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MODEL SPECIFICATIONS AND PURCHASING GUIDELINES FOR ENVIRONMENTALLY PREFERABLE PURCHASING OF MONOCHROME TONER CARTRIDGES

NERC Requests Your Review

Review Period: May 19 – June 22

I. INTRODUCTION

This document provides purchasers and environmentalists with model specifications and purchasing guidelines for inclusion in bids and vendor contracts for the environmentally preferable purchasing (EPP) of Monochrome Toner Cartridges.

Please note: Model EPP specifications for copy and multipurpose paper, and office supplies (including other paper) are not included in this document, but are available for review at:

- [Copy and Multipurpose Paper](#)
- [Office Supplies](#)

Please email [Mary Ann Remolador](#), NERC's Assistant Director, with your edits, comments, and suggestions no later than **June 19**.

The specifications will be finalized and posted on the NERC website by July 31.

II. MONOCHROME TONER CARTRIDGE EPP SPECIFICATIONS

Suggested hierarchy, in order of preference, for purchasing toner cartridges is:

- **Priority 1** - Remanufactured High-yield Cartridges
- **Priority 2** - High-yield Original Equipment Manufacturer (OEM) Cartridges
- **Priority 3** - Remanufactured Standard Cartridges

Note: Compatible toner cartridges are not included in these specifications. See the definitions at the end of this document for more information about compatible cartridges.

III. PURCHASING GUIDELINES

A. SUGGESTION FOR PURCHASING ENTITY

It is suggested that prior to creating bid documents, the purchasing entity should:

1. Inventory all imaging equipment and record toner cartridges needs, and
2. Determine the type of toner cartridges that have the highest volume of usage.

B. RECOMMENDED PRODUCT QUALITY REQUIREMENTS

1. All remanufactured cartridges must have specifications equal to or exceeding OEM cartridge standards of quality and performance and meet approved remanufactured toner cartridge industry standards. Toner cartridges furnished to this specification shall meet or exceed the latest ASTM remanufactured toner cartridge standards, or the guidelines of [UL/EcoLogo](#), [Blue Angel](#), [Nordic Swan](#), or equivalent Eco label, or the results of third party performance testing by the [Rochester Institute of Technology Imaging Products Laboratory \(RIT\)](#), [Buyers Lab](#), or equivalent independent laboratory. The vendor shall provide a separate declaration for each type of toner cartridge SKU offered to the purchasing entity.
2. All remanufactured toner cartridges shall not be manufactured/remanufactured with and/or contain intentionally added mercury, lead, cadmium or chromium (VI) as constituent parts of the toner. The vendor shall also provide documentation, with each shipment, that attests to compliance with this requirement.
3. All remanufactured toner cartridges shall not be manufactured/remanufactured with and/or contain any hazardous substances in concentration that causes the toner being classified with the following risk phases according to [Annex I of the European Union Directive 67/548/EEC](#)¹:
 - a. Very toxic by inhalation (R 26)
 - b. Very toxic in contact with skin (R 27)
 - c. Limited evidence of a carcinogenic effect (R 40)
 - d. May cause sensitization by inhalation (R 42)
 - e. May cause cancer (R 45)
 - f. May cause heritable genetic damage (R 46)
 - g. Danger of serious damage to health by prolonged exposure (R 48)
 - h. May cause cancer by inhalation (R 49)
 - i. May impair fertility (R 60)
 - j. May cause harm to the unborn child (R 61)
 - k. Risk of impaired fertility (R 62)
 - l. Possible risk of harm to the unborn child (R 63)
 - m. May cause harm to breastfed babies (R 64)
 - n. Possible risk of irreversible effects (R 68)
4. All remanufactured toner cartridges shall not be manufactured or remanufactured with azo-colorants (dyes or pigments) that may contain carcinogenic aromatic amines.
5. The vendor shall document that the remanufactured toner cartridges have been tested for performance and in accordance with the above standards and guidelines and that the cartridges have met or exceeded those tests.

¹ <http://www.comm-2000.com/ProductDetail.aspx?UniqueKey=26359>

C. RECOMMENDED BIDDER & CONTRACT VENDOR REQUIREMENTS

The following requirements are intended for retailers, distributors and remanufacturers.

1. Bidder Requirements

- a. Not propose to sell any OEM or remanufactured toner cartridges in which the manufacturer, wholesaler, distributor, retailer, or remanufacturer places restrictions on the recycling or remanufacturing of the cartridge.
- b. Propose toner cartridges that adhere to the hierarchy specified above for all imaging equipment of the purchasing entity. The bidder is responsible for informing the purchaser of the available products and indicating which category in the hierarchy the product falls into.
- c. Provide page counts for all OEM and remanufactured cartridges in its proposal.

