



# Environment

INFORMATION FROM KODAK

## *Environmental Guidelines for Amateur Photographers*



As a photographer, you have a unique sensitivity to the environment around you. But, as an amateur photographer, you don't have to worry about the environmental and safety regulations that apply to commercial businesses and professional photographers.

But you still need to know how to safely handle and dispose of photographic processing chemicals.

### **AMATEUR OR PROFESSIONAL?**

An amateur is someone who engages in an activity as a pastime rather than a profession. An amateur photographer does not generate (or try to generate) revenue from the use of photography. When you become a professional

photographer and charge for your services, you are *required* by law to comply with certain environmental and workplace safety regulations (some of which are covered in this publication). As an amateur photographer, you are not required by law to follow those regulations but we are providing *recommendations* on safe handling and waste management practices.

### **SAFETY**

Chemicals are safe when handled properly—that's why it's important to know and understand the chemicals you're working with and the appropriate protective measures you should use when handling them.

J-300 \$10.00

Kodak's health, safety, and environmental publications are available to help you manage your photographic processing operations in a safe, environmentally sound and cost-effective manner. This publication will help amateur photographers know how to safely handle and dispose of photographic processing chemicals.



## PERSONAL PROTECTIVE EQUIPMENT

When working with photographic processing chemicals, you should wear protective clothing to ensure your safety. Whenever the potential exists for chemicals to get in your eyes, wear safety glasses with side shields. When mixing chemicals, wear tight-fitting goggles. Wear impervious gloves, such as those made with Neoprene or Nitrile, to prevent contact with skin. You should also wear an apron, or other protective clothing that is impervious to chemicals, to prevent chemicals from coming in contact with your clothing.

## VENTILATION

Some Kodak photographic processing solutions may release vapors or gases that can irritate the eyes and respiratory tract and have unpleasant odors. When processing solutions are warm, they may generate more vapors. In addition, temperature affects processing times. Therefore, it is important that you work with solutions at the proper temperatures. For your own personal comfort and good health practices, you should minimize the concentration of these chemicals by controlling ventilation. We recommend using a room with a source of fresh air for darkroom use. Here are some ventilation guidelines for manual sink-line or open tray processing areas:

- *Supply* tempered fresh air to the darkroom above the processing solutions. Position the supply of fresh air so that it will not affect the capture of vapors or gases by the exhaust opening.
- *Exhaust* the room air from the processing chemical area to the outdoors at a minimum rate of 10 room volumes per hour<sup>1</sup> If you

1. For 10 x 10 x 10-foot room

have a fresh-air supply duct to your darkroom, set your exhaust rate slightly higher than the supply rate. This produces a slight negative pressure and reduces the chance of vapors or gases escaping to an adjoining room.

To determine how much exhaust per hour is required for your darkroom:

- Determine room volume (h x l x w)
- Multiply by 10
- Divide by 60 minutes

Most darkrooms are 10' h x 10' l x 8' w which equals 800 cubic feet (ft<sup>3</sup>). Therefore,

$$\frac{800 \text{ ft}^3 \times 10}{60 \text{ min/hr}} \times 10 = 10 \text{ room changes per hour}$$

Exhaust rate of  
133 ft<sup>3</sup> min for

## MATERIAL SAFETY DATA SHEETS

A Material Safety Data Sheet (MSDS) is available for every Kodak chemical you purchase. The MSDS tells you how to use, handle, and store the product safely. The content of MSDSs varies from one product to the next. Among the topics covered are:

- **Product Information:** identifying the name of the product and any other trade names.
- **Component Information:** identifying what ingredients are in the product.
- **Hazard Identification:** hazardous components in the product and safe handling information.
- **First Aid Measures:** appropriate emergency procedures and other information.
- **Fire-Fighting Measures.**
- **Precautions to take if a spill occurs.**

- **Handling and Storage:** special personal precautionary measures and storage information.
- **Exposure and Personal Protection:** ventilation and what personal protective equipment is needed, such as gloves, goggles, etc.
- **Physical and Chemical Properties:** such as pH, color, and odor.
- **Stability and Reactivity:** incompatibility with other chemicals.
- **Health Information:** such as symptoms of overexposure.
- **Disposal Information:** waste management options for the product.

## OBTAINING MSDSs

To get a copy of an MSDS for a Kodak product, see your dealer or retail store, or call us at 1-800-242-2424, ext. 25, or fax us at 716-724-9656. Please provide the catalog number (CAT No.) of each Kodak product and your address. Or visit Kodak Environmental Services on-line at [www.kodak.com/go/kes](http://www.kodak.com/go/kes).

## MANAGING WASTE

There are two types of waste—solid wastes and processing effluent. Most solid wastes are packaging materials. The waste produced from processing photographic films and papers is called photographic effluent; it includes developer, fixer, bleaches, and wash water. There are many different ways to manage solid and effluent waste materials.

