue. There is no particular structure that says this decision must be made by this person. Much depends upon the significance of the issue and under whose watch it first arises. Whether a company has a good environmental management system that makes good decisions depends upon the quality of the people within that system and how good they are at fulfilling their roles.

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**14. Are environmental management decisions often made at the facility level rather than corporate level? What type of facility level decisions require approval from corporate environmental managers?**

Different kinds of decisions require a different answer. Many decisions are and should be made at the facility level. Others, while not necessarily requiring that the decision be made at the corporate level, should at least have input from the corporate level. Because BFS is officially a decentralized company, the corporate role is one of guidance and oversight. The Environmental Affairs office does not generally have authority over divisions or individual facilities to approve or veto decisions. Some decisions, however, such as money decisions must be run by and approved at the corporate level. Also, any use of attorneys must be made at the corporate level rather than the division or facility level.

**15. Describe the level of integration of environmental departments or personnel with the rest of the company.**

BFS has nearly 40 factories. The level of integration company wide is everywhere from excellent to very poor and everything in between. The priority is to attempt to push more of the facilities into the excellent level.

Each plant tends to have its own personality that transcends the plants as a whole. Some plants have good personnel and well integrated systems while others are isolationists. This reality tends to affect how well Environmental Affairs works with each plant across the board.

**16. In a related vein, what are the relationships between environmental departments/personnel and other departments within the company? (In other words, what links are in place to allow environmental personnel to effectively perform their jobs within the company?)**

See response to question 16 (Organizational Issues) above. Relationships are all over the map depending upon each plant and its particular personality. Again, the priority is to push each plant toward the integrated/excellent end of the environmental management continuum. ISO 14000 almost forces you to achieve this with respect to individual plants.

**17. Describe any concerns with communication between environmental departments or cross-functional environmental employees and other departments with the firm.**

This is a building block for achieving # 15 above. To get integration, you have to have good communication. In some places, communication is excellent. In others, communication needs work. We try to encourage whatever form of communication that works best at each location.

One tool being developed to foster better and more efficient communications is the Environmental Corporate Intranet Website at BFS. This is a tool to foster communication from the Environmental Affairs offices to the division and facility levels. It is also intended to provide additional information resources for divisions and facilities. For example, legal regulations and materials will be made available on this site. Also, e-mail capabilities with this system will increase communication between corporate and division and facility levels on environmental issues.

**18. Does the firm rely upon outside consultants to handle environmental tasks? How often?**

Yes, extensively and primarily legal and technical consultants for the benefit of individual facilities. We use lawyers extensively, such as working with plants to develop permit require-

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ments. For more technically involved issues, technical consultants. Consultants (a Washington, D.C. law firm) are assisting individual plants with obtaining ISO 14000 certification.

BFS does not have the internal manpower necessary to handle all legal and environmental work that has to be done by the entire company. This fosters a need to utilize outside consultants. Generally, 4 to 5 hours of consultant time is obtained for every 1 hour of internal time generated. In this regard, however, much depends upon the particular issue. For example, Superfund work is mostly handled by outside consultants. For permitting, approximately 1 consultant hour will be utilized for every 1 internal hour generated. The spectrum tends to be very broad and is issue based.

### ***19. What factors are considered in determining whether to utilize consultants or handle an environmental matter in-house?***

See response to question 19 (Organizational Issues) above.

### ***20. How is the performance of the environmental management department evaluated within the firm?***

There are fairly regular meetings between Environmental Affairs and the CEO and President to give overviews regarding environmental management department performance. There is ample opportunity available to the highest level of BFS management to critique the department's performance.

At the division level, environmental managers are evaluated by the division presidents.

At plant level, environmental managers and ISO 14000 personnel are evaluated by plant upper management.

On an informal basis, the Environmental Affairs department often gets feedback from division presidents on issues of environmental management performance.

### ***21. Upon what criteria would departmental performance be judged?***

On a broad level, department performance is judged by cost control and efficiency. However, customer perception of BFS's environmental performance is becoming more and more of an important criteria in how the department is judged. A primary impetus for this is the push by automobile manufacturers into advertising the environmental responsibility of their respective companies including by stating that they expect their suppliers to be environmentally responsible as well. The message has been sent and received that if BFS were suddenly perceived as an irresponsible company from an environmental standpoint that these companies would look elsewhere for tire suppliers.

### ***22. Are individuals with environmental management responsibilities evaluated on their performance of those responsibilities?***

Standard corporate evaluation structure.