2. Contractor Requirements

a. Cartridge Packaging & Labeling Requirements

If the original shipping container will be used for returning spent cartridges to the bidder, the container shall be constructed in such a way as to permit this.

In addition, each shipping container shall have, on at least one of the long sides, a label which clearly states: "IMPORTANT: SAVE THIS BOX AND ALL INTERNAL PACKAGING FOR RETURN OF THE EMPTY CARTRIDGE."

If using corrugated packaging, it must contain a minimum of 50% post-consumer recycled content and the vendor must provide written documentation from the carton manufacturer/supplier to verify the actual percentage of recycled content.

Refrain from using any packaging materials used to protect the toner cartridges during shipping that are made of polystyrene foam or PVC.

b. Cartridge Take-back Collection

- i. Provide a viable method for collection of spent cartridges for recycling or remanufacturing that does not create any waste or expense for the customer (e.g., pre-paid shipping/ mailing label to be used on original box in which cartridges were received, a collection container for pick up, etc.). The best practices for take back will be reviewed and determined with the purchasing entity.
- ii. Recycle or remanufacture end-of-life cartridges and provide the buyer with the following details of its recycling/remanufacturing program in its annual reporting to the customer:
 - Track the number of used toner/ink cartridges received from the customer, including the type of toner cartridge (OEM or remanufactured), the name of the OEMs, and the name of the customer completing the return.
 - Track the disposition of the returns, including the disposition of the remaining toner in used cartridges (remanufactured, sent to remanufacturer, recycled, other).
- iii. Ensure that remaining toner in used cartridges is recycled or disposed of in a manner that complies with all environmental and human health and safety laws.

- iv. At the customer's request, provide manifests and any other documentation needed to confirm the proper management or disposal of material.

c. Safety Data Sheets & Training

- i. A link to the current Safety Data Sheet (SDS) for each product shall be provided to the customer.
- ii. The vendor shall provide training to the end-users on installation and maintenance of the cartridge to optimize the performance and life of the cartridge, upon request of the customer.

d. Warranty

- i. Warrant no more than a 2% failure rate of toner cartridges supplied.
- ii. Provide 100% replacement warranty for all cartridges supplied for a minimum of one (1) year from the date of purchase. This warranty shall be provided with each cartridge and shall cover defects in the cartridge, material used in the cartridge, workmanship and damage during shipment.
- iii. Provide the following, if problems occur with printers or copiers due to a vendor's defective remanufactured toner cartridge, the vendor shall: 1) provide a competent factory-trained authorized service technician to repair printer or copier within one (1) business day, or 2) reimburse the customer for any printer or copier repair service performed due to the vendor's defective cartridge. If the printer or copier cannot be repaired or restored to its previous condition, vendor shall pay for an equivalent replacement of the printer or copier, at no cost to the customer.

e. EPP Products Clearly Identified, Defined, and Found in Vendor Catalogs

Require that the vendor provide annual purchasing reports to the purchasing entity on all toner cartridge purchases, with breakdowns detailing all EPP purchases.

Require that the vendor provide details on how it defines EPP. [By tracking the EPP purchases through vendor reports, it enables purchasers to monitor EPP expenditures for performance and opportunities for improvement.] At a minimum, the following information should be included in the reports:

- list of items by SKU number and product description
- EPP attributes of items (see list above)
- the total quantity purchased per item
- the total expenditure per item.

Optional additional requirement: Require the vendor to provide EPP data by department, delivery location, or other demographic. that is most applicable to your organization.

f. Consolidate Deliveries

Select a vendor willing to pre-arrange the day in which deliveries are made.

[This requires the purchasing entity to have previously set up a plan whereby all purchases from the copy and multipurpose paper vendors are only delivered on a certain day of the week. The limited frequency of deliveries will reduce your carbon footprint by reducing the:

- i. Amount of fossil fuels required by delivery vehicles for your purchases.
- ii. Carbon emissions from fossil-fuel burning delivery vehicles.
- iii. Vehicle traffic at the workplace and on the roads.]

g. Minimize Use of Shipping Packaging & Use Readily Recyclable Packaging Material

Require the vendor to minimize shipping packaging, to use 100% recycled content shipping and packaging materials, to use shipping and packaging materials that can easily be reused (reverse distribution) or recycled in your local recycling program, and that comply with model toxics in packaging laws.

h. No Idling of Delivery Trucks

Require all delivery drivers to turn off their engines upon stopping at the delivery location, or not allow an engine to idle at any location for more than 20 seconds, except in the following situations:

- i. The health and safety of employees, sub-contractors or the public is compromised by turning off the vehicle;
- ii. The engine is required to power auxiliary equipment (e.g. hoist, lift platforms, hydraulic tools, inverters, compactors, medical equipment, specialized public safety radio communication and computer systems, etc.); or
- iii. Vehicle/equipment manufacturer requires additional idle time for warm up or cool down for efficient and proper mechanical or functional operation of the unit.

