June 27, 2017

Ms. Christina Dinovo
New York State Department of Environmental Conservation
Division of Environmental Permits and Pollution Prevention
625 Broadway
Albany, New York 12233-1750

Re: Submittal of 2017 HWRP Biennial Update Report (EPA ID No. NYD002211324)

Dear Sir/Madam:

Please find enclosed two copies of the 2017 Hazardous Waste Reduction Plan (HWRP) Biennial Update Report (BU) for Xerox Corporation's Joseph C. Wilson Center for Technology located in Webster, New York. Table 1 of the report includes 2016 hazardous waste volumes and calculated normalized production values. Table 1b is included to provide a historical reference to hazardous waste volumes generated at the facility since 1998 and all other Biennial Update report documents. The status of waste streams currently subject to the HWRP is reported in Table 2. Please note that Table 1 has also been updated to include the additional details referenced in the Conor Shea, letter dated December 16, 2016 to include the source of generation, EPA waste codes, disposal methods, and productivity indices.

Should you have any questions concerning this report, please contact Joseph Posick at (585) 422-9267.

Sincerely,

Joseph Calabria
Xerox Corporation, Manager, Western Hemisphere Facilities Management, GRE&F

JC/jp
encl.
cc: Mr. Mike Khalil, Environmental Engineer II, NYSDEC, Region 8
Mr. Sam Ezekwo, RCRA Programs Branch, USEPA Region 2
Mr. Matthew Dunham, Engineer, NYSDEC, Central Office
Xerox Hazardous Waste Operating Record

800 Phillips Road
Building 0105-166S
Webster, New York 14580
Telephone 585-422-7788

HAZARDOUS WASTE REDUCTION PLAN

2017 Biennial Update

Xerox Corporation
Joseph C. Wilson Center
800 Phillips Road
Webster, New York 14580

EPA ID No. NYD002211324

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1.1 BACKGROUND

In accordance with the New York State Hazardous Waste Reduction Act, Xerox is required to prepare, implement, and submit a Hazardous Waste Reduction Plan (HWRP) to the New York State Department of Environmental Conservation (NYSDEC) for its Joseph C. Wilson Center for Technology located in Webster, New York. This plan is reviewed for acceptance by the NYSDEC and must be updated biennially. The biennial updates are intended to highlight the progress of waste reduction actions, accomplishments and any changes from the HWRP and updates previously submitted.

The HWRP and this 2017 Biennial Update have been prepared for the Xerox operations located at the Joseph C. Wilson Center for Technology, located in Webster, New York. The 1995 HWRP (with addendum) was accepted by the NYSDEC as complying with the legislative requirements of the New York State Hazardous Waste Reduction Act (Article 27, Section 0908 (6)). Since 1995, all updates (Biennial and Annual Status Reports) have been prepared using the 1995 HWRP and its addendum (submitted to the NYSDEC on June 29, 1995 and December 20, 1995, respectively) as baseline documents.

1.2 CORPORATE MANAGEMENT SUPPORT

Xerox is fully committed to the company's policies and goals and is focused on Environmental Leadership as described in the Xerox Corporation 2016 Report on Global Citizenship. Plant management supports the programs and actions summarized within the context of this Hazardous Waste Reduction Plan.

2.1 OVERVIEW OF FACILITY OPERATIONS

The Joseph C. Wilson Center for Technology in Webster, New York is one of the largest manufacturing facilities in upstate New York. This facility employs a number of processes and support operations that are collectively engaged in the manufacture of photocopiers, printers and other office products. Research and development (R&D), warehousing and marketing activities are also conducted at the facility.

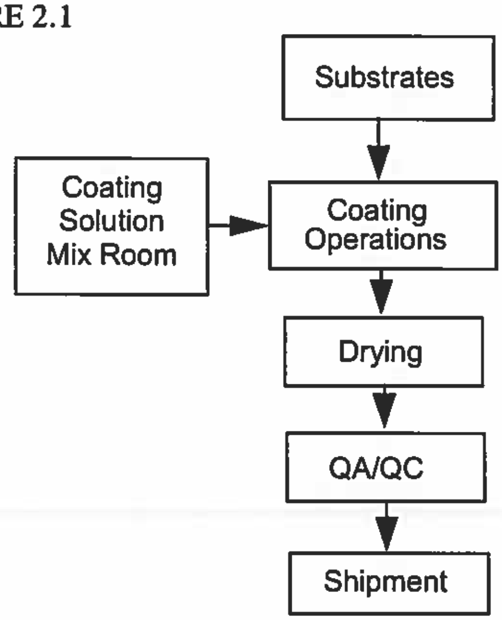
The activities and operations performed at the Webster, New York facility can be divided into the following five (5) areas:

a. Manufacture of photoreceptors
b. Manufacture of photocopier/printer consumables (e.g., toner, developer)
c. Manufacture of hardware components and copier assemblies
d. Utilities, support operations, and research and development
e. Xerox Services (office/administrative activities only, no hazardous waste)

2.1.1 Manufacture of Photoreceptors

Surface coating is performed using extrusion dye and dipping techniques. Figure 2.1 is an illustrative process flow depicting the typical production steps of photoreceptor manufacturing. All coating operations are performed in a clean room environment. A mixing room for mixing process solvents and polymers is associated with each coating operation.

FIGURE 2.1



The different types of photoreceptor production operations at the Webster facility are described as follows:

XAP Photoreceptors

Xerox AMAT Photoreceptors (XAP) research, development and manufacturing activities are conducted at Xerox's Webster site (Buildings 213). The primary function of Building 213 is AMAT photoreceptor manufacturing. In this process, a flexible web (substrate) is coated with successive layers of polymer coatings, each serving a specific function. The flexible web may be passed through a dual coater/dryer system several times to complete this process. Solvents are used to apply the polymer coating to the flexible web. The XAP process is a significant user of methylene chloride ($MeCl_2$) solvent on the Webster site. Other organic solvents used in this process include tetrahydrofuran (THF), cyclohexanone, heptane, and isopropanol (IPA).

The XAP operation has equipment, including storage tanks, containers, and associated piping to facilitate the management of MeCl2. Process exhaust passes through an activated carbon absorption system to remove solvents from coating and many other ancillary operations. The absorption units are steam stripped to remove the $MeCl_2$ and other trace solvents. This recovered material is processed through closed loop distillation steps to recycle $MeCl_2$ back to the operation. Distillation bottoms and other waste solvents generated from mix room activities are currently sent off site to a commercial RCRA TSDF for fuels blending or energy recovery. Xerox continues to pursue waste free initiatives to reduce waste solvent volumes.

Building 119 AMAT Photoreceptor Operation

Production and R&D photoreceptor activities were discontinued in 2012.

Alloy Photoreceptors (Aluminum)

Production of aluminum As/Se alloy photoreceptors was discontinued in 1999.

Alloy Photoreceptors (Nickel)

Production of nickel photoreceptors was discontinued in 1999.

XOD Photoreceptors

The Xerox Organic Dip (XOD) process, formerly located in Building 201 at the Webster facility, began in late 1990 and was decommissioned in 2000.

Webster High Density Dip (WHDD) Photoreceptors

This facility is only used for research and development activities. These activities can include the preparation of coating solutions and dip coating of rigid substrates.

2.1.2 Manufacture of Toners and Developers

Toner is manufactured in Building 224 via extrusion of a mixture of carbon black, organic resins iron oxide and other property-enhancing additives. Once extruded polymer is cut into toner pellets, it is cooled, ground and classified to specific particle size specifications, and packaged for distribution. The toner process is equipped with various dust collectors for control of nuisance dust from grinding, packaging and other operations. The Banbury® toner manufacturing process was decommissioned in 1998.

Chemical toner is manufactured by an emulsion aggregation (EA) process in Building 216. Micron sized particles of pigment, latex, wax, surfactants and other functional materials are mixed and chemically grown, or aggregated into particles of the desired average size, and then coalesced into the appropriate particle shape. This type of manufacturing process can achieve much better uniformities of particle size, and shape therein optimizing toner performance. Once the toner properties are achieved in the aqueous mixture, the particles are washed and then dried to powder form. At the end of the toner particle manufacturing process, the materials are blended, screened and filled into toner bottles that are shipped to customers. Hazardous and non-hazardous waste is generated throughout the EA toner pilot plant from the disposal of intermediate products, bad batches and expired or unnecessary raw materials.

Developer consists of a magnetic core material coated with polymers and charge control additives and mixed with small quantities of toner. Two types of coating processes are used. Powder coating (Bldg 225) consists of using heat to fuse dry powder to the magnetic core. No hazardous wastes are generated via this process. Solution coating (Bldg 224) consists of tumbling magnetic core material with a solution of resins and additives suspended in solvent. The solvent is vaporized off as the beads dry, and collected via condensers. Hazardous wastes generated by solution coating include waste solvents, off-spec raw materials, and solvent contaminated wastewater and solids. The MEK solvent developer process in Building 224 was discontinued during the 2013 calendar year and the process equipment removed in 2017.

2.1.3 Manufacture of Hardware Components and Copier Assembly

The printer/copier assembly process typically involves a number of operations, all of which generate wastes and/or releases that are properly controlled and managed by Xerox. The primary sources of waste originate from:

a. **<u>Painting</u>** - Spray-painting techniques are used to paint metal and plastic panels and parts with compliant coatings.

b. **<u>Plastic Mold Injection</u>** - Plastic parts were extruded in this operation. (discontinued August 2003)

c. **<u>Refurbishing Copying Machines</u>** - Xerox manages operations for refurbishing copying machines that have been returned to Xerox for servicing. These operations include:
    - Removal of toner deposits from machine internals.

- Cleaning of machine parts with non-hazardous cleaners, such as Windex, Lysol, CO^2, non-hazardous solvent, and minimal citrus based solvent and manual repainting in a spray booth.

d. **Fuser Manufacturing** – The Fuser Business Center produces fuser and/or pressure rolls that are sent to the appropriate assembly operations or distribution center as spares. Various coating, such as flow coat, powder coat, and aluminum and steel machining operations are sub process used in the manufacturing process.

