

# Q & A on Environmental Issues

All types of industry have become more environmentally aware during the past few years, and the oilseed industry is no exception. The *Oil Mill Gazetteer* recently posed some “environmental” questions to three authorities involved in varying aspects of the oilseed industry. A short background on each of our “panelists” follows.

**Mike Boyer** is a registered professional engineer and the president and CEO of AES Management Services, Inc. of Atlanta, Georgia, an environmental, marketing, and management consulting business. A member of several technical and professional organizations, he has authored over 30 technical papers in the area of environmental engineering and management.

**James M. Lay** is the vice president–site manager of Bunge Milling in Danville, Illinois. He has held management positions at various Bunge locations since 1972. He is a member of several professional organizations and has had his technical papers published in a variety of agribusiness publications.

**Robert Reeves** has been the president of the Institute of Shortening and Edible Oils, Inc., a trade association based in Washington, DC, since 1985. The institute represents the interests of the refiners of edible fats and oils who currently process approximately 90–95% of the edible fats and oils in the U.S.

**OMG:** What are some important environmental issues affecting oil mill plants and the processing industry right now?

**Boyer:** This obviously varies from one plant site and company to the next. Wastewater issues are reasonably well-defined and under control, but there are some locations where this is still a challenge. Air emissions and the MACT (Maximum Achievable Control Technologies) standards are big items facing the industry. New regulations for the Federal SPCC (Spill Prevention Control and Countermeasure) regulations will impact much of the industry. Stormwater and resulting water-quality issues are a major concern that has not been fully assessed or regulated as yet. The industry will see more of this, not less.

**Lay:** This may vary from company to company, but some of the more important issues are as follows:

- Vegetable Oil MACT Standard, which will go into effect April 2004. This date will mark the beginning of a 12-month data collection period for compliance determination.
- PSD (Potential for Significant Deterioration) air permitting is a complex, regulatory program, and EPA has issued numerous guidance papers in an attempt to clarify the requirements.

- Amendments to the current SPCC regulations. The industry continues to work with EPA on differentiation of vegetable oils from petroleum products.
- Title V operating permits for many facilities are being issued and will require close review for compliance.
- The Inventory Update Rule (IUR) was recently updated and will require careful review for compliance reporting of several substances used in our industry.
- Annual Emission Inventory Reporting will require increased review and effort with the promulgation of Title V permits.
- “Proposed” Boiler MACT standards will require many companies to review existing boiler operations for compliance.

**Reeves:** Issues vary depending on the firm and its priorities. Generally speaking, one of the more recent issues is the 7-17-02 amendments to the SPCC rule of EPA. Although “subpart C” has been added to the rule to provide differentiation for vegetable oils and animal fats from petroleum oils, the requirements are basically the same. Industry is working with EPA to correct this inequity, and hopefully some of the requirements will be changed in the near future to be more equitable.

Another rule which EPA recently updated (1-7-03) is the IUR, which requires facilities to report inventories of certain chemicals every four years. The amendments will require larger amounts of substances (300,000 lb/facility/year) to trigger reporting that includes expanded downstream worker-exposure information.

Air emissions will continue to be an important area of environmental regulation. Compliance with Title V air-quality permits will likely be an important activity among oil crushers and refiners in at least the near term. MACT standards will continue to be established and expanded as new technology emerges.

**OMG:** Time-wise, which issues do companies spend the most on? Would dollar-wise be the same?

**Boyer:** Air issues are a major demand. They are highly regulated and require a lot of soft costs (forms, engineering support, etc.). The overall area of regulatory compliance as an operating issue—environmental, but also, safety—requires a great deal of time at the plant and corporate levels.

**Lay:** Most recently, air regulations required the greatest amount of industry resources.

**Reeves:** As regulatory agencies continue to reduce the allowable limits of certain air, water, and land pollutants to even smaller levels, the cost of removing or preventing such pollutants generally increases. Significant time and money will be required to maintain compliance with ever-expanding environmental regulations.

**OMG:** What issues will there be in the next 5–10 years?

**Boyer:** The future, is of course, always hard to predict, and even more so in an atmosphere that is regulatory and therefore politically driven. The air issues are likely to last at least for another five years, including time for physical-plant implementation. Operating issues and costs will continue forever, and the costs and time will increase as the goal of 100% compliance is approached and demanded by the regulatory community. You should also consider that issues will arise in a 5–10-year horizon that do not exist in any practical sense at this time. This may be concern



Boyer

for a new chemical or constituent that has not even been thought of as yet.

