

PLANNING FOR ENVIRONMENTAL COMPLIANCE

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Environmental

Abstract: I will share what Deluxe has done in four areas; air permitting, chemical consolidation, pollution prevention, and future challenges we see. We hope that sharing this information will make your job of planning for environmental compliance easier.

Air Permitting - Our challenge in November, 1992 was to get air permits for 70 printing plants in 35 states without risk or visibility to the corporation. Other challenges were to focus attention, create urgency, and get quick response from state environmental agencies.

Chemical Consolidation - Our goal was to run our printing facilities with the lowest number of chemicals possible and not compromise employee safety. We looked at our needs and studied the ingredients of the chemicals we were using, analyzed the material safety data sheets to find the duplicate chemicals, we started small and made change by consensus. We now tightly control the introduction of any new solvents. We have seen savings in excess of \$500,000 per year and a reduction number of chemicals used from 467 to 12.

Pollution Prevention- Pollution Prevention Plans have been completed in 35 states for 70 plants. Deluxe made pollution prevention a policy, because it was good business.

Future Challenges - Future challenges and opportunities lie in reducing the naturally confrontational nature between regulator and regulated. Another significant opportunity is solving today's environmental challenge and learning to capitalize on those solutions.

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Good morning and welcome. My name is Gary Weisbrod, and I am Senior Director of Environment, Safety and Health at Deluxe Corporation, a Fortune 500 printer based in St. Paul. I moved into this position last year after 25 years as a plant manager.

Today I'll share with you what we have experienced with regard to planning for environmental compliance in four areas:

- Air permitting
- Chemical consolidation
- Pollution prevention/waste minimization
- Future challenges

I hope that you'll benefit from our experience, and that your own experience will be easier as a result.

Air Permitting

Background

In November 1990, we gave our eight regions the responsibility for gaining air permits. Unfortunately, though they all read the regulations, only one region really understood them and took action.

Therefore, our challenge was to get 70 plants in 35 states into compliance without risk and visibility to the corporation. In addition, the need for air permits was unclear inside the corporation and was up against many competing issues.

We balanced tight national control against our desire to build responsibility and commitment among our local managers. In the long run, however, we determined that tight national control was important because of the legal risks to the Corporation.

Get It in Writing

To determine if we had a companywide problem, we ran a test air-permit application in a medium-sized plant, located

in a tough state on the East Coast. We soon learned that, if we spoke to the permit-application people at the state's Department of Environmental Protection, they told us we did not need a permit. If we spoke with the compliance people, on the other hand, they said we did need a permit.

That lack of consistency, coupled with the high risks of noncompliance, taught me one very important fact regarding permits of any kind: Get it in writing!

Create Urgency

Based on our experience in the test state, we organized an overall strategy. I scheduled a meeting with our eight Regional Environmental, Safety, and Health Coordinators and asked our legal department to be available. I invited one of our mechanical engineers, who had management background and whose judgment I trusted, to be project leader. I also selected an experienced outside consultant, with a background in air permits and printing, to work with us.

We gathered the forms necessary to complete air permits in all the states, and we recorded solvent usage data, plot plans, and plant layouts for our 70 plants. We then met the week before Thanksgiving in 1992, and I told everyone we were staying until the job was done. That brought a productive work ethic and sense of urgency to the meeting.

Within a week, the 12 of us had drafted 57 air permits for use in 35 states.

Getting Permits Back Quickly

We filed the permits by Dec. 31, 1992, with a goal of having all final operating permits back within six months. We found there were three keys to getting the permits back quickly:

- Submit clear, complete applications
- Make fast decisions on agency questions
- Perform frequent follow-up

By the end of March, about 55 percent of our plants had permits or exemptions. We expect to have all our permits back by July 1.

Improving the Process

The main thing we would do differently concerning permits is that we would visit the regulators personally. That would give us a chance to explain our company, our processes, and our permit application.

We also found out that you shouldn't be afraid to question agency responses you don't understand. Often, even ominous responses are only form letters. My advice is to try to explain your situation in a face-to-face meeting with regulators, and ask them for help in solving any problems.

Chemical Consolidation in Printing Plants

Background

My second topic covers chemical consolidation in a printing plant.

As a result of Right To Know, we began examining our chemical needs and looking at ways to minimize the number of chemicals used in our facilities. Previously, we had used a tremendous number of different chemicals, and very little effort had been placed on limiting the number of solvents.

Our ultimate goal was: to run all production facilities with the lowest number of solvents possible.

We placed the highest priority on worker safety and environmental issues as we determined what materials to use. If compromise became necessary, we knew in advance that we would sacrifice performance, and pay more, to maintain adequate safety. Compromising safety was never an option.