2.1.4 Utilities and Support Operations

The manufacturing operations at the Webster facility are supported by many process and facility cooling towers and industrial boilers. These heating and cooling systems contain water treatment chemicals such as biocides and corrosion inhibitors. The chemical selection and careful application and storage practices have eliminated or minimized the wastes generated.

Plant maintenance activities generate wastes associated with painting, lubricating, re-lamping, welding and cleaning and other related activities. Waste oil is managed responsibly by recycling where possible.

2.1.5 Research and Development and Laboratory Operations

Various research activities are performed at the Webster facility. The research and laboratory operations generate a number of wastestreams categorized as waste corrosive acids, solvents, solvent carriers, solid rags and debris, cleaning solutions/solvents and un-used laboratory chemicals. These wastestreams vary in quantity, rate of generation and hazard characteristics.

2.2 WASTES DESCRIPTION

The following summarizes the waste characteristics and the factors influencing the rates and frequency of waste generation.

Waste Code	Waste Name	Waste Characteristics
1218-213	Spent Activated Carbon	This wastestream has been characterized as spent activated carbon used to abate air emissions from the solvent reclaim process at the AMAT photoreceptor operations, primarily Methylene chloride. Minimal amounts of Toluene, THF, Cyclohexanone, Ethanol and Heptane may also be present. **Factors Influencing Rates and Frequency of Waste Generation:** The carbon adsorption efficiency is influenced by operational practices. The intent is to limit the removal or screening of the carbon only to periods of a pressure drop across the adsorbers per the manufacturer's recommendations to reduce the breakdown of the carbon and prolong its life. This waste stream is transferred off-site for fuels blending / incineration on an as needed basis.
2014	Water With Organics	This waste stream can be categorized as a wastewater containing soluble organics such as benzene, toluene, ethylbenzene, xylene, acetone, styrene and other organic compounds. The soluble organic content varies between 3-5% on a weight basis. **Factors Influencing Rates and Frequency of Waste Generation:** 2014 waste is generated from the extrusion process; organics are volatilized from the resins and other raw materials during the extrusion process. These vapors are captured in the steam that originates from the extruder and are condensed into a liquid. The condensate is transferred to the 2014 exempt 90 day hazardous waste storage tank Primary drivers influencing the rate and frequency of 2014 material are production volumes and product mixes. However, the primary driver influencing the rate and frequency of 2014 disposal are preventive maintenance (PM) activities.

Waste Code	Waste Name	Waste Characteristics
2051	Waste EA Latex Emulsion	This wastestream is generated from toner research and development activities and typically includes off-specification material and raw materials that have no further use. This waste material typically has a pH <2.0 and is a characteristic RCRA regulated waste. **Factors Influencing Rates and Frequency of Waste Generation:** Waste generation rates are influenced by research activities/schedule demands for EA toner R&D activities.
5011	Freons / Halogenated solvents and oil	This is a listed hazardous waste generated from sitewide maintenance activities (HVAC system and other equipment). **Factors Influencing Rates and Frequency of Waste Generation:** Proper segregation procedures for the collection of waste oil contribute to minimizing the volume of hazardous waste oil (contaminated with freons and/or halogenated solvents) generated at the site.
5211	MEK	This wastestream represents a volatile organic solvent primarily comprised of methyl ethyl ketone (MEK) (98 - 99.5%). The solvent is managed as a listed and characteristic hazardous waste displaying ignitable properties. **Factors Influencing Rates and Frequency of Waste Generation:** As part of the toner manufacturing operations, methyl ethyl ketone is used as the primary carrier solvent to deposit a polymer coating onto small steel beads. The process requires the MEK solution to be pumped into a tank containing the beads. This tank is agitated and then the MEK is flashed off of the beads leaving the polymer coating on the beads. The amount of MEK utilized is a function of production activity.
5211-MIBK	MIBK with polymers	This wastestream is generated from spent coating and cleaning solutions used in flow coat operations in the fuser roll manufacturing process. MIBK is used to clean coating solution pots and supply lines, resulting in a waste that contains MIBK, n-Methyl Pyrollidone, Methanol, and Toluene. **Factors Influencing Rates and Frequency of Waste Generation:** Fuser roll production and flow coat process yield are leading factors influencing the waste generation

Waste Code	Waste Name	Waste Characteristics
		rate.
5214	Non-Chlorinated Mixed Solvents	This wastestream has been categorized as spent non–chlorinated solvents. **Factors Influencing Rates and Frequency of Waste Generation:** The waste quantities and characteristics are influenced by various manufacturing, pilot, and laboratory operations using solvents.
5216	Waste Paint	This wastestream has been characterized as off-spec paint. Xerox does manage this material as a characteristically defined hazardous waste. **Factors Influencing Rates and Frequency of Waste Generation:** Most of the copier components require exterior surface coatings. This is generally accomplished using paint spray lines that rely on robotic applications of the paint. As of September 1997, 100% of all the painting operations were converted to water based paint. This has been an ongoing effort since 1994. Maintenance activities still use solvent-based paints that account for the majority of this wastestream. Historically, the majority of the waste represents paint that cannot be used before its shelf life has expired or when other factors render the paint unusable. The paint properties and content are prime factors influencing hazard potential.
5925	AMAT Flammable Waste	This wastestream represents a mixture of organic solvents generated from the AMAT photoreceptor operation. **Factors Influencing Rates and Frequency of Waste Generation:** The waste quantities and characteristics of this waste stream are influenced by the efficiency of the closed loop solvent recovery system and distillation system used to recover wastewater generated during the steaming of the AMAT solvent abatement system. Product yields and process modifications also have an influence on rates of waste generation.
5926	Rags/Chlorinated Solvents	This wastestream represents rags, gloves and filters contaminated with solvents used in the cleanout of polymer mixture vessels and manufacturing equipment. **Factors Influencing Rates and Frequency of Waste Generation:**

Waste Code	Waste Name	Waste Characteristics
		The wastestream is primarily generated in the photoreceptor mix rooms (i.e. XOD, AMAT). The volume of waste generated is directly related to the production volume.
5930	Rags/Non-Chlorinated Solvents	On an aggregate basis, this waste stream has been characterized as rags contaminated with non-halogenated solvents. **Factors Influencing Rates and Frequency of Waste Generation:** Cleaning specifications dictate the use of rags and solvent. The rags pick up contaminants along with residual levels of non-halogenated solvent. The generation rates and frequency are influenced by the activity in each area.
9120	Hazardous Maintenance Water	This wastestream has been categorized as an organic contaminated solids or liquid generated on an event basis from preventative maintenance or project related activities. **Factors Influencing Rates and Frequency of Waste Generation:** The quantity and characteristics of this wastewater are influenced by maintenance requirements, the degree of contamination and activity.
PLC-ACU	Acute Laboratory Waste	This wastestream represents packaged laboratory chemicals. **Factors Influencing Rates and Frequency of Waste Generation:** Many of the chemicals disposed of either are off spec or have exceeded their shelf life. Waste segregation measures implemented to enable solvent disposal via energy recovery versus incineration.
Steam Gen	AMAT Steam Generator Blow Down	This waste stream is a liquid wastewater that contains AMAT related organic compounds. **Factors Influencing Rates and Frequency of Waste Generation** The quantity and characteristics of this waste stream are influenced by the number of cycles the AMAT solvent abatement system (activated carbon system) need to be steam cleaned.

2.3 BLOCK DIAGRAMS

This submittal includes all applicable process and material flow diagrams (PFD's)/block diagrams. These diagrams identify the primary processes generating hazardous waste and include the Xerox waste profile numbers found in Xerox's Waste Analysis Plan (Attachment C-6). Xerox has related individual waste (s) to product output and raw material usage. These block diagrams can be used by Xerox to assess opportunities for waste reduction. Table 1a is a listing of all diagrams used to support the Xerox hazardous waste reduction plan and used to identify the PFD's/block diagrams applicable to the current reporting year.

3.1 2016 WASTESTREAMS

Table 1b shows the wastestreams that are included in this Biennial Update and the rationale behind the inclusion or exclusion of each waste stream generated. The general approach has been to include all wastestreams greater than 5 tons in 2016 and such that the sum of the wastestreams included accounts for at least 90% of the total hazardous waste generated at the site. In addition, wastestreams that were less than 5 tons in 2016 but were greater than 5 tons in any one-year between 1990 and 2016 are also included in Table 1b and 1c in this Biennial Update. One time project related waste streams and corrective actions related wastewater generated as the result of permitted remediation activities are not typically included in Table 1 of the report.

3.2 WASTESTREAMS IN PREVIOUS REPORTS

Table 1c shows a comparison of the wastestreams included in this Biennial Update and those that were included in previous Annual Status Reports (ASR). The data provided in Tables 1b and 1c establish consistency with data submitted in previous Annual Generator Reports and previous HWRPs.

3.3 HAZARDOUS WASTE GENERATION

3.3.1 Hazardous Waste Amounts

The amounts of hazardous waste generated in 2016 at the Xerox Webster site are shown on Table 1. When a wastestream is generated by multiple sources at the site (various processes or manufacturing operations), these sources are shown.

3.3.2 Productivity Index

A Normalized Productivity Index (NPI) is calculated for each source, not each wastestream, since production metrics are source dependent rather than wastestream dependent. Year 1990 is used as the baseline year, except for cases where waste generation started after 1990, in which case the productivity index is normalized to that year. In some earlier years, generation amounts and/or productivity numbers were not always available. In such cases, the productivity index is normalized to the first year when reliable data (production and waste generation rates) are documented.

The computation of the Normalized Productivity Index (NPI) is performed as follows:
(1990 as baseline year)

NPI (1990) = PI (1990)/ PI (1990) = 1.0
NPI (Year i) = PI (Year i)/ PI (1990)

where PI is the Productivity Index:
PI (Year i) = (Lbs Waste Generated /Production) for Year i,
Year i is 1991, 1992, 1993, 1994, 1995, 1996…
Production in Year i = number of units produced by the process in Year i.

Although typical manufacturing activities lend themselves well to this approach, it is difficult to define a productivity index for certain wastestreams generated by activities such as research and development, maintenance throughout the site, site-wide projects (relamping for example), or a one time project. In these cases, productivity indices are not provided, as these are not meaningful based on the above definition.