**Lay:** Likely continued developments of MACT standards as well as PSD permitting challenges as the push for reductions in emissions continues.

**Reeves:** I suspect we will see more of the same issues currently being faced today being addressed in the future. Air emissions will likely lead the pack as the most costly and time-consuming. Regulatory agencies will likely continue pressuring for no or reduced net output of pollutant emissions; therefore selection of raw materials and processes will continue to be important factors in keeping the environment clean and safe. No doubt some issues will emerge that are currently not even identified; however, industry has proven it can meet such challenges when needed.

**OMG:** Has 9/11 and the threat of bioterrorism affected the industry and caused the government to introduce any new environmental regulations that might not have happened otherwise?

**Boyer:** While this has caused a great impact on our society, it has not been felt in any great sense in the more traditional environmental areas. Municipalities are concerned with safety of water supplies and so is industry, and there are other related examples that could be cited. Taking the term “environmental” to a further meaning, concerns have been expressed and measures are being taken with respect to the safety of the food

supply and the raw materials. So, in a sense, the 9/11 concerns have influenced the environmental area from a safety and caution concern.

**Lay:** Since 9/11, many companies have enhanced their policies to ensure that they comply with the Bioterrorism Act of 2002 with particular focus on the traceability of inbound grain and outgoing products.

**Reeves:** The regulatory community has been affected by numerous pieces of legislation, particularly the provisions of the Homeland Security Act of 2002. The prevention of certain chemicals being used as weapons or as a means for causing harm has caused several changes in policies or regulations. Greater security measures over chemicals that may ignite, explode, or be toxic or carcinogenic are evident in several regulations.

Physical access to facilities manufacturing or storing such materials is much more controlled. More emphasis is being placed on audits to ensure workplace security and safety. Security plans are now more comprehensive and more actively enforced. All facilities manufacturing or storing foods or feed must be registered with the FDA by December 12, 2003. Also, any imported food or feed raw materials or final products must be identified to the FDA prior to arrival at our borders. FDA officials now have expanded authority to examine plant records and detain products suspected of being subjected to a threat of serious adverse health consequences.



Lay



Reeves

**OMG:** If we could take plant managers from 25 years ago, fast-forward and place them in a plant today, what would be the biggest differences they would see, from an “environmental issues” point of view? Or possibly what we might expect in another 25 years?

**Boyer:** They would see a much higher level of concern and proactive need for compliance at all levels than 25 years ago. This is true both in major corporations as well as smaller processors. The whole nation has a much greater knowledge and individual concern, and subsequent “ownership” of environmental issues. This is true on the international scene as well.

What will the plant manager see 25 years from now? Much of the same, but again concerns for things that we have not even thought of yet. One area that this industry needs to embrace to a greater level is the overall environmental stewardship issue. Some of the larger retail products companies have embraced a corporate environmental philosophy that compliance with regulations is the minimum standard for the company program. There is an increasing belief that companies need to go beyond this and make their mark as leaders in this area. Kimberly Clark is a good example of such a company, and I would refer you to its annual environmental report for more in this area.

**Lay:** They would be surprised by the amount of documentation that is required in today's business environment. They would likely be surprised with the time requirements of the permitting process and the size and complexity of the facilities operating permit. They would also find that they were not able to spend as much time in the plant. High-speed communications and the need for immediate information would be an adjustment, and he/she would find themselves connected to the facility at all times.

**Reeves:** If a plant manager from 25 years ago did a "Rip van Winkle" and woke up in today's world, I think he or she would be utterly amazed at the breadth and number of environmental rules and regulations facing today's managers. Also, the technical ability to identify such a large number of pollutants and then to remove or reduce those pollutants is just amazing and would be beyond comprehension of someone 25 years ago. Also I believe these managers would be surprised at the increased level of corporate environmental responsibility that has resulted in a cleaner environment for today and future generations.

Having never been a plant manager, I hesitate to predict what one would experience in the future. Based on history, we should expect more regulatory restrictions in the future as our ability to either prevent or remove potential pollutants increases or as additional environmental threats are identified. Future plant managers will likely experience an increase in corporate social and environmental responsibility. This will help in the initiation, development, and application of newer technologies that will result in a cleaner environment for future generations.

Be sure to check a future *Gazetteer* as we take a closer look at specific environmental issues. ■