## REDUCING WASTE

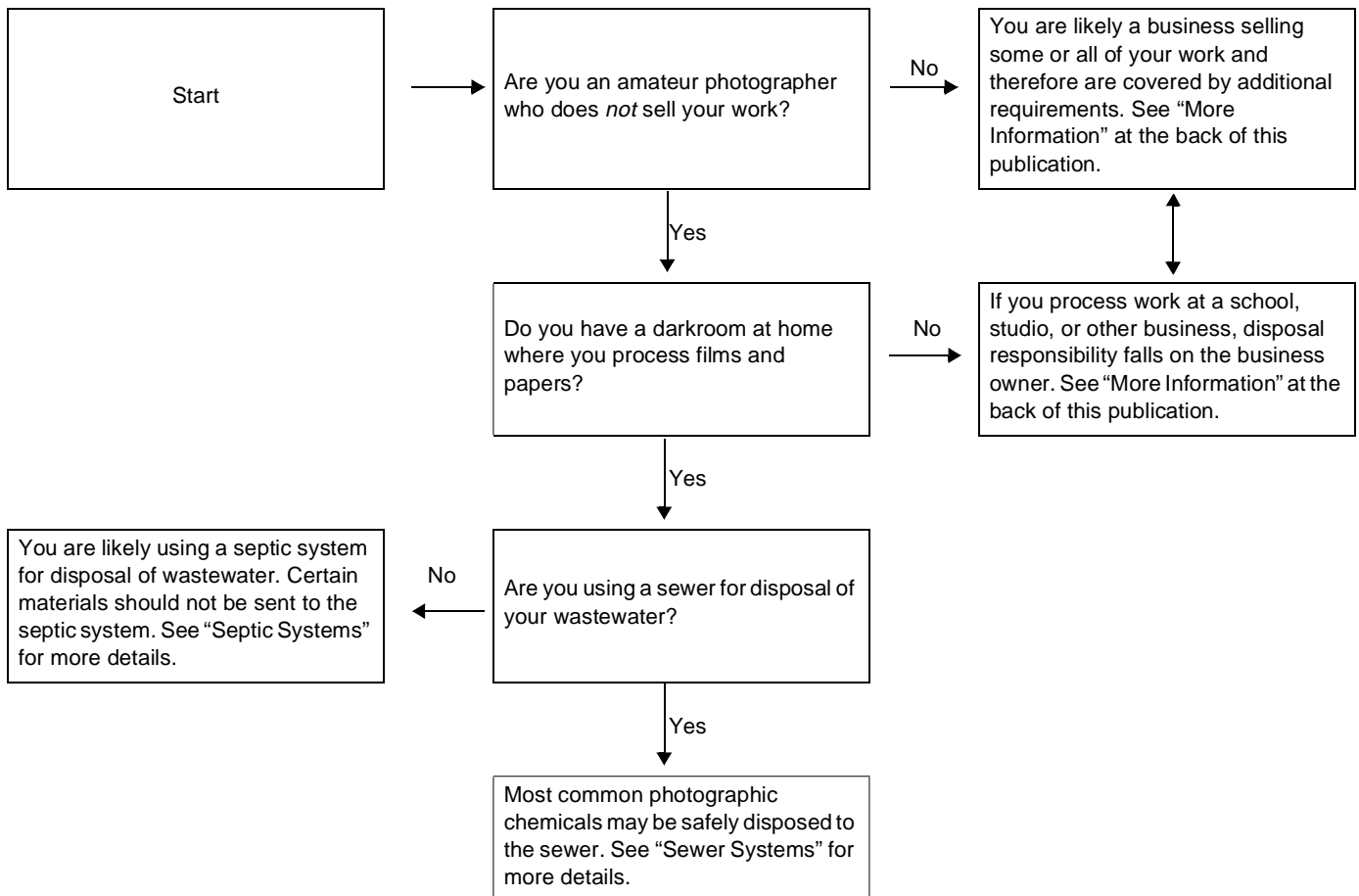
The best way to help the environment—and yourself—is to use photographic processing solutions efficiently. You can accomplish this by:

- Buying only the supplies you need. This way, you won't be storing unused photoprocessing chemicals past their recommended shelf life and later, having to dispose of them.
- Mixing only the amount of photographic processing chemicals you need; this way, you won't have to dispose of additional materials.

## PHOTOGRAPHIC EFFLUENT

Before you can decide how to dispose of photographic processing chemicals, you need to know what type of waste disposal system you have. The type of system you have and the types of materials you need to dispose of will determine how you dispose of your waste. There are two types of waste disposal systems—sewer and septic.

### Amateur or Professional?



## SEWER SYSTEMS

The majority of wastewater generated in our communities travels through the sewer system to a Publicly Owned Treatment Works (POTW). The POTW is responsible for treating the wastewater that comes through its facility. The water that leaves the POTW after treatment must comply with federal