3.4 WASTE MANAGEMENT COSTS

Table 1d provides the most current hazardous waste cost for the wastestreams referenced in this report. These costs, representing transportation and disposal costs only, are continuously tracked by wastestream, container type, and disposal method. Waste generation amounts and the associated management costs are communicated routinely to the research, development and manufacturing operating groups that generated these wastestreams. This practice serves to increase the plant's awareness in terms of the amounts, types, and costs incurred for the complete management of these wastestreams.

4.1 WASTE REDUCTION STRATEGY

Table 2a summarizes the typical Waste Reduction Strategy historically used for the waste streams included in this report.

4.2 HAZARDOUS WASTE REDUCTION PROGRAM SUMMARY

The Hazardous Waste Reduction Program Summary is shown on Table 2.

Taking into account the Waste Minimization Program guidelines specified by EPA and NYSDEC, Xerox has compiled information describing corporate policy and initiatives, such as:

a. Waste-Free Products
b. Industry Environmental Initiatives Involving Voluntary Partnerships
c. Waste Free Facilities

This information is directly applicable to the company's planned efforts to minimize and wherever feasible, prevent the generation of solid and hazardous waste. This is summarized in the at most recently published, **Xerox Corporation "2016 Report on Global Citizenship"** that contains 2015 performance data. This report is available via the URL below.

https://www.xerox.com/en-us/about/ehs

CORPORATE POLICY AND INITIATIVES
Appendix A

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HAZARDOUS WASTE REDUCTION PLAN

2017 Biennial Update

Xerox Corporation
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INTRODUCTION
Section 1

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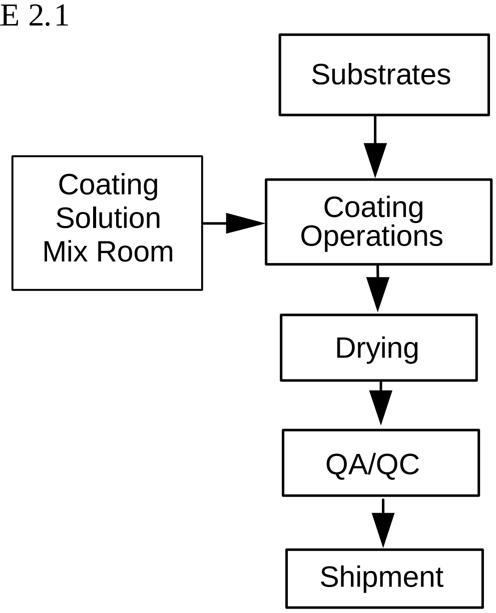

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b. **<u>Plastic Mold Injection</u> -** Plastic parts were extruded in this operation. (discontinued August 2003)

c. **<u>Refurbishing Copying Machines</u> -** Xerox manages operations for refurbishing copying machines that have been returned to Xerox for servicing. These operations include:
    - Removal of toner deposits from machine internals.

- Cleaning of machine parts with non-hazardous cleaners, such as Windex, Lysol, CO^2, non-hazardous solvent, and minimal citrus based solvent and manual repainting in a spray booth.

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2014	Water With Organics	This waste stream can be categorized as a wastewater containing soluble organics such as benzene, toluene, ethylbenzene, xylene, acetone, styrene and other organic compounds. The soluble organic content varies between 3-5% on a weight basis. **Factors Influencing Rates and Frequency of Waste Generation:** 2014 waste is generated from the extrusion process; organics are volatilized from the resins and other raw materials during the extrusion process. These vapors are captured in the steam that originates from the extruder and are condensed into a liquid. The condensate is transferred to the 2014 exempt 90 day hazardous waste storage tank Primary drivers influencing the rate and frequency of 2014 material are production volumes and product mixes. However, the primary driver influencing the rate and frequency of 2014 disposal are preventive maintenance (PM) activities.

Waste Code	Waste Name	Waste Characteristics
2051	Waste EA Latex Emulsion	This wastestream is generated from toner research and development activities and typically includes off-specification material and raw materials that have no further use. This waste material typically has a pH <2.0 and is a characteristic RCRA regulated waste. **Factors Influencing Rates and Frequency of Waste Generation:** Waste generation rates are influenced by research activities/schedule demands for EA toner R&D activities.
5011	Freons / Halogenated solvents and oil	This is a listed hazardous waste generated from sitewide maintenance activities (HVAC system and other equipment). **Factors Influencing Rates and Frequency of Waste Generation:** Proper segregation procedures for the collection of waste oil contribute to minimizing the volume of hazardous waste oil (contaminated with freons and/or halogenated solvents) generated at the site.
5211	MEK	This wastestream represents a volatile organic solvent primarily comprised of methyl ethyl ketone (MEK) (98 - 99.5%). The solvent is managed as a listed and characteristic hazardous waste displaying ignitable properties. **Factors Influencing Rates and Frequency of Waste Generation:** As part of the toner manufacturing operations, methyl ethyl ketone is used as the primary carrier solvent to deposit a polymer coating onto small steel beads. The process requires the MEK solution to be pumped into a tank containing the beads. This tank is agitated and then the MEK is flashed off of the beads leaving the polymer coating on the beads. The amount of MEK utilized is a function of production activity.
5211-MIBK	MIBK with polymers	This wastestream is generated from spent coating and cleaning solutions used in flow coat operations in the fuser roll manufacturing process. MIBK is used to clean coating solution pots and supply lines, resulting in a waste that contains MIBK, n-Methyl Pyrollidone, Methanol, and Toluene. **Factors Influencing Rates and Frequency of Waste Generation:** Fuser roll production and flow coat process yield are leading factors influencing the waste generation

Waste Code	Waste Name	Waste Characteristics
		rate.
5214	Non-Chlorinated Mixed Solvents	This wastestream has been categorized as spent non–chlorinated solvents. **Factors Influencing Rates and Frequency of Waste Generation:** The waste quantities and characteristics are influenced by various manufacturing, pilot, and laboratory operations using solvents.
5216	Waste Paint	This wastestream has been characterized as off-spec paint. Xerox does manage this material as a characteristically defined hazardous waste. **Factors Influencing Rates and Frequency of Waste Generation:** Most of the copier components require exterior surface coatings. This is generally accomplished using paint spray lines that rely on robotic applications of the paint. As of September 1997, 100% of all the painting operations were converted to water based paint. This has been an ongoing effort since 1994. Maintenance activities still use solvent-based paints that account for the majority of this wastestream. Historically, the majority of the waste represents paint that cannot be used before its shelf life has expired or when other factors render the paint unusable. The paint properties and content are prime factors influencing hazard potential.
5925	AMAT Flammable Waste	This wastestream represents a mixture of organic solvents generated from the AMAT photoreceptor operation. **Factors Influencing Rates and Frequency of Waste Generation:** The waste quantities and characteristics of this waste stream are influenced by the efficiency of the closed loop solvent recovery system and distillation system used to recover wastewater generated during the steaming of the AMAT solvent abatement system. Product yields and process modifications also have an influence on rates of waste generation.
5926	Rags/Chlorinated Solvents	This wastestream represents rags, gloves and filters contaminated with solvents used in the cleanout of polymer mixture vessels and manufacturing equipment. **Factors Influencing Rates and Frequency of Waste Generation:**

Waste Code	Waste Name	Waste Characteristics
		The wastestream is primarily generated in the photoreceptor mix rooms (i.e. XOD, AMAT). The volume of waste generated is directly related to the production volume.
5930	Rags/Non-Chlorinated Solvents	On an aggregate basis, this waste stream has been characterized as rags contaminated with non-halogenated solvents. **Factors Influencing Rates and Frequency of Waste Generation:** Cleaning specifications dictate the use of rags and solvent. The rags pick up contaminants along with residual levels of non-halogenated solvent. The generation rates and frequency are influenced by the activity in each area.
9120	Hazardous Maintenance Water	This wastestream has been categorized as an organic contaminated solids or liquid generated on an event basis from preventative maintenance or project related activities. **Factors Influencing Rates and Frequency of Waste Generation:** The quantity and characteristics of this wastewater are influenced by maintenance requirements, the degree of contamination and activity.
PLC-ACU	Acute Laboratory Waste	This wastestream represents packaged laboratory chemicals. **Factors Influencing Rates and Frequency of Waste Generation:** Many of the chemicals disposed of either are off spec or have exceeded their shelf life. Waste segregation measures implemented to enable solvent disposal via energy recovery versus incineration.
Steam Gen	AMAT Steam Generator Blow Down	This waste stream is a liquid wastewater that contains AMAT related organic compounds. **Factors Influencing Rates and Frequency of Waste Generation** The quantity and characteristics of this waste stream are influenced by the number of cycles the AMAT solvent abatement system (activated carbon system) need to be steam cleaned.

2.3 BLOCK DIAGRAMS

This submittal includes all applicable process and material flow diagrams (PFD's)/block diagrams. These diagrams identify the primary processes generating hazardous waste and include the Xerox waste profile numbers found in Xerox's Waste Analysis Plan (Attachment C-6). Xerox has related individual waste (s) to product output and raw material usage. These block diagrams can be used by Xerox to assess opportunities for waste reduction. Table 1a is a listing of all diagrams used to support the Xerox hazardous waste reduction plan and used to identify the PFD's/block diagrams applicable to the current reporting year.

3.1 2016 WASTESTREAMS

Table 1b shows the wastestreams that are included in this Biennial Update and the rationale behind the inclusion or exclusion of each waste stream generated. The general approach has been to include all wastestreams greater than 5 tons in 2016 and such that the sum of the wastestreams included accounts for at least 90% of the total hazardous waste generated at the site. In addition, wastestreams that were less than 5 tons in 2016 but were greater than 5 tons in any one-year between 1990 and 2016 are also included in Table 1b and 1c in this Biennial Update. One time project related waste streams and corrective actions related wastewater generated as the result of permitted remediation activities are not typically included in Table 1 of the report.

3.2 WASTESTREAMS IN PREVIOUS REPORTS

Table 1c shows a comparison of the wastestreams included in this Biennial Update and those that were included in previous Annual Status Reports (ASR). The data provided in Tables 1b and 1c establish consistency with data submitted in previous Annual Generator Reports and previous HWRPs.