### ***23. Who conducts such evaluations and what criteria are used to do such evaluations?***

Standard procedures. However, the Environmental Affairs department is pushing, with limited success so far, to have environmental performance tied to compensation decisions in evaluations for general managers.

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### “Perfect World” Issues

1. *Could the environmental management system of your company be better? How? What would you change if you could? Why?*

BFS is a Japanese-owned company and like many Japanese companies utilizes the concept of kaizan (or continuous improvement). Applying the concept of kaizan to environmental management means that, like all other company systems, we can always make our EMS incrementally better than it is today.

2. *The primary improvement we would like to make is to repeat the success of our environmental management system in the tire division in every other manufacturing division in the company. The tire division has excellent leadership in management of its environmental issues. We have had much success in integrating environmental management into the core business management of the tire division because of such leadership. That division is very well run regarding environmental management issues and we would like to see the same type of effort and success in other divisions.*

BFS as well as other companies have in the past experienced a “tag along” factor, where persons with limited management or leadership abilities could be “stuck” in an environmental manager position to await the time for their retirement from the company. It would be difficult, if not impossible, to have a successful, well-integrated, environmental management system in a component of the company where such a scenario existed. BFS experienced a real world example of the problems such a circumstance could cause in a facility where such an individual had been placed into an environmental manager position. This person failed to communicate with others in the environmental management chain of the company, was not on top of the environmental issues facing the facility, and managed to alienate the regulators overseeing the facility. A small problem that could have been quickly and efficiently dealt with by a motivated, competent manager was allowed to turn into a large and expensive problem by mismanagement. Although such situations might still occur occasionally in companies, BFS has in large measure successfully addressed this problem at its facilities. The hope is that ISO 14000 will provide a focus on environmental management of each facility that wholly prevents this type of situation from occurring in any facility in the company and, instead, promotes the type of system now present in the tire division.

3. *What degree of influence over corporate structure or policy does environmental management have? What degree do you think it should have? Why?*

Environmental management should be a participant in the creation of structure and policy. It should not govern but it is a mistake not to have environmental management participating in the creation of company policy and as a part of decision-making processes. BFS is not there yet, but that is where we are heading. For example, for construction of a new plant in Aiken, South Carolina, environmental management was part of the site selection team and then part of the construction management team. Necessary permits were obtained in record time. Other such issues were handled very smoothly. There was always plenty of advance notice for environmental managers to handle issues as they came up. The participation of environmental management in this process was the key element.

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**4. *Are matters being handled by other departments in the firm that would be better served if they were handled by environmental?***

The response to questions 3 and 4 (below) comes back around to integration. Not everything related to environmental can be handled by the environmental department or environmental management personnel. On the other hand, these entities should be coordinating all matters relating to environmental rather than physically performing all tasks. That is where integration is key.

ISO 14000 is forcing non-environmental personnel to perform in and evaluate environmental roles, which they have never had to do in the past. A positive outcome from this experience is that, by placing plant presidents in the role of having to deal with these environmental issues through ISO 14000, we have eliminated as many as 3 plant environmental managers who were not getting the job done. Once the plant presidents started focusing on environmental issues and on those who were responsible for handling these issues at their plants (and had to live with the problems that previously only the Environmental Affairs department had to live with), these presidents quickly made moves to replace individuals who previously were not getting the job done.

**5. *Are there issues being handled by environmental that should be handled by other departments?***

See response to question 3 (Perfect World Issues) above.

**6. *When and to what extent is environmental consulted on issues of public relations, marketing, product development, etc. now? When and to what extent do you think it should?***

Consultation on such issues is growing, primarily as a product of the increased concern over how the company is perceived publicly on environmental issues and how our customers perceive us in that regard. With respect to public relations, Environmental Affairs is consulted to a significant extent. With marketing, Environmental Affairs is consulted on a less frequent basis. And, at least with the tire division, consultation on product development has been very good. In this regard, for reasons discussed in the response to question 1 (Perfect World Issues) above, consultation went from zero to world class in the tire division. We would like to reproduce this in the other divisions.

**7. *What meetings do environmental managers attend that are not run by environmental managers? Are there meetings that you think environmental should attend now but they are not?***

Any meeting involving building a new plant, modifying a plant, adding new equipment or a new product line, or using new raw materials, should include an environmental person. For any “management of change” meeting there should be an environmental person in that meeting.