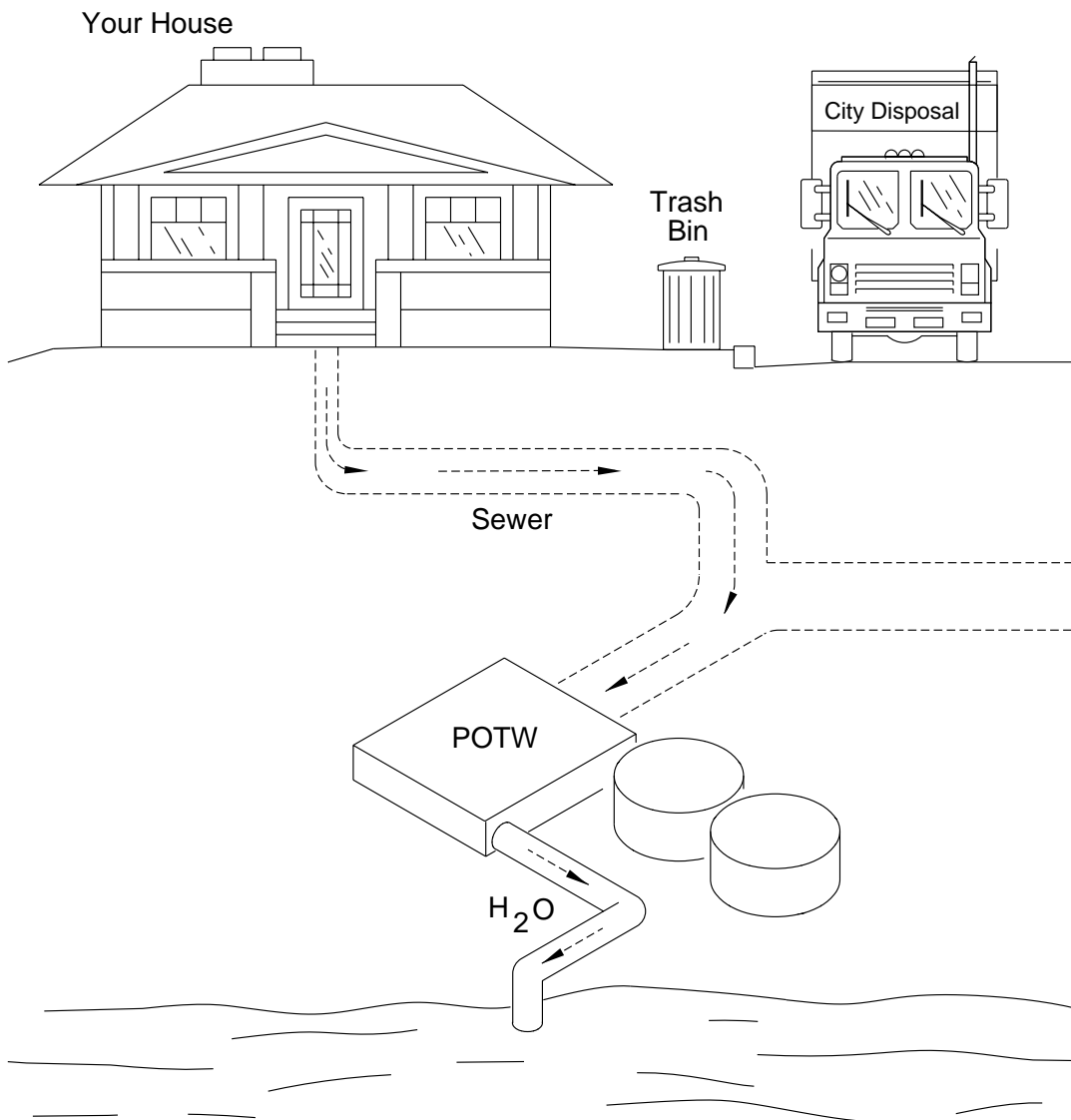
and state regulatory limits established under the Clean Water Act. In order to comply, the local POTW must establish pretreatment guidelines (commonly referred to as sewer codes) that impact businesses. As a domestic user—an amateur photographer—you are excluded from these regulations. Most

photographic chemicals can be sent to the sewer. They include:

- Developers
- Stop baths
- Fixers (after silver recovery)
- Wash waters

Do **NOT** send:

- Selenium toners
- Solvents
- Other materials that are prohibited, i.e., flammable materials



## WASTE MANAGEMENT OPTIONS

If you are on a sewer system, the best way—and the most appropriate—is to dispose of your photographic processing effluent through the sewer system. Most photographic processing solutions are biodegradable and are effectively treated when discharged to POTWs. POTWs that have secondary (biological) wastewater treatment can effectively treat the waste stream through the use of biological action, such as bacteria nutrients and aeration, to break down the waste it receives so that it may be safely discharged to a body of water.

Photographic processing effluent includes developer, fixer, bleach, and wash water involved in processing films and papers. Two key characteristics of photoprocessing effluent are pH and the concentration of silver. Developer has a high pH and is therefore alkaline or caustic. Fixer has a low pH and is therefore acidic. When fixer and developer are combined as the total process effluent, the effluent is neutralized, resulting in a better compatibility with drain pipes and treatment at the POTW.

Another key characteristic of photoprocessing effluent is the silver concentration found in photographic fixer or bleach-fix effluent. Although the form of silver (silver thiosulfate) found in photographic processing effluent is not harmful and is removed during secondary treatment at the POTW, it is a good practice to recover silver before discharging the effluent. See page 6 for information on silver recovery.

If you do not want to recover silver from used photographic fixer or bleach-fix, you may choose to utilize other disposal options, such as household hazardous waste collection. Refer to the section on Waste Management Alternatives for Septic Systems for additional information.

## SEPTIC SYSTEMS

Septic tank systems are designed and used for the disposal of domestic waste, primarily in areas where municipal sewers are unavailable. They operate with anaerobic (without oxygen) biological action to treat the wastes discharged. This also includes leach fields and cesspools.

Septic systems do not have the ability to properly treat photographic processing solution waste. Regulations have been established by the United States Environmental Protection Agency (USEPA) and many states to minimize the potential of adversely affecting sources of underground drinking water. Although these regulations typically do not impact domestic users, such as amateur photographers, we recommend that you contact your local health department to determine whether discharging photographic processing effluents into your septic system is appropriate for your location.