3.3 HAZARDOUS WASTE GENERATION

3.3.1 Hazardous Waste Amounts

The amounts of hazardous waste generated in 2016 at the Xerox Webster site are shown on Table 1. When a wastestream is generated by multiple sources at the site (various processes or manufacturing operations), these sources are shown.

3.3.2 Productivity Index

A Normalized Productivity Index (NPI) is calculated for each source, not each wastestream, since production metrics are source dependent rather than wastestream dependent. Year 1990 is used as the baseline year, except for cases where waste generation started after 1990, in which case the productivity index is normalized to that year. In some earlier years, generation amounts and/or productivity numbers were not always available. In such cases, the productivity index is normalized to the first year when reliable data (production and waste generation rates) are documented.

The computation of the Normalized Productivity Index (NPI) is performed as follows:
(1990 as baseline year)

NPI (1990) = PI (1990)/ PI (1990) = 1.0
NPI (Year i) = PI (Year i)/ PI (1990)

where PI is the Productivity Index:
PI (Year i) = (Lbs Waste Generated /Production) for Year i,
Year i is 1991, 1992, 1993, 1994, 1995, 1996…
Production in Year i = number of units produced by the process in Year i.

Although typical manufacturing activities lend themselves well to this approach, it is difficult to define a productivity index for certain wastestreams generated by activities such as research and development, maintenance throughout the site, site-wide projects (relamping for example), or a one time project. In these cases, productivity indices are not provided, as these are not meaningful based on the above definition.

3.4 WASTE MANAGEMENT COSTS

Table 1d provides the most current hazardous waste cost for the wastestreams referenced in this report. These costs, representing transportation and disposal costs only, are continuously tracked by wastestream, container type, and disposal method. Waste generation amounts and the associated management costs are communicated routinely to the research, development and manufacturing operating groups that generated these wastestreams. This practice serves to increase the plant’s awareness in terms of the amounts, types, and costs incurred for the complete management of these wastestreams.

4.1 WASTE REDUCTION STRATEGY

Table 2a summarizes the typical Waste Reduction Strategy historically used for the waste streams included in this report.

4.2 HAZARDOUS WASTE REDUCTION PROGRAM SUMMARY

The Hazardous Waste Reduction Program Summary is shown on Table 2.

Taking into account the Waste Minimization Program guidelines specified by EPA and NYSDEC, Xerox has compiled information describing corporate policy and initiatives, such as:

a. Waste-Free Products
b. Industry Environmental Initiatives Involving Voluntary Partnerships
c. Waste Free Facilities

This information is directly applicable to the company's planned efforts to minimize and wherever feasible, prevent the generation of solid and hazardous waste. This is summarized in the at most recently published, **Xerox Corporation "2016 Report on Global Citizenship"** that contains 2015 performance data. This report is available via the URL below.

https://www.xerox.com/en-us/about/ehs

XEROX WASTE CODE	2016 HW REPORT CM#	NAME OF WASTE	SOURCE OF GENERATION	DISPOSAL METHOD & EPA WASTE CODES	AGR QUANTITY OF WASTE GENERATED (TONS) 1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
5211-MIBK		MIBK with Polymers	W200 Flow coat operation sources to include solvent cleaning & un-used coating solutions	D001, D035, F001						27.1	19.7	19.2	13.1	12.4	12.9	14.2	15.0	20.1	18.5	17.6	14.1	12.2	15.1	15.3	16.0	13.3	11.7	10.5	10.2
5211-MIBK		MIBK with Polymers	AEAMC lab (R&D) to include solvent cleaning & un-used coating solutions	D001, D035, F001										0.3	0.4	0.4	0.0	0.4	0.4	0.2	0.5	0.4	0.6	0.6	0.4	0.6	0.3	0.4	0.6
5211-MIBK Total	8	MIBK with Polymers	All sources	Off-site Solvent Recovery, Off-site Fuels Blending (H061 & H020)						27.1	19.7	23.3	19.1	12.7	13.3	14.6	15.0	20.5	18.9	17.8	14.6	12.5	15.7	15.8	16.5	13.8	11.9	10.9	10.7
5025		AMAT Flammable Waste	213 mixing coating operations to include solvent cleaning & un-used coating solutions. Also includes solvent abatement & recovery system waste	D001, D010, D021, F002, F005	191.2*	460.9	672.5	507.0	464.1	388.8	421.6	416.2	284.4	414.9	406.9	364.5	307.2	341.9	324.5	366.0	419.4	288.4	260.1	299.6	178.5	196.2	194.0	140.2	131.0
5025 Total	11	AMAT Flammable Waste	All sources	Off-Site Fuels Blending (H061)	191.2	460.9	677.4	531.5	467.7	448.2	401.3	460.8	323.2	468.8	470.0	412.6	403.7	434.1	370.8	406.9	406.3	312.5	287.6	344.6	181.0	136.2	154.0	140.2	131.0
Steam Gen.		AMAT Steam Generator Blow Down	213 AMAT wastewater blow down from the solvent abatement system	F002, F005													115.9	135.4	125.0	199.9	281.8	241.5	278.5	209.8	162.4	118.4	85.5	98.5	80.3
Steam Gen. Total	31	AMAT Steam Generator Blow Down	All sources	Discharge to POTW (H037)													115.9	135.4	125.0	199.9	281.8	241.5	278.5	209.8	162.4	118.4	85.5	98.5	80.3
PLC-ACUTE	30	Laboratory Waste	One time clean-out of laboratory operations	Off-site Incineration (H040) P030, P119				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

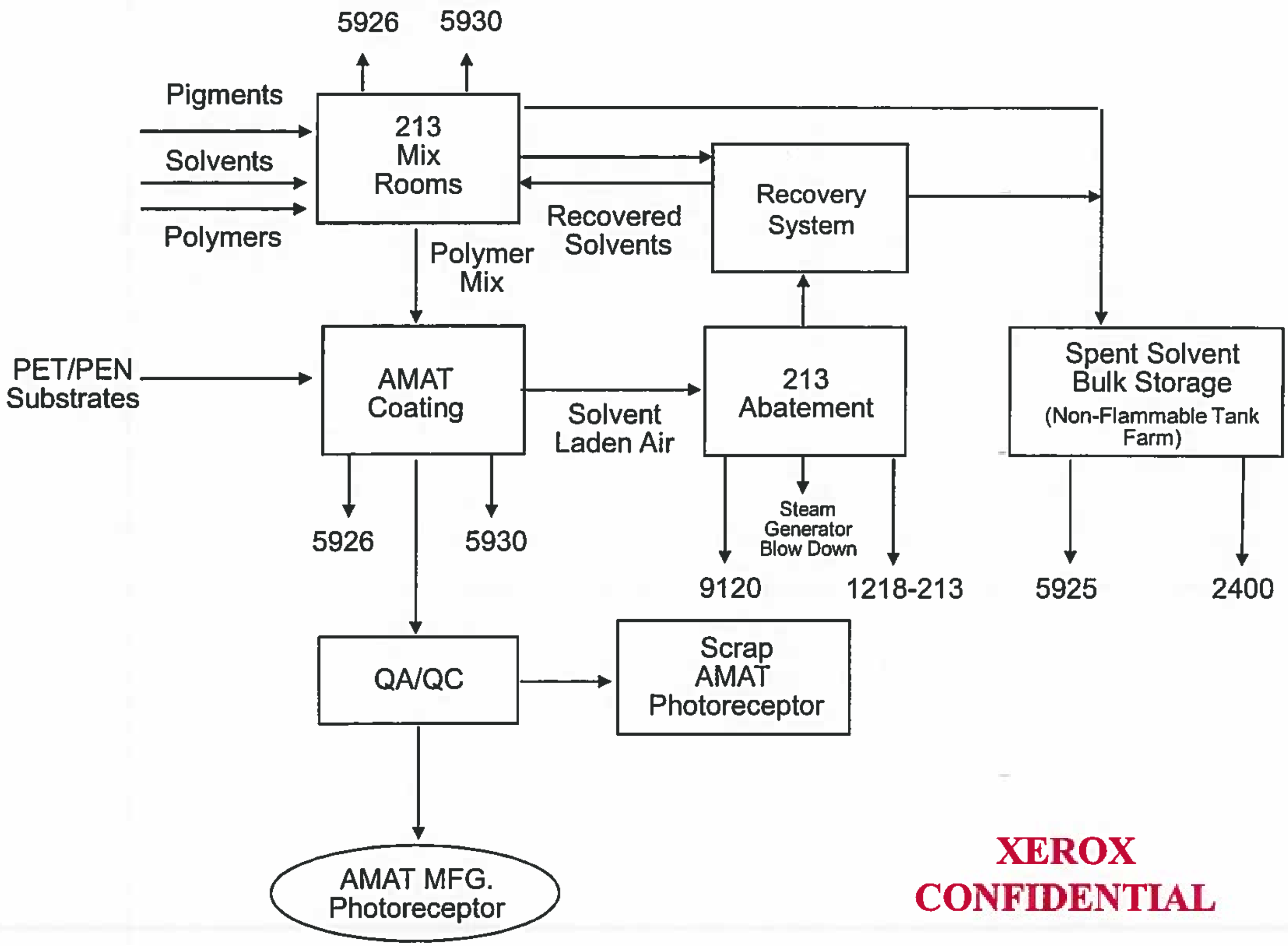
XEROX WASTE CODE	CALCULATED NORMALIZED PRODUCTIVITY INDEX (BASE INDEX = 1) 1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	PRODUCTION VALUE (Total / Year) 2016	Production Engineering Units
5211-MIBK						1.00	0.60	0.30	0.29	0.25	0.27	0.26	0.28	0.16	0.14	0.15	0.12	0.13	0.13	0.15	0.19	0.11	0.11	0.10	0.10	116,371	Coated Fuser Rolls, Net (Flow Coat)
5211-MIBK										NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	R&D Only
5211-MIBK Total																											
5025		1.00	1.13	0.93	0.87	0.570	0.822	0.600	0.472	0.494	0.498	0.468	0.429	0.556	0.575	0.120	0.145	0.137	0.135	0.119	0.135	0.108	0.105	0.12	0.139	12,293,542	Webster Photoreceptor Production at 213 XAP in Gross Square Feet Coated
5025 Total																											
Steam Gen.													1.00	1.54	1.97	2.83	0.81	0.25	0.89	0.66	0.77	0.58	0.41	0.52	0.53	12,293,542	Webster Photoreceptor Production at 213 XAP in Gross Square Feet Coated
Steam Gen. Total																											
PLC-ACUTE				N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	One Time Laboratory Clean-out