D. PREFERRED PRODUCT QUALITY REQUIREMENTS

1. Emission Rates

Provide documentation that confirms the emissions testing results of each cartridge purchased meets the specified requirements for release of total volatile organic compounds (TVOC), benzene, styrene, and dust as defined in [RAL-UZ55](#) for monochrome print cartridges and determined in accordance with standard; [ISO/IEC 28360:2007 Information technology -- Office equipment -- Determination of chemical emission rates from electronic equipment](#). See Table 1 for the allowable emission rate values for each substance.

Table 1: Maximum Allowable Values of Emission Rates Determined in Accordance with the Test Conditions Listed in the Basic Criteria of RAL-UZ 122:2009²	
Substance	Emission Rate Printing Phase (mg/h) – Monochrome
TVOC	10.0
Benzene	< 0.05
Styrene	1.0
Dust	4.0

² Ibid.

E. BIDDER & VENDOR REQUIREMENTS ON REMANUFACTURERS

1. Quality Requirements for Remanufacturers

- a. It is desirable that all product remanufacturers be certified as [STMC, ISO 9001 for Quality Management Systems](#), or [ISO 14001 for Environmental Management Systems](#). Bidders shall inform purchasing entity of these certifications.
- b. If the remanufacturer is certified according to STMC Guidelines, provide documentation on the number of company personnel who have completed the training for the Guidelines. This includes the standardized testing certification for ASTM F 1856-98, ASTM F 2036, and ISTA 1A VERSION-99.
- c. Provide documentation on the remanufacturers facility(ies); skilled personnel; and equipment and parts available to completely service, maintain, overhaul and repair all brands of copiers and printers that are associated with the brand of cartridges listed in the solicitation.

2. Cartridge Testing

Provide documentation on remanufacturers' verification of testing all toner cartridges after remanufacturing by installing the cartridge in an applicable printer or copier and running and inspecting test copies. A test copy for each toner purchased will be provided with each purchase shipment, printed on 100% recycled content paper, and printed double-sided.

3. Cartridge Remanufacturing Process

The exterior cartridge surfaces shall be thoroughly cleaned, with all traces of old labels removed entirely.

IV. DEFINITIONS

- A. **ASTM** – American Society for Testing Materials.
- B. **Compatible Toner Cartridges or Clones** – new cartridge built using 100% new parts, not produced by the OEM but by a 3rd third party, and sold under a 3rd third party brand name (Also known as: Clone or new build.)
- C. **Compatible with** – remanufacturers may refer to their toner cartridges as “compatible with” certain OEM printers and copiers. This is different than compatible toner cartridges.
- D. **High-yield Cartridge** – Cartridge filled to obtain maximum number of copies of printed material.
- E. **International Imaging Technology Council (I-ITC)** - Global trade association of the imaging supplies industry and institutional host of the Standardized Test Methods Committee (STMC).
- F. **International Safe Transit Association (ISTA)** - Testing and standard setting organization for packaging used for shipping goods.
- G. **OEM** - Original equipment manufacturer.
- H. **OEM Cartridge** – New cartridge produced by the OEM and sold under the brand name.

- I. **Remanufacturer** – Company that disassembles previously used toner cartridges into components, assembles the reusable parts into functioning printing cartridges, and introduces new or aftermarket parts or components only where expressly required (i.e., new toner).³
- J. **Remanufactured Cartridges** – Used OEM cartridge which has been disassembled, cleaned, and any worn, damaged or end of life components replaced.
- K. **Standard Cartridge** – cartridge that is partially full with ink or toner.
- L. **Standardized Test Methods Committee (STMC)** – global committee, created by the International Imaging Technology Council, to promote standardized test methods for the printer cartridge industry. The STMC certification for remanufactured toner cartridge vendors signifies that the vendor’s employees are trained in and use STMC test methods.
- M. **UL/EcoLogo CCD-039** - Standard for remanufactured cartridges with specifications for the remanufacturing process, cartridge quality, and end-of-life management.

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³ Ibid.