**Table I. General Guidelines**

KODAK Products	Sewer System Options	Other Alternatives			
	Discharge to Sewer (POTW)	Household Hazardous Waste Collection	Discharge to nearby POTW	KODAK RELAY Program	Trash Disposal
Developer unused/used	✓	✓	✓	✓	—
Fixer/Bleach-Fix unused used	✓	✓	✓	✓	—
	✓*	✓	✓*	—	—
Stabilizers	✓	✓	✓	✓	—
Sepia Toner	✓	✓	✓	✓	—
Rapid Selenium Toner	—	✓	—	—	—
Indicator Stop Bath	✓†	✓	✓	✓	—
PHOTO-FLO Solution	✓	✓	✓	✓	—

\* Recommended after silver recovery is performed.

† Recommended after neutralization.

## WASTE MANAGEMENT ALTERNATIVES FOR SEPTIC SYSTEMS

Kodak does **not** recommend the use of septic systems for disposal of photographic processing chemicals because the disposal of photographic processing solutions may affect the proper operation of the septic system. Other disposal options are available for septic system users, including household waste collection facilities, discharge to a nearby municipal treatment plant, or a licensed hazardous waste hauler. Table I provides a summary of waste management options which are available for Kodak products.

Most communities have local household hazardous waste collection facilities. These facilities are available to the public to collect items from domestic use that should not be disposed of through municipal trash, septic, or sewer systems. This option is available if you generate less than 220 pounds (100 kilograms) of hazardous waste per calendar month. Most home hobbyist photographers fall well below this limit. See Appendix A for the listing of state household hazardous waste collection coordinators. You may contact your state coordinator for information on the household hazardous waste collection facility nearest you.

You can also discharge your photographic wastes to a local municipal sewer authority, often referred to as a Publicly Owned Treatment Works (POTW). Contact the POTW directly to see if they will accept your waste.

The third option available is to contract with a licensed hazardous waste hauler to manage your photographic processing wastes for off-site disposal. Kodak offers the RELAY Program, in conjunction with Safety-Kleen Corporation, to properly handle, treat, and dispose of photographic processing wastes. For more information on the KODAK RELAY Program, see Appendix D. You may also check the yellow pages of your local phone book for a list of waste management companies in your area. (There is a fee for this service.)

### MUNICIPAL TRASH DISPOSAL

*We do not recommend that you dispose of used or unused photographic processing solution in your regular trash. This is to ensure the safety of the trash collectors who would not know that this material is in the trash and could possibly come into contact with it.*

### DISPOSAL OF OTHER KODAK PRODUCTS

Used KODAK Rapid Selenium Toner is regulated as a hazardous waste under the USEPA Resource Conservation and Recovery Act (RCRA) regulations for commercial users. We recommend that domestic users do not discharge this material to the sewer or discard it in the municipal trash. Use a household hazardous waste collection facility or a licensed hazardous waste hauler to manage this material.

KODAK Indicator Stop Bath contains acetic acid. It has a very low pH (1.0). Neutralize this solution with sodium bicarbonate (baking soda) solution prior to sending the material to the sewer. This will help protect your drain pipes. Add the sodium bicarbonate slowly to the solution because it will cause foaming. Neutralize the solution in a well ventilated area using proper personal protective equipment (gloves, goggles, and apron).

If you do not want to neutralize the Indicator Stop Bath prior to disposal, you may choose to utilize other disposal options, such as household hazardous waste collection. Refer to the previous section on Waste Management Alternatives for Septic Systems for additional information.

### DISCONTINUED KODAK PRODUCTS

For information on managing discontinued Kodak products, please contact Kodak Environmental Services at 716-477-3194 for assistance.

### SILVER RECOVERY

You can find silver in a number of different materials when you process photographic materials. The original source of silver is photographic films and papers. Once processed, silver can be retained in the photographic material or transferred to solutions used to process the photographic materials. Commercial business and photographers must recover silver from photoprocessing effluent to meet sewer discharge limits established by POTWs. Amateur photographers are not required to recover silver. But whether you are a professional or amateur photographer, silver recovery provides environmental benefits, conserves a natural resource, and may provide a source of revenue.

The amount of silver found in photoprocessing effluent will depend upon the amount of film or paper you've processed. See Table II for typical silver concentrations. For small volume users like amateur photographers, metallic replacement is usually a good method for recovering silver from photographic processing effluent. In this method, iron metal (steel wool) reacts with the silver in the fixer solution. The iron replaces the silver in solution, while the less active metal (silver) settles out as a solid sludge. To bring the silver in contact with the iron, the used fixer passes through the container filled with steel wool. The steel wool provides the source of iron to replace the silver.

**Table II. Silver Concentrates Found in Photoprocessing Solutions**

Solution	Amount
Developer	Contains negligible amounts of silver
Fixer/Bleach-Fix	3000–5000 milligrams/litre
Wash Water/Stabilizer	1–5 milligrams/litre

The advantages to using metallic replacement cartridges are the low initial cost (approximately \$50 each), and the simplicity of installing them—all you have to do are a few simple plumbing connections. The disadvantage of metallic replacement is that the silver is recovered as a sludge, which makes it more difficult to determine the exact amount of silver recovered and requires more costly refining. Also, you cannot reuse cartridges; you must replace them when they become exhausted. For small-volume users, such as amateur photographers, metallic replacement cartridges usually last about six months.

You can recover silver from small batches of fixer by pouring the solution into a metallic replacement cartridge. You can use the KODAK Chemical Recovery Cartridge, Junior Model II.