* Designates operations start-up
NR = Not Reported

Table 1a: Block Diagram Check List

New Diagram Number	Process Source Name & Location	2016 Biennial Report (June 2017)	2014 Biennial Report (June 2015)	2012 Biennial Report (June 2013)	2010 Biennial Report (June 2011)	2008 Biennial Report (June 2009)	2006 Biennial Report (June 2007)	2005 Biennial Report (June 2005)	Report (September 2003)	2001 Biennial Report (July 2001)
PFD1	Al Based Photoreceptor Production (Rigid)	No	No	No	No	No	No	No	No	No, Production ceased in 1997
PFD3	Building 225 Al Based Photoreceptor Production (Rigid)	No	No	No	No	No	No	No	No	No
PFD6	Nickel Based Photoreceptor Production	No	No	No	No	No	No	No	No	No
PFD7	Building 225A Nickel Based Photoreceptor Production (Electroform	No	No	No	No	No	No	No	No	No
PFD9	Building 223A Nickel Based Photoreceptor Production (Ni, As, Se	No	No	No	No	No	No	No	No	No
PFD11	Building 225 Nickel Based Photoreceptor Production (As/Se Blend	No	No	No	No	No	No	No	No	No
224EXTDR	Building 224 Toner Manufacturing Operation (Extrusion Process)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
224EXTWWT	Building 224 Extruder Condensate Wastewater Treatment	No	No	No	No	No	Yes	Yes	Yes	Yes
224MEKCAR	Building 224 Developer Manufacturing Operation (MEK Carrier)	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
224TOLCAR	Building 224 Developer Manufacturing Operation (Toluene Carrier)	No	No	No	No	No	Yes	Yes	Yes	Yes
224POWCAR	Building 224 Developer Manufacturing Operation (Powder Coated	No	No	No	No	Yes	Yes	Yes	Yes	Yes
119TRIG	Building 119 Trigonal Selenium Manufacturing	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
119AMATPP	Building 119 AMAT Photoreceptor Pilot Process	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
213AMAT	Building 213 AMAT Photoreceptor Manufacturing Process	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
201XOD	Building 201 Xerox Organic Dip (XOD) Photoreceptor Manufacturir	No	No	No	No	No	No	No	Yes	Yes
	Building 209 Remanufacturing Operation (1990 Operations)									
PFD24	Building 208 Component Manufacturing Operations	No	No	No	No	No	No	No	No	No, Plating production ceased in 1998. Paintshop Revised: See "208PAINT"
119WWT	Building 119 Trigonal Selenium Wastewater Treatment Operations	No	No	No	No	No	No	No	Yes	Yes
	Building 213 XAP Phase 0 Solvent Recycling									
	Building 213 XAP Phase I Solvent Recycling									
PFD33	Building 114 (128) Research & Development Ink Technology	No	No	No	No	No	No	No	Yes	Yes, However, process is now located in B114
200PROW	Building 200 MM&LS Parts Recovery Operations - Webster (PROV	No	No	No	No	No	No	No	Yes	Yes
208PBC	Building 208 COMETs Plastics Business Center	No	No	No	No	No	No	No	Yes	Yes
208PAINT	Building 208 COMETs Paint Shop Operations (60C, 158C and 173	No	No	No	No	No	Yes	Yes	Yes	Yes
208FLOW	Building 208 Fuser Business Unit Flow Coat Operations	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
208POWDR	Building 208 Fuser Machining and Powder Coat	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
218WHDD	Building 218 Webster High Density Dip Photoreceptor (WHDD)	No	No	No	No	No	Yes	Yes	Yes	Yes
201WWT	Building 201 Wastewater Treatment Operation	No	No	No	No	No	No	Yes	Yes	Yes
119 EAPP	Building 119 EA Pilot Plant Toner R&D	No	Yes	Yes	Yes	Yes				

Firm: XEROX CORPORATION Site: WEBSTER, NEW YORK Revision Date: June 2017	**WASTE MINIMIZATION OPPORTUNITY ASSESSMENT** **Process:** AMAT Photoreceptor Manufacturing Process **Location:** Building 213, BC-P615 **Product(s):** AMAT Photoreceptor	Revised by: Brian Giannetto Checked by: J. Posick Page _1_ of _1_ Drawing No.: 213 AMAT



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Firm: XEROX CORPORATION
Site: WEBSTER, NEW YORK
Revision Date: June 2017

Process: Fuser Business Unit Process (BC 942)
Location: Building 208, BC-M942
Product(s): 5090 Fuser roll

Revised by: Mark Smith
Page ___ of ___ Drawing No.:

Flow I -- 5090 Family Coat Operation

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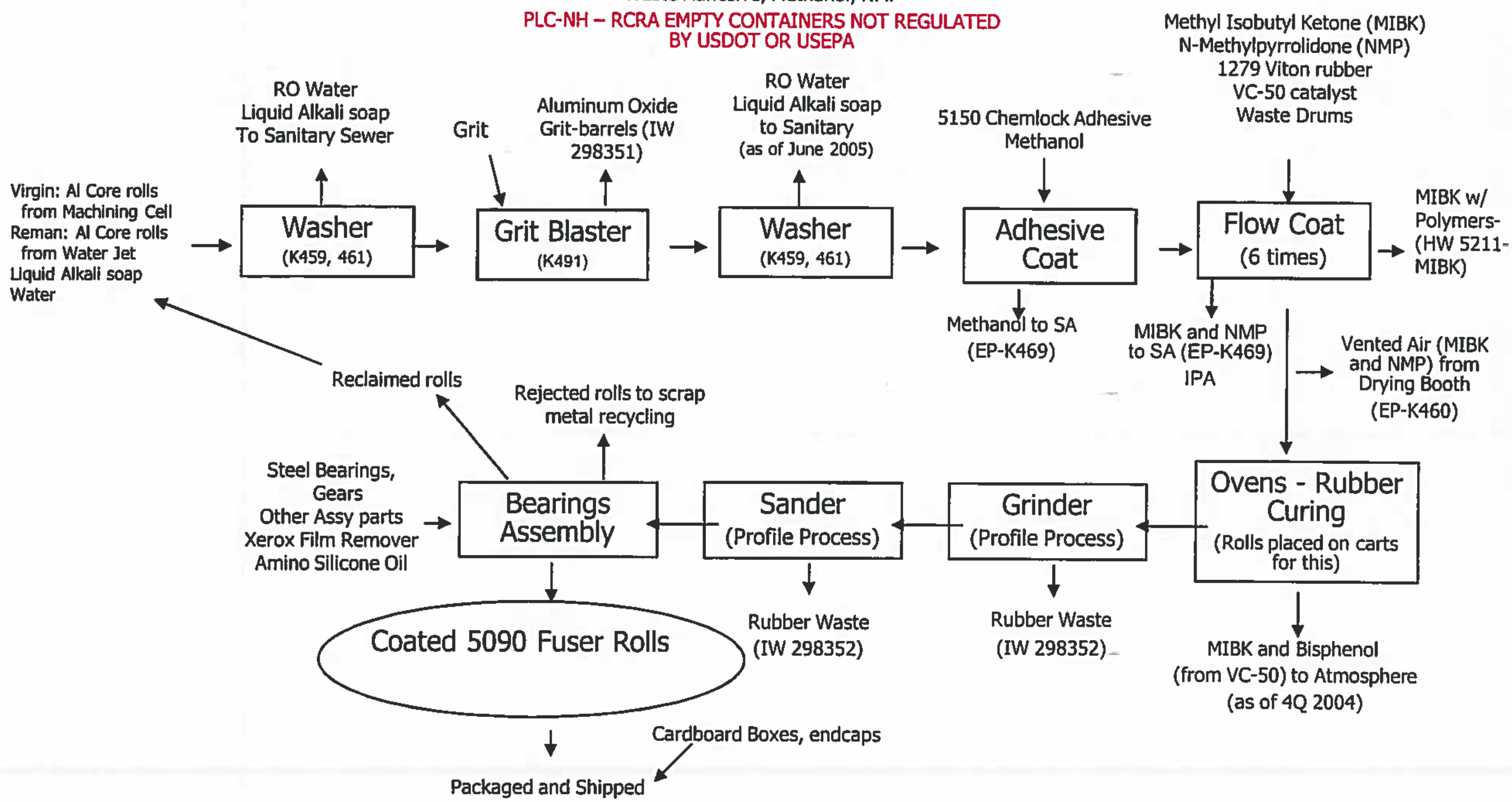
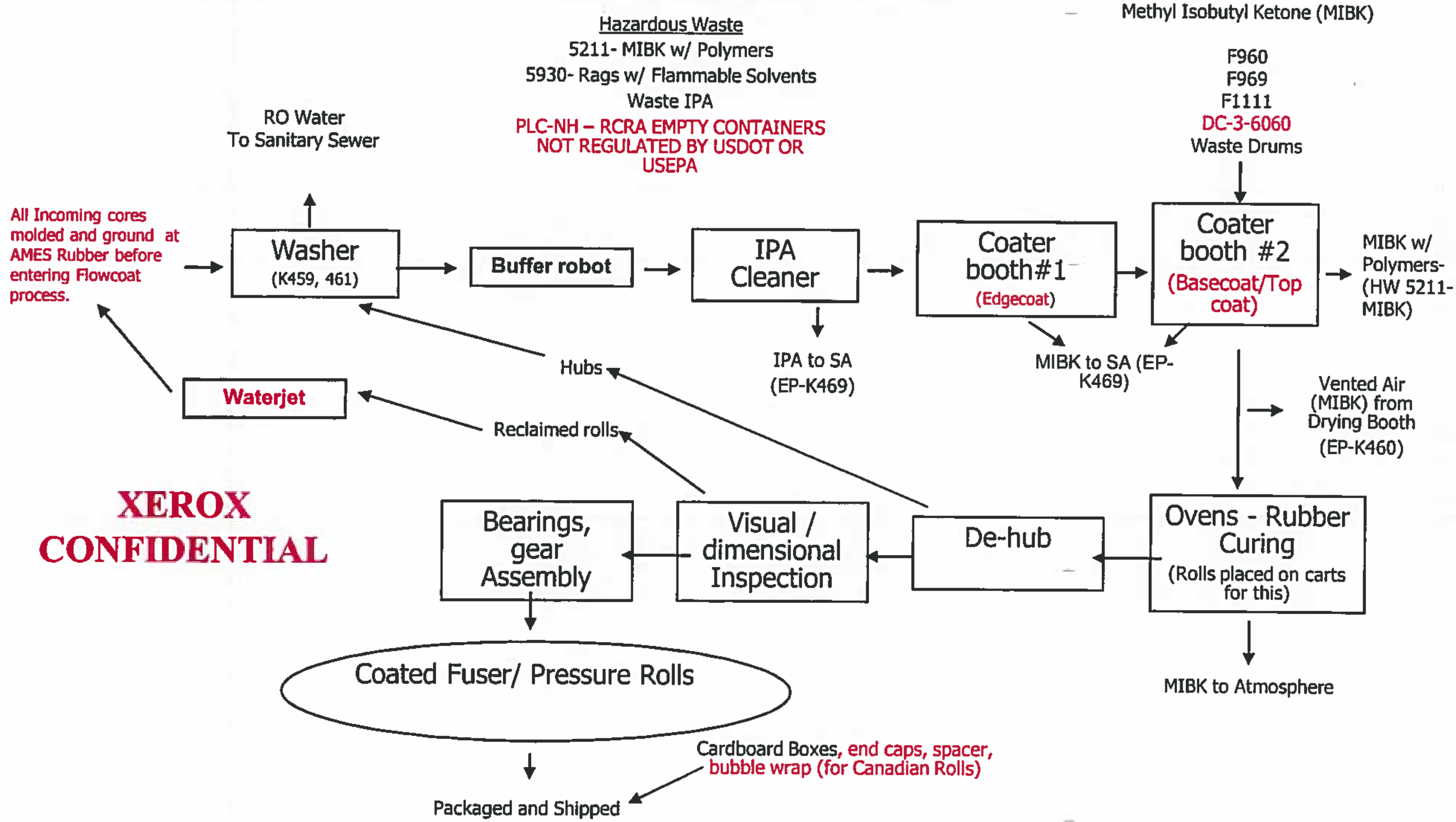
Hazardous Waste
5211- MIBK w/ Polymers
5930- Rags w/ Flammable Solvents
Waste Adhesive, Methanol, NMP