Making Lists

We began by making a list of what we needed, using generic terms. For example, we listed such items as "small offset blanket wash," "typewash," and "web blanket wash." The list included specific equipment but no trade names. It also included our commodity solvent needs, such as mineral spirits. We consulted our production people to make sure our list was as complete as possible.

Next, we developed a list of safety requirements that all our solvents had to meet. For example, flash points for all solvents had to be above 100°F.

Our next step was to list the properties of each chemical. What was the desired evaporation rate? Were there any production concerns and known solvency needs? We checked with people who used the products to determine what was important.

Analysis

Then we pared the list down to a manageable size. We looked for similar needs and thought about what would help one solvent work in different applications.

After our needs were grouped, we inventoried our plants' chemicals. Questions you should ask at this point are:

- What are we currently using for each application?
- How many different brands of each?
- How many current suppliers of each material?

We learned we had 46 suppliers of 1,1,1 trichloroethane, 28 suppliers of alcohol, and 47 suppliers of mineral spirits--which translated into 121 MSDSes instead of three. In some cases, we had three brands of 1,1,1 trichloroethane in the same plant.

We then examined the use of blended solvents. This area is probably the most complex and controversial because of the various trade names and the number of proprietary formulas involved. The first step is to review ingredients and ask whether a blended solvent is necessary. Would a pure commodity solvent work as well? Find out how many of the products you use are actually straight commodity solvents that have been repackaged and given a trade name. The MSDS will tell you this, because each component should be listed.

We then looked at the way we used these solvents. For example, we asked:

- What is the best blanket wash we currently use?
- Does it meet the criteria for all presses?
- Is it available at each location?
- Is the cost acceptable?
- Is it acceptable from a safety standpoint?

Another alternative is to formulate your own products, either by doing so internally or by working with a vendor. Deluxe did this because we had so many plants and so many

different products currently in use. Another advantage of having our own formulations is that we can control the ingredients, which prevents formulation changes without our knowledge or consent.

Implementation

Once you decide on a list of solvents, implementation becomes the primary concern. In general, three factors are involved. You need upper management support; you need production personnel support; and--most importantly--you need to start small and move slowly.

"Small" will vary, depending on your organization, but I recommend starting with one or more test locations. Make sure you communicate well with the people involved in the test and with management from the various plants. To get performance feedback, prepare written documentation for the plant to complete. Respond to complaints, either by changing the product or by explaining why you can't. Ask personnel whether compromises are possible.

We've obtained the best results when employees feel they play an active role in developing the solvent. Keep in mind that they are the people who use the products, day in and day out.

Unapproved Solvents

When vendors ask to have new products evaluated, require them to leave an MSDS first. Then see how the product fits into your new solvent program. Do not allow vendors to leave a sample until you've compared the MSDS to what you currently use.

That's because one of two things happens to samples. Either someone uses three ounces, decides it doesn't work, and puts it in storage, or someone decides it works well and uses it in production. These actions can cause confusion in your program, and disposing of the products as hazardous waste can be expensive. Try to have one central area or person evaluate new products.

Hazardous Waste Standardization

Standardizing what comes in automatically standardizes what goes out. By consolidating your solvent usage, it becomes much easier to control the disposal of used

solvents. You can set up well-defined waste streams and keep track of each product.

A qualified waste disposal company can help in this area. Until you control the chemicals you use, however, you will never control the wastes you generate.

Payoff

At Deluxe, we've significantly reduced the number of solvents we use--from 467 to 12 in two years, a comfortable time frame for a company of our size.

We now control the ingredients in our solvents. We know what they are, and we monitor safety and health issues closely. We can react quickly if new information becomes available. Finally, we have centralized control over solvent formulas,

which makes quality control and troubleshooting easier by reducing the variables involved.

We have minimized our Right to Know and hazardous waste paperwork. We are saving \$500,000 a year in raw material costs because we no longer use a small amount of many products, but rather a large amount of a few products. We are also saving a considerable amount in hazardous waste disposal costs, and we have made significant progress toward minimizing our impact on the environment.

Other areas within your organization may be ripe for consolidation. Consider: building maintenance, fountain solutions, photographic supplies, lubricants, and other chemicals. Additional benefits from using the smallest number of chemicals possible are that Right to Know laws become easier to work with, you consolidate waste streams, and you reduce operating costs.

Deluxe Pollution Prevention Plans

My third topic concerns Deluxe's pollution prevention policy.

Both the U.S. Congress and Minnesota Legislature passed Pollution Prevention Acts, which took effect in 1991. These new laws require industry to implement and track programs that prevent pollution.