### TIPS FOR RECOVERING SILVER

To use metallic replacement cartridges as efficiently as possible, fill them with water before you use them. This will allow the solution to come into contact with the greatest surface area of steel wool and prevent “channeling.” Regardless of the amount of effluent passed through it, never use a cartridge for more than six months. The cartridge is used to remove silver from the fixer/bleach fix solution only. Do not add developer or any other chemical to the cartridge. Adding developer or other chemicals will destroy the cartridge and inhibit the silver-recovery process.







### REFINING

After the metallic replacement cartridge is exhausted, you have to send it to a refiner to reclaim the silver that is present in the form of a sludge in the cartridge. For a list of refiners, see Appendix B.

### SOLID WASTE

You can choose from several options for managing the solid waste associated with processing Kodak films and papers. Refer to Table III for guidelines on what to do with these materials.

**Table III. General Guidelines**

Product	Component		Material	Option
Film	Carton/Box		100% recycled fiberboard	Discard in regular trash
	35 mm Canister	Body	 Plastic*	Recycle†
		Cap	 Plastic*	Discard in regular trash
	35 mm magazine		Steel	Recycle‡
	35/120/220 spool		 Plastic*	Recycle‡
	126/110 cartridge		 Plastic*	Recycle‡
	Film		Emulsion, base	Discard in regular trash
Paper	Carton/Box		100% recycled fiberboard	Discard in regular trash
	Core		Fiberboard	Recycle‡
Photochemical Container	Bottles		 Plastic* or glass	Recycle**
	Caps		 Plastic*	Discard in regular trash
	Carton		100% recycled fiberboard	Recycle or Discard in regular trash

\* Refer to Appendix C for resin codes and descriptions.

† Check with your community recycling program for details or ask your local photo Recycling Program.

‡ Check with your community recycling program for details or ask your local photographic processing lab if they participate in the KODAK Paper Core Recycling Program.

\*\* Refer to Appendix E for information on photochemical bottle recycling in community recycling programs.

## APPENDIX A

### HHW Management State Agency Contacts, 1995

Source: The Waste Watch Center

#### Alaska

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## APPENDIX B

### Silver Refiners and Buyers

This list has been compiled from various sources. Inclusion on this list does not imply any endorsement or recommendation by Eastman Kodak Company.


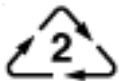
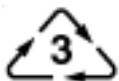

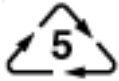
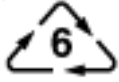
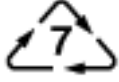
Company Name	Telephone Number
Academy Corporation 6905 Washington, N.E. Albuquerque, NM 87109	1-800-545-6685 (505) 345-1805
Capital Silver Service 1340 Airport Blvd. Gallatin, TN 37066	(615) 452-3574
Century Refining 21630 Hanover Ave. Lakeville, MN 55044	(612) 985-9995
Commodity Resource & Environmental, Inc. 116 East Prospect Ave. Burbank, CA 91502	(818) 843-2811
Degussa Corporation 3900 South Clinton Ave. South Plainfield, NJ 07080	(908) 561-1100, ext. 505
Drew Resource Corporation 1717 Fourth Street Berkley, CA 94710-1783	(510) 527-7100
Eastern Smelting & Refining Corp. 37-39 Bubier Street Lynn, MA 01901-1794	1-800-343-0914
Encore Resources 2619 Brenner Dallas, TX 75220	(214) 350-9345
Environmental Svcs. 4174 A.S. Parker Road Ste-132 Aurora, CO 80014	(303) 690-1414
Hallmark Refining Corp. 1743 Cedardale Road, Unit 4 P.O. Box 1446 Mount Vernon, WA 98273	1-800-255-1895 (206) 428-5880
Handy & Harmon 300 Rye Street South Windsor, CT 06074-1220	1-800-421-0411 (203) 289-4327 Fax (203) 289-6494
Heraeus Enright Processing Co. 65 Euclid Ave. Newark, NJ 07105	(201) 589-5273

Company Name	Telephone Number
Mar_Cor Environmental Services 11221 Melrose Street Franklin Park, IL 60131	(800) 323-9785 (847) 288-0800 Fax (847) 288-0818
Morris Recovery Systems 819-D Purser Dr. Raleigh, NC 27603	(919) 772-7924
Noble Silver 259 S. Countyline Rd. Cumberland, IN 46229	(317) 891-0559
Pyromet 5 Commerce Drive Aston, PA 19014	(610) 497-1743
Sabin Metal Corp. 1647 Wheatland Center Rd Caledonia, NY 14546	(716) 538-2194
Safety-Kleen Corp. 2110 South Yale Street Santa Ana, CA 92704	(714) 435-9225
San Antonio Silver 7514 Reindeer Trail San Antonio, TX 78238	(210) 647-4111
S.E. Environmental Services 925 W. Adams Street Jacksonville, FL 32204	1-800-329-2245
Silver Enterprises 77 Cliffwood Ave. Cliffwood, NJ 07721	1-800-777-4583
Southern Silver 400 Buchanan LeVergne, TN 37086	(615) 793-6168
SPM Montvale Industrial Montvale, VA 24122	(540) 947-5407
Springfield Silver Service 10815 State Route 161 P.O. Box 189 Mechanicsburg, OH 43044	(513) 834-2293
USI Environmental Reclamation Div. P.O. Box 43 825 Schoenhaar Drive West Bend, WI 53095-2633	(414) 334-3000 Fax (414) 334-6222

## APPENDIX C

### Resin Codes

Today, plastics are among the easiest types of waste to recycle. Responding to requests from recyclers, the Society of the Plastics Industry, Inc. created the following codes to identify plastic packaging by resin types. These codes are typically imbedded in the bottoms of plastic bottles or containers and allow easy sorting of plastic waste.