Firm: XEROX CORPORATION Site: WEBSTER, NEW YORK Revision Date: June 2017	Process: Fuser Business Unit Process (BC 942) Location: Building 208, BC-M942 Product(s): 5090, DC12 and Sfida family pressure /fuser Roll	Revised by: Mark Smith Checked by: P. Boyer Page ___ of ___ Drawing No.:

Flow I -- DC12F-P, Sfida I,II Coat Operation



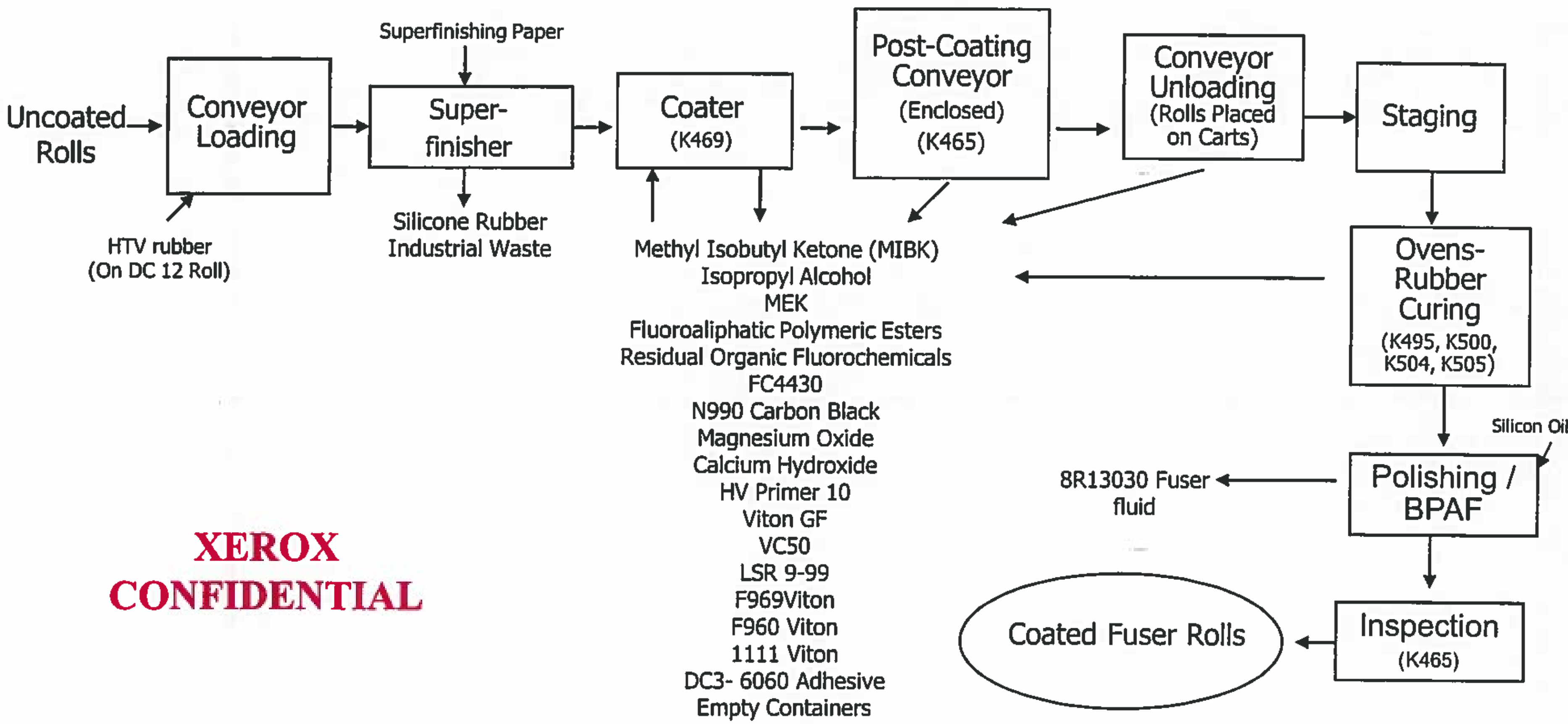
Firm: XEROX CORPORATION
Site: WEBSTER, NEW YORK
Revision Date: June 2017

Process: Webster Fuser Business Center (BC M948)
Location: Building 208
Product(s): iGen3, and DC12 Family

Revised by: Mark Smith
Page __1_ of ___1 Drawing No.:

Color Flow Coat Operation

Hazardous Waste
5211 - MIBK w/ Polymers-
5930 - Rags w/ Flammable Solvents



Xerox, Joseph C. Wilson Center for Technology

Table 1b: 2016 Wastestreams

EPA I.D. NUMBER
NYD002211324

Waste Code	Wastestream Description	2016 Generated Amount		2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	Comments
		Tons	% of Total	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	
The following waste streams were >5 tons in 2016 or acute hazardous wastes and are included in this update. (excludes one time project waste)																						
5925	AMAT Flammable Waste	131.0	53.2%	140.3	134.0	136.2	181.0	244.6	287.0	312.3	456.3	406.9	378.9	434.1	403.7	412.6	470.0	468.8	313.5	469.8	491.5	
Steam Gen.	AMAT Steam Generator Blow Down	80.3	32.6%	98.5	85.5	118.4	162.4	209.8	278.5	241.5	281.8	199.9	125.0	153.4	115.9							
5211-MIBK	MIBK with Polymers	10.7	4.4%	10.9	11.9	13.8	16.3	15.9	15.7	12.5	14.6	17.8	18.9	20.5	11.5	14.6	13.3	12.7	15.1	13.4	19.7	
PLC-ACUTE	Laboratory Waste	0.004	0.0%	0.000	0.000	0.000	0.000	0.005	0.03	0.0025	0	0.001	0.024	0.016	0.014	0.0565	0.009	0.022	0.007	0.003	0.009	
	Percent of Total		90%																			
The following waste streams were <5 tons in 2016 but are included in this update because they were >5 tons in a previous year.																						
2014	Water w/ Cont. organics	3.7	1.5%	4.4	6.0	4.9	4.9	6.3	9.3	9.4	5.3	7.8	0.0	0.2	0.1	0.1	0.2	0.3	0.0	0.5	0.6	
5930	Rags/Non-Chlorinated Solvents	2.8	1.1%	2.7	3.1	3.1	3.2	3.8	4.4	4.2	5.4	5.1	6.9	13.9	10.3	10.2	12.2	10.7	11.6	11.4	10.7	
2051	Waste EA Latex Emulsion	2.0	0.8%	0.3	4.7	4.9	0.2	0.2	1.7	2.2	5.6	5.1	5.1									
1218	Spent Carbon	1.6	0.6%	0.5	0.8	1.5	0.5	0.6	1.1	1.5	0.8	0.5	0.9	0.3	0.9	0.9	1.3	13.1	3.7	3.6	6.0	
5011	Freons/Halogenated Solvents & Oil	1.4	0.6%	0.7	0.7	1.9	0.8	1.6	2.5	3.1	1.1	2.1	2.7	1.5	1.6	3.5	4.8	28.1	2.0	2.4	36.4	
5216	Waste Paint	1.1	0.4%	0.3	0.8	0.6	1.0	0.3	0.5	0.5	1.1	0.5	0.8	1.1	0.3	1.1	0.5	1.1	1.2	2.0	0.7	
5214	Mix Non-Chlor. Solvents	0.6	0.3%	1.2	1.7	3.0	3.1	3.0	5.0	3.1	4.9	3.6	21.6	25.9	23.9	24.8	23.5	15.2	18.0	18.8	7.9	
5926	Rags/Chlorinated Solvent	0.5	0.2%	0.7	0.7	0.9	0.9	1.0	1.0	1.0	1.5	1.3	1.3	2.3	2.4	2.1	2.8	5.0	5.2	5.9	6.6	
9120	Hazardous Maintenance Water	0.1	0.0%	0.4	1.5	0.0	2.8	15.5	21.8	14.7	13.1	68.1	7.1	22.5	1.5	17.0	2.8	22.6	1.2	6.1	32.6	
5211	Methyl Ethyl Ketone	0.0	0.0%	0.0	0.1	1.8	0.4	0.2	0.4	0.4	0.7	0.1	0.6	1.0	0.8	0.0	0.2	0.5	0.0	19.3		
The following waste streams are not included in this update because they have been <5 tons consistently or 0 tons for at least 2 years (also includes one time project waste).																						
PLC	Laboratory Waste (PLCD & PLC-299825)	5.0	2.0%	4.8	4.5	3.8	2.9	3.6	8.7	6.6	6.5	5.4	7.7	7.5	7.8	16.0	8.7	12.1	8.5	9.8	12.1	One Time Project Waste
9110S	Hazardous Maintenance Material	1.2	0.5%	1.1	0.9	0.3	2.3	2.8	49.0	8.0	3.0	5.0	0.4	3.4	2.7	1.1	1.2	0.0	6.2	3.7	7.1	One Time Project Waste
2000	Mineral Spirits	0.9	0.4%	0.4	0.9	0.7	0.9	0.8	0.3	1.0	1.0	0.2	0.5	1.0	1.8	1.6	0.0	0.0	0.0	0.8	3.6	
7210L	Waste Organic Solvent From R&D	0.7	0.3%	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	One Time Project Waste
Spent	Spent Aerosols	0.4	0.2%	0.4	0.4	0.3	0.5	0.5	0.6	0.5	0.7	0.6	0.6	0.9	0.226							
7000	Corrosive Acids and Bases	0.4	0.2%	0.2	0.0	0.3	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4		One Time Project Waste
7210S	Organic Contaminated Solids,	0.2	0.1%																			
7020L	Off Spec Organics	0.1	0.0%	0.2	1.8	0.6	0.0	0.0	0.2	0.8	0.2	0.3	0.0	0.2	0.2	0.4	0.8	1.6	0.4	1.0	58.6	One Time Project Waste
100070	Solvent Contaminated Solids, Discarded	0.1	0.1%	0.2	0.3	0.9	0.6	0.6	0.7	0.0	0.7	0.6	0.6	0.4	0.9	1.5	0.8	1.1	1.4	1.6		
3120	PCB waste from leaking ballasts	0.01	0.0%	0.01	0.01	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.1	2.2		
9110L	Hazardous Maintenance Material	0.03	0.0%	0.4	0.0	1.2	6.9	7.3	0.7	18.3	0.9	22.8	0.0	0.0	116.0	0.0	18.7	0.0	0.3	26.4	11.6	One Time Project Waste
2400	Containment Water with Low Conc. of	0.0	0.0%	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.5	0.0	0.0	31.2	0.0	
5213	MEK With Polymers	0.0	0.0%	0.1	0.0	0.0	0.4	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0%	0.0	0.1	
1016	Solids Contaminated w/CPC	0.0	0.0%	0.1	0.0	0.2	0.1	0.3	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.6	0.7	0.5	0.9	0.4		
5929	Methylene Chloride	0.0	0.0%	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	1.8	0.0	1.1	8.9	10.8	15.3	4.5	9.9	13.4	49.2	
8010L	Liquid Waste from Spill Clean-up	0.0	0.0%	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	2.3		
8010S	Hazardous Spill Clean-up Waste	0.0	0.0%	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	12.2	0.0	0.1	0.9		
8010L	Hazardous Spill Clean-up Waste	0.0	0.0%	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2101	Selenium/Sodium Hydroxide Solution	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	2.8	1.2	17.1	54.2	46.1	37.9	87.2	96.7	124.4	27.9	177.6	224.6	302.1	
1101	Arsenic/Selenium Trash	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	0.4	0.2	1.1	2.8	1.0	0.9	8.6	58.9	8.4	
1220	Remediation Groundwater	0.0	0.0%	0.0	0.0	0.0	0.03	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5220	Ethanol & Heptane from R&D	0.0	0.0%	0.0	0.0	0.0	0.2	0.6	0.6	1.3	1.2	1.0	1.2	1.7	2.8	1.3	2.0	2.1	0.9	1.2		
3130	Non-Leaking PCB light ballasts (Large size)	0.0	0.0%	0.0	0.0	0.0	0.03	0.5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	1.0	0.2	1.5	
5222	Developer coating & acetone solution	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.2	0.2	0.2	0.2	0.1						
5200	Ignitable Solvent from PLC's	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.4	0.5	1.6		
7010	Off-spec inorganics from maint. activities	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.3			
2015	Water with Cetyl Pyridinium Chloride	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.9	1.1	1.0	2.4	2.8	4.1	7.9	9.9	14.7	
2014BC	Water contaminated with organics	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	54.9	113.0	1176.9	70.8	110.3	179.9	440.6	1173.5	340.3	
5104	Extruder Condensate Organic Phase	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	2.3	1.9	3.3	1.4	2.4	3.8	3.0	12.7	
7020S	Organic Solids	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0	0.5	2.6	1.5	0.4		One Time Project Waste
7120L	Corrosive Solvents	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.8	1.2	0.4	0.8		
9110-213	Solids associated with 5925 waste tank	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.3	1.2					
5918	Mixed Chlorinated Solvents	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	1.5	5.2	2.9	5.9	2.7	
5215	Selenium Contaminated Organic Solvents	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.5	1.3	1.8	
5212	Toluene	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.2	1.6	1.3	
5010RD	Isopar w/ F.P.	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.5	4.7	
9000	Soil and concrete from construct debris	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.2	25.8		
5900	Chlorinated Solvent from PLC's	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.0	0.3		
5221	Citric Cleaner	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.3	0.0	0.0	0.0	0.0	

Xerox, Joseph C. Wilson Center for Technology

Table 1b: 2016 Wastestreams

EPA I.D. NUMBER
NYD002211324

Waste Code	Wastestream Description	2016 Generated Amount		2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	Comments
1102	Arsenic/Selenium Filters	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.2	
1115	WW Treatment Sludge/Filter Press	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.5	18.8	
1116	Chromium Contaminant Solids	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	141.3	
2020	Photo Curable Polymer	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6		
2102	Selenium Regen Solution	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.8	13.5	69.2	
2104	Arsenic/Selenium Water	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	2.7	
2312	Caustic Cleaner	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5210	Isopropanol	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		
5218	Ignitable solvent from R&D	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5		
5914	1,4-Dioxane/Methylene Chloride	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6007	Rinse water sludge	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6009	Water w/Hydrofluoric Acid	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.2		
6010	Electroless Nickel Sludge	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8020	Industrial Wastewater	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.4	
9020	Soil from maintenance activities	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	75.9		
6000 (PWW)	Caustic Solutions	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6001 (PWW)	Chromate Solutions	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6002 (PWW)	Electroclean	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6003 (PWW)	Etch Clean	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6004 (PWW)	Muriatic Acid	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6005 (PWW)	Nitric Acid	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6006 (PWW)	Soak Clean	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5922	1,1,1-Trichloroethane Degreasing Solvent	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1					
2023	Water w/ Volatile Organics	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4	0.4		
7110S	Waste inorganics contaminated solids	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2					
5913	Cyclohexanone	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.9		
NA	Secondary Cont. Water Discharged To POTW	1.2	0.5%																			
	Total Tons	246.0	100%	268.8	264.5	301.7	392.5	520.2	693.4	660.4	825.3	832.2	685.7	848.3	1985.4	700.9	841.5	828.0	1071.2	2257.5	1711.8	

Table 1c: Wastestream Comparison

Wastestream Code	Waste Name	Table 1 2016 HWRP	Table 1 2014 HWRP	Table 1 2012 HWRP	Table 1 2010 HWRP	Table 1 2009 HWRP	Table 1 2008 HWRP	Table 1 2007 HWRP	Table 1 2006 HWRP	Table 1 2005 HWRP	Table 1 2004 HWRP	Table 1 2003 HWRP	Inclusion in Table 1 2002 ASR	Table 1 2001 HWRP	Table 1 2000 ASR	Table 1 1999 HWRP
1100	Se sludge	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
1101	Arsenic/Selenium Trash	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
1102	Arsenic/Selenium Filters	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
1103	As/Se alloy	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
1115	WW Treatment Sludge/Filter Press	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y (New in 1998)
1115-5	WWT sludge	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
1115-C	WWT sludge	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
1116	Chromium Contaminant Solids	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y (New in 1998)
1218-118	Spent Carbon	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
1218-213	Spent Carbon	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2000	Mineral Spirits	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
2013	Caustic Alu Cleaner	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
2014	Water w/ Cont. organics	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2014-BC	Water contaminated with organics	N	N	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
2015	Water w/Cetyl Pyridinium Chloride	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2023	Carrier W W	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
2051	Waste EA Latex Emulsion	Y	Y	Y	Y	Y	Y	Y	N (New In 2006)							
2101	Selenium/Sodium Hydroxide Solution	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2102	Selenium Regen Solution	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
2104	Arsenic/Selenium Water	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
2312	Caustic cleaner	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
2400	Containment Water with Low Conc. of Solvents	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
3111V	PCB Capacitors	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3120	Lkg PCB ballasts	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
3130	Non-Leaking PCB light ballasts (Large size)	N	N	N	N	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y
5010RD	Isopar w/ F.P.	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y
5011	Freons/Halogenated Solvents and Oil	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y (New in 1998)
5016	Waste coolant oil	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5019	Solv. Abst. waste	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5101	As/Se Oil	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5104	Extruder Condensate Organic Phase	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5200	Non-Chlor. slvt	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5211	Methyl Ethyl Ketone	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5211-MIBK	MIBK with Polymers	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5212	Toluene	N	N	N	N	Y	N	N	N	N	Y	Y	Y	Y	Y	Y
5213	Waste MEK coating	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5214	Mix Non-Chlor. Solvents	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5215	Selenium Contaminated Organic Solvents	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
5216	Waste Paint	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5217	Paint stripper	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5218	Waste ink	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5221	Citric cleaner	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
5222	Waste Acetone/IPA From Coater Cleaning	N	N	N	N	N	N	N	N	N	N	N	NA	NA	NA	NA
5900	Chlor. slvt	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5911	1.1.1-TCA	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5913	Cyclohexanone	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5914	Dioxane/MeCl2	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
5918	Mixed Chlorinated Solvents	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y
5919	Waste Oil	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5922	1.1.1-TCA	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
5925	AMAT Flammable Waste	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5926	Rags/Chlorinated Solvent	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5929	Methylene Chloride	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5930	Rags/Non-Chlorinated Solvents	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6000	Caustic solutions	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6001	Chromate solns.	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6002	Electroclean	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6003	Etch clean	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6004	Muriatic acid	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6005	Nitric acid	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6006	Soak clean	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y