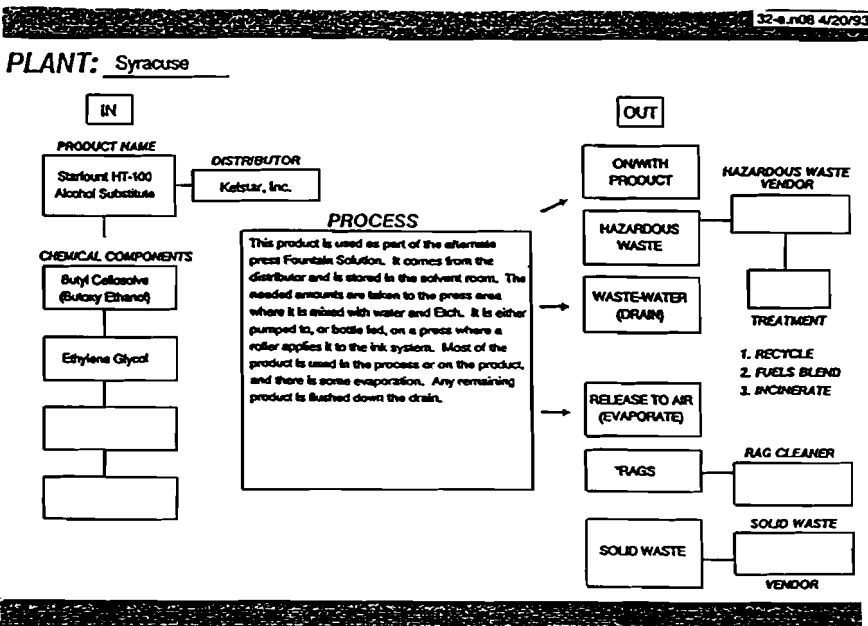
Making Pollution Prevention a Policy

Deluxe asked all facilities (even those that were not required to) to complete pollution prevention plans, because we knew the process and the plans themselves would be valuable.

Faced with the challenge of 35 state plan requirements, we compared them, looking for the strictest requirements. We decided to use Minnesota's plan because it included everything that was in the others, plus a little more.

Deluxe already had the first component, a corporate environmental commitment statement. It says: "We will comply with all laws and regulations and with reasonable standards of care for protecting employee health and safety, our assets, and the environment."

The second component, process information, was challenging for us. We used a flow chart, which let us show our processes. We wrote generic descriptions, and plants could note any local variations.



Third, we documented our current and past pollution prevention activities, including those that would be introduced within three years. Individual facilities could eliminate activities that did not apply to them.

Fourth, facilities evaluated the activities. With the help of plant committees, some made significant contributions, which I'll discuss in a few moments.

Finally, we completed the plan certification, which was signed by the plant manager, the person preparing the report, and a corporate vice president.

Future Challenges

My final topic concerns future challenges. I believe our future opportunities lie in reducing the historical and somewhat natural confrontations between regulator and regulated.

I have begun getting to know the regulators' world by becoming involved in several organizations, including:

- EPA Design for Environment
- Minnesota Environmental Quality Board
- MPCA

Attending groups like this lets me learn the perspective of the different agencies without putting the corporation or the agency at risk. This makes both groups more comfortable and productive.

It is still a significant challenge to adapt Deluxe culture and policy so they reflect today's environmental realities. This change is necessary, however, so that people understand and support environmental goals.

Formulating policy is also a fairly significant task. We must set expectations so that we have something against which we can measure our actions. Policy formulation can be done only with solid knowledge of regulations and internal practices.

Technical Development

We can face today's regulatory issues by learning to capitalize on solving environmental challenges. For example, one of our pollution prevention teams significantly reduced the hazardous waste generated by one of our larger

printing facilities in Chicago. Our corporate results have been good, but the Chicago group has demonstrated what can be done, and as a result, has challenged the rest of our organization.

Another example of a technical solution is our water-washable lithographic ink. If you haven't heard, Deluxe has developed a water-washable lithographic ink that can be 100-percent VOC free. Because it can be cleaned with water, clean-up is VOC-free as well. Obviously, this concept helps Deluxe solve many of the environmental problems confronting us. It essentially eliminates air permitting issues, substantially reduces hazardous waste, and lessens the number of health and safety issues.

If you are interested in this concept, I can provide you with a copy of the news release announcing it. Or you can see me and obtain information on whom to contact at Deluxe. Deluxe is also sponsoring a hospitality room at the Radisson South, located at the intersection of Highway 100 and 494, in Suite 115 this evening. Deluxe representatives will be available to discuss the new concept there.

I hope this time has been beneficial for you, and I appreciate the opportunity to have shared our experiences.