Code	Resin Type	Examples
	<b>PETE</b> —Polyethylene terephthalate	Beverage containers, boil-in food pouches, processed meat packages
	<b>HDPE</b> —High-density polyethylene	Film trays, chemical bottles, plastic lids for anesthetics and many other products, barrier envelopes, milk bottles, detergent bottles, oil bottles, toys, plastic bags
	<b>V</b> —Vinyl (PVC or polyvinyl chloride)	Film packet outer wraps, food wrap, vegetable oil bottles, “blister” packaging
	<b>LDPE</b> —Low-density polyethylene	Shrink-wrap, plastic bags, garment bags
	<b>PP</b> —Polypropylene	Margarine and yogurt containers, caps for containers, some wraps
	<b>PS</b> —Polystyrene	Egg cartons, fast food trays, disposable plastic silverware
	<b>OTHER</b> —Other types	Multi-resin containers

## APPENDIX D

### KODAK RELAY Program

**Q. What is the KODAK RELAY Program?**

- A. The RELAY Program is for managing photographic processing wastes generated by customers using Kodak photographic chemicals. Kodak is committed to providing the best products, methods, and services to meet your photographic processing needs. The RELAY Program, offered by Kodak in conjunction with Safety-Kleen Corporation, is a service you can choose to help you comply with waste management regulations.

**Q. Is the RELAY Program available worldwide?**

- A. The RELAY Program is currently available only throughout the continental United States and Puerto Rico. Canadian customers who need help with waste management can call 1-800-465-6325.

**Q. How do I sign up for the RELAY Program?**

- A. To sign up for the RELAY Program, simply contact your Kodak sales representative, or call Kodak Environmental Services at (716) 477-3194.

**Q. How soon can I expect to hear from Safety-Kleen?**

- A. Immediately after a Kodak representative has called you to confirm your interest in the RELAY Program and answer any questions you may have, your name will be forwarded to Safety-Kleen. You can then expect to receive a telephone call from a Safety-Kleen representative within 2 to 3 business days.

**Q. Who pays for the RELAY Program and how much does it cost?**

- A. You will be billed for each container of waste picked up by Safety-Kleen. The price depends on the size of container and includes the cost of analysis and containers. For pricing information, contact Kodak at (716) 477-3194.

**Q. Are there any other costs associated with the program?**

- A. Safety-Kleen charges a small fee upon initial sign-up of any new RELAY customer. Customers who participated in the 55-gallon RELAY Program prior to January 1994 who want to switch to the smaller container service do not have to pay the fee.

**Q. Will Safety-Kleen pick up partially filled containers?**

- A. Safety-Kleen's service price applies to full or partially-filled containers. Containers are available in various sizes to accommodate your needs, and empty containers are stackable to decrease the amount of storage space needed.

**Q. I use storage tanks, not containers. Can I make arrangements for pick-up by tanker truck?**

- A. Yes, you can negotiate the RELAY service price for pick-up by tanker trucks directly with Safety-Kleen.

**Q. Can I store my processing waste in the plastic 15-, 30- or 55-gallon containers that originally contained Kodak photographic chemicals?**

- A. In order to ensure container and chemical compatibility, obtain prior approval from Kodak Environmental Services by calling (716) 477-3194 before storing waste in any empty Kodak container.

**Note:** Most empty plastic drums that previously contained Kodak photographic chemicals can be returned for reconditioning and reuse. For more information on the KODAK Returnable Drum Program, contact your local Kodak sales representative or call the Kodak Information Center at 1-800-242-2424.

*Q Will I get credit from Safety-Kleen for any silver recovered from my waste streams?*

A. Currently you will *not* receive credit from Safety-Kleen for any silver recovered from your waste streams.

*Q. What happens to the waste after it is picked up by Safety-Kleen?*

A. The waste is transported to a Safety-Kleen facility for treatment and/or disposal in accordance with applicable State and Federal regulations. You will receive a Safety-Kleen's written assurance that the waste has been received and properly managed.

*Q. What is an EPA identification (ID) number? Why do I need one, and how do I get one?*

A. An EPA ID number is a number assigned by the United States Environmental Protection Agency or authorized state agency to each person (by site) who generates, transports, treats, stores, or disposes of hazardous waste. Photographic solutions that contain silver at or above 5 mg/L are considered hazardous waste when placed in containers for transportation to off-site treatment facilities. Federal and State hazardous waste regulations and the volume of hazardous waste generated by your site will dictate your need for an EPA ID number. Safety-Kleen can help you obtain an ID number if you need one.

*Q. What if I use other manufacturers' chemicals or a combination of Kodak and non-Kodak chemicals?*

A. Only waste generated from the use of Kodak photographic chemicals or Kodak-published bulk-mix formulas, qualifies for the KODAK RELAY Program. You can, however, make arrangements with Safety-Kleen for waste generated from non-Kodak (or combined Kodak and non-Kodak) solutions by calling 1-800-669-5740, or contacting your local Safety-Kleen branch.