Table 1c: Wastestream Comparison

Wastestream Code	Waste Name	Inclusion in Table 1 2016 HWRP	Table 1 2014 HWRP	Table 1 2012 HWRP	Table 1 2010 HWRP	Table 1 2009 HWRP	Table 1 2008 HWRP	Table 1 2007 HWRP	Table 1 2006 HWRP	Table 1 2005 HWRP	Table 1 2004 HWRP	Table 1 2003 HWRP	Table 1 2002 ASR	Table 1 2001 HWRP	Table 1 2000 ASR	Table 1 1999 HWRP
6007	Rinse water sludge	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
6009	LAEF rinsewater	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
6010	Electroless Ni sludge	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
7020L	Off Spec Organics	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	Y	Y	Y	Y	Y	Y (New in 1998)
8010	Solids cont. w/ Hmat.	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N	N	N	N	N	N
8020	Industrial Wastewater	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N	N	N	Y	Y	Y
9000	Haz Maint. debris	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)
9020	Soil from maintenance activities	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)
9110L	Hazardous Maintenance Material - Liquid	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)
9110S	Hazardous Maintenance Material - Solid	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)	N (Project Waste)
9120	Hazardous Maintenance Water	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PLC	Laboratory Waste	N (Project Waste)	N (Project Waste)	N (Project Waste)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PLC-ACUTE	Laboratory Waste / Acute	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Spent Aerosol Cans	Spent Aerosol Cans	N	N	N	N	N	N	N	N	N	Y					
Steam Gen	AMAT Steam Generator Blow Down	Y	Y	Y	N	N	N	N	N	N	N					
7210L	Waste Organic Solvents From R&D	N	N													
7000	Off-Spec Acids & Bases	N														
Total number of streams		14	15	16	16	21	21	21	19	23	27	31	35	36	48	48

Table 1d: Estimated Unit Costs for Transportation and Disposal of Hazardous Wastes

Waste Code	Description	Container Type	System Code	Estimated Unit Disposal Cost	Estimated Unit Transportation Cost	Total Estimated "T&D" Unit Cost
1218-213	Spent carbon from solvent reclaim	Burlap, Cloth/Paper Bags	H040	$910.00	$240.00	$1,150.00
1218-213	Spent carbon from solvent reclaim	Metal Drum	H040	$165.75	$60.00	$225.75
2014	Extruder condensate	Metal Drum	H061	$168.00	$19.20	$187.20
2051	Waste EA Latex Emulsion	Plastic Drum	H040	$620.00	$60.00	$680.00
2051	Waste EA Latex Emulsion	Tote	H040	$2,819.00	$240.00	$3,059.00
5011	Freon and oil	Metal Drum	H061	$58.00	$19.20	$77.20
5211	MEK with polymers	Metal Drum	H061	$58.00	$19.20	$77.20
5211MIBK	MIBK with polymers	Metal Drum	H020	$20.00	$19.20	$39.20
5211MIBK	MIBK with polymers	Metal Drum	H061	$58.00	$19.20	$77.20
5214	Non-Cl mixed waste solvent	Metal Drum	H061	$58.00	$19.20	$77.20
5216	Waste Paint	Metal Drum	H061	$168.00	$19.20	$187.20
5925-119 & 213	AMAT Waste Flammable Solvent	Tanker Truck (4200 Gal.)	H020	$2,400.00	$2,100.00	$4,500.00
5926	Rags/filters/PPE contaminated w/Cl solvent	Metal Drum	H061	$155.00	$19.20	$174.20
5930	Rags/filters/PPE w/flammable solvent	Metal Drum	H061	$160.00	$19.20	$179.20
9120	W213 containment and H2O	Metal Drum	H061	$157.00	$19.20	$176.20
PLC-Acute	Acute Lab Pack Waste	Varies	H040	Varies	Varies	Varies
Steam Gen.	AMAT Steam Generator Blow Down	NA	H135	NA	NA	NA
Other	Project Related T&D Costs	Varies	Varies	Based on Treatment Method & Waste Profile, Varies		

NYSDEC Table 2 Hazardous Waste Reduction Program Summary (2016 Data)
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CODE #	NAME OF WASTE	WASTE STREAM AFFECTED	REDUCTION PLANS/PROJECTS*	EST. REDUCTION (TONS as of 2016) (Baseline=first year generated or max. generated)	EST. REDUCTION (% as of 2016) (Baseline=first year generated or max. generated)	ROI METHOD	ROI (EST)	GOAL DATE	REMARKS
5211-MIBK	M945, M942, M442		Good Operating Practices-Procedural measures 5211-MIBK -1			NA		On Going	Historically the Xerox Webster Fuser Business Center (WFBC) focus has been placed on reducing solvent consumption, waste source segregation, and in plant management of the solvent hazardous waste stream through recycled distilled methyl isobutyl ketone. During the 2016 calendar year the WFBC continued to deploy recycling of the Xerox 5211MIBK waste through off-site distillation options; 11,669 lbs. of reclaimed distilled MIBK was used in the operation to clean the fluid delivery systems.
5211-MIBK	MIBK with Polymers		Total	16.36	60%				
5925	AMAT Flammable Waste	Reference Section 2.2 & Table 1: W213 Solvent Recovery	Solvent Recovery - 95-5925-1					On going	The 1996 1997 decrease of the MeCl2 5925 flammable waste stream managed off-site is related to the increased recovery and reuse of the MeCl2 within the plant. In 2006, AMAT operation continued to improve the efficiency of the solvent reclaim system. The AMAT plant has documented targets and goals established for the recovery of methylene chloride. Spent methylene chloride contaminated with Teflon originally sent off-site for disposal is currently being recycled. During the 2010 2011 operating period Xerox also optimized the distillation process associated with the solvent abatement system. This improvement has also decreased the amount of 5925 hazardous waste generated. During the 2012 calendar year modifications to the coating die cleaning process were implemented that resulted in reduced 5925 waste volumes in 2013 and 2014. The AMAT photoreceptor demand continues to decrease, this has also resulted in a drop in waste volumes.
5925	AMAT Flammable Waste		Total	546.43	81%				
Steam Gen.	AMAT Steam Generator Blow Down	Reference Section 2.2 & Table 1: Research Laboratory Ops.	Source Reduction Under Consideration			NA		TBD	In 2013 Xerox implemented a source reduction option resulting in a 44 ton (39.2%) reduction in hazardous wastewater generated. This operation will continue to pursue waste reduction activities during the 2017 calendar year, this waste stream has been reduced by 201.5 tons (72%) from the base year.

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CODE #	NAME OF WASTE	WASTE STREAM AFFECTED	REDUCTION PLANS/PROJECTS*	EST. REDUCTION (TONS as of 2016) (Baseline=first year generated or max. generated)	EST. REDUCTION (% as of 2016) (Baseline=first year generated or max. generated)	ROI METHOD	ROI (EST)	GOAL DATE	REMARKS
Steam Gen.	AMAT Steam Generator Blow Down		Total	201.5	72%				
PLC-Acute	Laboratory Waste	Reference Section 2.2 & Table 1: Research Laboratory Ops.	Reinforce Good Operating Practices			NA		On going	Acute hazardous waste are not routinely generated on-site, this waste stream typically originates from lab clean-outs.
PLC-Acute	Laboratory Waste		Total	0.05	94%				

NOTE: The reduction plans projects that were identified as "complete" have been removed from this submittal.

* Reduction Plans Projects identification number based on the year the plan was submitted

Table 2a: Waste Reduction Strategy Summary

		Source Reduction: Process Modifications				Source Reduction: Input Materials Changes			Recycling/Reuse: Reclamation					Source Reduction: Good Operating Practices							Recycling/Reuse: Use and Reuse		Waste Processing:	
Wastestream Number	Waste Name	Equipment Changes	Automation Improvements	Operating Controls	Product Composition	Raw Material Substitution	Raw Material Modification	Material Purification	Process for Resource Recovery	Process as Byproduct	Off-site Recovery	Off-site Product Exchange	Off-site use as fuel	Loss Prevention	Procedural Measures	Management Practices	Waste Segregation	Material Handling Improvements	Production Scheduling	Preventative Maintenance	Return to original process	Raw material substitute for another process	Volume Reduction	Hazard Reduction
5211-MIBK	MIBK with Polymers	NA	NA	A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A	A	A	NA	NA	NA	A (Off-site Recycling)	NA	NA	NA
5925	AMAT Flammable Waste	A	NA	NA	NA	NA	NA	NA	A	NA	NA	NA	NA	NA	A	A	NA	NA	NA	NA	A	NA	A	NA
Steam Gen.	AMAT Steam Generator Blow Down	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A	A	NA	NA	NA	NA	NA	NA	NA	NA
PLC-ACU	Lab waste/acute	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	A	NA	NA	NA	NA	NA	NA	NA	NA

NA - Not Applicable
A - Applicable
UC - Under Consideration