



## Environmental Policies

During the mid 1980's, a new era of environmental regulations began taking effect to protect human health and the environment. Local, state and federal environmental regulatory agencies promulgated regulations from these laws which applied increasing pressure on industry to prevent, reduce, or otherwise mitigate the impact of pollution. Today's regulatory mandates require a stringent environmental stewardship never before witnessed in history.

Pollution from industrial processes can enter the environment in three basic ways: into the air (atmospheric emissions), to the land (waste disposal), and to the water (wastewater effluent). Because of the conservation of mass, waste and by-products from activities will ultimately reach one of these environmental "sinks."

Complying with environmental regulations has necessitated major changes in the printing process. From the beginning, ColorGraphics took a position to not only comply with the regulatory mandates, but to make every effort to do more than required by taking steps to reduce the impact of pollution on human health and the environment wherever it is both technically and economically feasible. To this end, a number of initiatives were taken, including:

- ! The services of an environmental consulting firm are retained on an ongoing basis to assist us in complying with all applicable agencies and regulations and in planning and implementing pollution reduction measures. Significant resources are committed to evaluate pollution reduction practices and engineering controls, and to properly quantify, evaluate and report atmospheric emissions, hazardous waste disposal, and water-related discharges.
- ! ColorGraphics is in continuing compliance with all applicable regulations set forth by federal, state and local environmental agencies.

### Air Quality Compliance

- ! ColorGraphics operates in the most stringent air quality regulatory districts in the world. Air quality is the most rigorous area of compliance for lithographic printers.
- ! ColorGraphics holds federally-enforceable Title V Operating Permits mandated under the clean air act. The facilities routinely certify full compliance with permit conditions to both USEPA and the local air district.
- ! Each piece of printing and related equipment must be processed for permitting through new source review and must comply with the standards for best available control technology (BACT) and lowest achievable emission rate (LAER) for criteria pollutants, and through toxic best available control technology (T-BACT) for toxic air contaminants.
- ! Each piece of equipment must be operated under specific permit conditions which are more stringent than source-specific standards.
- ! Daily records are kept of the types and amounts of all inks and chemicals used on each printing press in order to quantify daily emissions of volatile organic compounds (VOC's) into the atmosphere from each press and for each facility as a whole.
- ! The use of isopropyl alcohol, commonly used in fountain solutions as a wetting agent, has been completely eliminated to reduce emissions of reactive organic gases (pre-cursors to ozone).

- ! All inks, wash solvents and fountain solutions are continuously reformulated for the lowest levels of VOC's and toxic air contaminants, while still meeting our quality requirements.
- ! The use of ultra-violet curable inks and coatings has been initiated to reduce emissions of volatile organic compounds. U.V. curable inks and coatings are virtually VOC-free.
- ! ColorGraphics is one of the first facilities to utilize the Baldwin Impact cleaning system for cleaning blankets. The Impact system utilizes a medium impregnated with non-VOC cleaners to clean the blankets on the run. This system dramatically reduces the emissions of VOC's to the atmosphere when compared to solvent cleaning.
- ! Emissions from all heatset web presses are vented through an oxidizer to reduce emissions. The Los Angeles plant installed a new regenerative thermal oxidizer in 2002, which eliminates 99.5% of pollutants that would otherwise be emitted into the atmosphere. The regenerative thermal oxidizer is remarkable because it maintains the high temperatures necessary for the near-complete destruction of pollutants while efficiently conserving fossil fuels by using the pollutants as fuel and by using a complicated series of heat exchangers to maximize efficiency.
- ! ColorGraphics has installed low-NOX (oxides of nitrogen) burners in heatset drying ovens and the regenerative thermal oxidizer to reduce the impact of natural gas combustion.
- ! The facilities operate on an advanced equipment replacement schedule to not only maintain the highest print quality, but also to minimize environmental impacts, by installing and operating state-of-the-art equipment.
- ! Ozone depleting chemicals, as defined by the Montreal Protocol, such as 1,1,1 - trichloroethane, are not used by ColorGraphics.

### **Hazardous Waste**

- ! ColorGraphics has an active waste minimization program to reduce both the volume and toxicity of hazardous wastes. Hazardous wastes, such as printing ink and wash solvent, are diverted for recycling where possible, or directed to more efficient and productive uses such as energy conversion.
- ! Waste ink and wash solvents are transported by a licensed transporter to a RCRA-permitted treatment facility where it is blended as fuel for cement kilns.
- ! ColorGraphics audits all hazardous waste facilities to meet due diligence requirements under RCRA.
- ! Each facility has minimized the volume of waste sufficiently to be exempt from federal reporting requirements.

### **Non-Hazardous Waste**

- ! Aluminum printing plates are sent off-site for recycling.
- ! Waste paper is shredded, baled and returned to use as a commodity in the recycling market.

### **Water Quality Compliance**

- ! ColorGraphics processes municipal water through a reverse osmosis purification process to meet water quality requirements on press. The excess water created from the reverse osmosis water purification processes is recycled for use in restroom plumbing.

- ! Technology in the form of computer-to-plate (CTP) has nearly eliminated the use of film processors. Those film processors still in use are equipped with silver recovery units and backup tailing units to ensure that silver discharge into the sewer system is well within legal discharge limitations. The silver chip collected during this process is recycled.
- ! ColorGraphics is in excellent standing with the industrial wastewater discharge authorities for continuing compliance with wastewater discharge limits.
- ! ColorGraphics participates in the state General Permit for Stormwater Discharges where pollutant loading in stormwater discharges from the facility are monitored, evaluated, and reduced or eliminated. Best management practices have been implemented to reduce pollutant loading pursuant to the site-specific Stormwater Pollution Prevention Plan.

**Hazardous Materials**

- ! ColorGraphics uses recycled materials for shipping cartons and internal forms and supplies.
- ! Inks used by ColorGraphics are not considered to be toxic or hazardous as defined by the Federal Hazardous Substances Act (16 CFR 1500.3); they are not classified as carcinogens within OSHA under (29 CFR 1910.1200); and the waste ink does not exhibit the characteristic of a hazardous waste under the Resource and Conservation Recovery Act (40 CFR 261.1 et seq.).
- ! Concentrations of heavy metals in inks used at ColorGraphics are extremely low. No heavy metals are used as pigments in the inks. The heavy metals that do exist are the result of background by-products from pigment production and subsequent washouts. Typically, these levels are less than:

Cadmium	<1 ppm
Chromium	<5 ppm
Chromium, Hexavalent	<5 ppm
Lead	< 5 ppm
Mercury	<0.2 ppm

- ! ColorGraphics periodically evaluates occupational and environmental exposures under Proposition 65 to meet reasonable warning requirements. No receptors are exposed above significant risk levels as a result of facility operations, largely due to the comprehensive emission reduction strategy.
- ! ColorGraphics is in full compliance with the community-right-to-know provisions under SARA Title III, Section 313. ColorGraphics does not use toxic chemicals in quantities sufficient to require reporting for the Toxic Chemical Release Inventory. ColorGraphics annually notifies the local hazardous materials agency of the types, quantities, locations and hazards of all chemicals stored on-site.