## APPENDIX E

### Recycling KODAK Photochemical Containers

#### PREPARING KODAK PHOTOCHEMICAL CONTAINERS FOR RECYCLING

You can help minimize solid waste by participating in your local community recycling program. The following information will help you in preparing empty plastic or glass Kodak photochemical containers for recycling in your local recycling program:

1. Follow the recommendations for **personal protection and ventilation**, as described in the product Material Safety Data Sheet (MSDS), while rinsing the empty container.
2. **Empty** the container of all residual product, and dispose of the residual in accordance with all local, state, and federal regulations.
3. To minimize splattering and respiratory exposure, slowly rinse caps and empty containers with **cold** water. In some instances, the chemical residue may react with water if present in high concentrations. Dispose of the rinsate (rinse water) in accordance with all local, state, and federal regulations.
4. Repeat the rinsing of the containers two more times; you can use warm water (approximately 100° F) for the final rinse to increase the solubility of any remaining chemicals.
5. Once you no longer need the caps, rinse and discard them. Do not place them in the recycling container.
6. If the containers have visible stains or residue after triple rinsing, do not recycle them. Dispose of them in accordance with local regulations.
7. If the rinsed container is plastic, slit it so it cannot be used again and place it into your recycling collection container.

#### Answers to some frequently asked questions about recycling Kodak photochemical containers:

- Q. *Does Kodak accept back the empty plastic or glass photochemical containers?*
- A. Kodak does not accept back the empty plastic or glass photochemical containers. Local recyclers are best equipped to recycle these containers.

- Q. *What type of plastic are the containers made from?*
- A. Most of the plastic Kodak photochemical containers are manufactured from high density polyethylene, the Society of Plastics Industry (SPI) code number 2 or low-density polyethylene, SPI code number 4. In addition, some Kodak plastic containers are made of other resins and are coded number 7 to symbolize layered multi-material plastics.
- Q. *What is an SPI code and where will I find it?*
- A. An SPI code is a way to identify what type of plastic the container is made from. The number will be located on the bottom of the chemical bottle, inside the chasing arrows (mobius loop). For Cubitainers, the SPI code will be located near the neck of the container.
- Q. *What SPI code numbers will the recycler accept?*
- A. You will need to contact your local recycler for the information on what recyclable plastics they accept. Each recycler may have different market outlets for the plastics which determine what recyclables they can collect.
- Q. *How do I contact my local recycler?*
- A. Call your local or state recycling coordinator, municipal waste collection agency, or your local waste disposal company. If these agencies cannot assist you, you can call the American Plastics Council (APC) at 1-800-243-5790 for information on plastic recyclers in your area.
- Q. *What information will I have to provide to the recycler when inquiring about recycling my containers?*
- A. It would be helpful for the recycler if you provided a sample of the rinsed containers that you would like to recycle; a count of how many containers you generate per week, month, or year; the Material Safety Data Sheets for the photochemical product that was sold in the original container; and a copy of this Appendix. You may be asked to sign a form stating you will make sure the containers have been properly rinsed before you send them to the recycler.

The recycling information in this publication applies to empty Kodak plastic or glass containers used for the following Kodak photochemical products only and is not intended for containers that were reused for other purposes.

Q. *Why do some local recyclers not accept the containers?*

A. Some recyclers may not understand the nature of the contents of the containers. Most Kodak photographic chemicals are water soluble. Properly rinsed photochemical containers with no visible stains or residue are expected to pose no greater health concerns for customers or recyclers than properly rinsed household chemical containers. Some recyclers may only be able to process specific sizes of containers, types of materials (plastic and glass), and colors of glass at their facility. As a result, they may not be able to accept every container that you would like to recycle.

Q. *Can I recycle the 15-, 30-, and 55-gallon Kodak plastic drums that my photographic chemicals are shipped in?*

A. Yes, this is possible provided you have located a recycler of such drums in your area. However, these drums are part of the KODAK Returnable Drum Program and can be sent to the Kodak-approved drum reconditioner, then back to Kodak for reuse. If you need further information about the KODAK Returnable Drum Program, call Kodak at 1-800-242-2424.

Q. *Whom may I contact at Kodak for additional information about the recycling of Kodak photochemical containers?*

A. For additional information, you may contact the Kodak Information Center at 1-800-242-2424, Monday through Friday, from 9 a.m. until 7 p.m. (Eastern time).

#### **KODAK EKTACOLOR PRIME Chemicals**

KODAK EKTACOLOR PRIME Developer Replenisher / RA-4

KODAK EKTACOLOR PRIME Developer Regenerator

KODAK EKTACOLOR PRIME Bleach-Fix and Replenisher

KODAK EKTACOLOR PRIME Stabilizer and Replenisher / RA-4

#### **KODAK EKTACOLOR RA Chemicals**

KODAK EKTACOLOR RA Developer Starter

KODAK EKTACOLOR RA Developer Replenisher RT, Part A

KODAK EKTACOLOR RA Developer Replenisher RT, Part B

KODAK EKTACOLOR RA Developer Replenisher RT, Part C

KODAK EKTACOLOR RA Developer Replenisher

KODAK EKTACOLOR RA 100 Developer Replenisher

KODAK EKTACOLOR RA 100 Developer Regenerator

KODAK EKTACOLOR RA 100 Developer Regenerator (WS)

KODAK EKTACOLOR RA Bleach-Fix and Replenisher

KODAK EKTACOLOR RA 100 Bleach-Fix Replenisher

KODAK EKTACOLOR RA Stabilizer and Replenisher / EP-2, RA-4

#### **KODAK FLEXICOLOR Chemicals**

KODAK FLEXICOLOR Developer Starter LORR

KODAK FLEXICOLOR Developer Replenisher LORR

KODAK FLEXICOLOR Developer Replenisher LORR, Part A

KODAK FLEXICOLOR Developer Replenisher LORR, Part B

KODAK FLEXICOLOR Developer Replenisher LORR, Part C

KODAK FLEXICOLOR Bleach III / C-41, Part A

KODAK FLEXICOLOR Bleach III / C-41, Part B

KODAK FLEXICOLOR Bleach III Starter

KODAK FLEXICOLOR Bleach III Replenisher, Part A  
KODAK FLEXICOLOR Bleach III Replenisher, Part B  
KODAK FLEXICOLOR Bleach III Regenerator  
KODAK FLEXICOLOR RA Bleach Replenisher NR  
KODAK FLEXICOLOR Bleach III NR Replenisher  
KODAK FLEXICOLOR RA Fixer and Replenisher  
KODAK FLEXICOLOR Fixer and Replenisher  
KODAK FLEXICOLOR Stabilizer and Replenisher LF

#### **KODAK Chemicals for Process E-6**

KODAK First Developer, Process E-6  
KODAK First Developer Replenisher, Process E-6 and Process E-6AR  
KODAK First Developer Starter, Process E-6  
KODAK Reversal Bath, Process E-6  
KODAK Reversal Bath and Replenisher, Process E-6 and Process E-6AR  
KODAK Color Developer, Process E-6, Part A  
KODAK Color Developer, Process E-6, Part B  
KODAK Color Developer Replenisher, Process E-6  
KODAK Color Developer Starter, Process E-6  
KODAK Bleach, Process E-6  
KODAK Bleach Starter, Process E-6  
KODAK Fixer, Process E-6  
KODAK Fixer and Replenisher, Process E-6 and Process E-6AR  
KODAK Defoamer, Process E-6  
KODAK Pre-Bleach, Process E-6  
KODAK Pre-Bleach and Replenisher, Process E-6 and Process E-6AR  
KODAK Final Rinse, Process E-6  
KODAK Final Rinse and Replenisher, Process E-6

#### **KODAK EKTACHROME R-3 Chemicals**

KODAK EKTACHROME R-3 First Developer Replenisher  
KODAK EKTACHROME R-3 Color Developer Replenisher, Part A  
KODAK EKTACHROME R-3 Color Developer Replenisher, Part B  
KODAK EKTACHROME R-3 Color Developer Replenisher, Part C  
KODAK EKTACHROME R-3 Bleach-Fix and Replenisher  
KODAK EKTACHROME R-3 First Developer and Color Developer Starter

#### **KODAK EKTACHROME R-3000 Chemicals**

KODAK EKTACHROME R-3000 First Developer  
KODAK EKTACHROME R-3000 Color Developer, Part A  
KODAK EKTACHROME R-3000 Color Developer, Part B  
KODAK EKTACHROME R-3000 Color Developer, Part C  
KODAK EKTACHROME R-3000 Bleach-Fix



**MORE INFORMATION**

If you have environmental or safety questions about Kodak products or services, contact Kodak Environmental Services at 1-716-477-3194, between 9 a.m. and 7 p.m. (Eastern time) or visit KES on-line at [www.kodak.com/go/kes](http://www.kodak.com/go/kes).

Kodak also maintains a 24-hour health hotline to answer questions about the safe handling of photographic chemicals. If you need health-related information about Kodak products, call 1-716-722-5151.

For questions concerning the safe transportation of Kodak products, call Kodak Transportation Services at 1-716-722-2400.

Additional information is available on the Kodak website and through the U.S.A./Canada faxback systems.

The products and services described in this publication may not be available in all countries. In countries other than the U.S., contact your local Kodak representative, or your usual supplier of Kodak products.

The following publications are available from Kodak Customer Service or from dealers who sell Kodak products.

- J-110 *Formaldehyde Use in Photographic Processing Facilities*
- J-111 *Determining Workplace Exposure to Formaldehyde*
- J-112 *Formaldehyde Emergencies*

- J-113 *About the OSHA Formaldehyde Standard*
- J-210 *Sources of Silver in Photographic Processing Facilities*
- J-211 *Measuring Silver in Photographic Processing Facilities*
- J-212 *The Technology of Silver Recovery for Photographic Processing Facilities*
- J-213 *Refining Silver Recovered from Photographic Processing Facilities*
- J-214 *The Regulation of Silver in Photographic Processing Facilities*
- J-215 *Recovering Silver from Photographic Processing Facilities*
- J-216 *The Fate and Effects of Silver in the Environment*
- J-217 *Using Code of Management Practice to Manage Silver in Photographic Processing Facilities*

For more information about Kodak Environmental Services, visit Kodak on-line at: [www.kodak.com/go/kes](http://www.kodak.com/go/kes)

Many technical support publications for Kodak products can be sent to your fax machine from the Kodak Information Center. Call: U.S. 1-800-242-2424, Ext. 33 / Canada 1-800-295-5531 —Available 24 hours a day, 7 days a week—

If you have questions about Kodak products, call Kodak.  
 In the U.S.A.:  
 1-800-242-2424, Ext. 19, Monday–Friday  
 9 a.m.–7 p.m. (Eastern time)  
 In Canada:  
 1-800-465-6325, Monday–Friday  
 8 a.m.–5 p.m. (Eastern time)



**EASTMAN KODAK COMPANY • ROCHESTER, NY 14650**