SECTION 3.0

WASTE CHARACTERISTICS AND WASTE ANALYSIS

3.1 INTRODUCTION

This section describes the chemical and physical nature of the hazardous wastes stored and treated at GLOBALFOUNDRIES. The processes described in Section 3.2.1 are used to allow proper characterization of wastes, which then provides the necessary information to properly manage the waste streams.

3.2 CHEMICAL AND PHYSICAL NATURE OF GLOBALFOUNDRIES' WASTE

GLOBALFOUNDRIES' major hazardous waste streams may include, but are not limited to, the following:

- Solvent-based waste from photochemical processes
- General solvents from other production processes and miscellaneous laboratory, maintenance, and/or remediation operations
- Soil from release response
- Wipes, personal protective equipment (PPE), etc., contaminated with solvents, corrosives, or other hazardous wastes
- Oil and oil-contaminated materials from maintenance operations
- Solutions containing ethylene glycol and materials contaminated with ethylene glycol

The list of wastes that GLOBALFOUNDRIES manages and stores is provided in Table 3-1. Table 3-1 also gives the basis for the hazard classification and associated waste codes for each waste stream. Due to the dynamic nature of GLOBALFOUNDRIES' processes and the potential for GLOBALFOUNDRIES tenants or non-GLOBALFOUNDRIES business entities within the technology park to generate hazardous wastes or for other GLOBALFOUNDRIES locations to send waste for storage and consolidated shipment, GLOBALFOUNDRIES may manage a wide variety of hazardous waste codes. In Table 3-1, the "XX" or "XXX" notation represents any combination of characters.

Hazardous wastes generated and stored at GLOBALFOUNDRIES are listed in the most current Biennial Hazardous Waste Report and Annual Report of International Shipments of Hazardous Waste. These reports are enclosed as Appendix C.

Table 3-1 Wastes, Basis For Hazard Classification, Associated Waste Codes		
Waste Type	**Basis for Hazard Classification**	**Associated Waste Codes**
Tanks		
General Solvents	Characteristic, Listed	DXXX, FXXX, VTXX, UXXX
Ethylene Glycol	Listed	VT08
Propylene Glycol Methyl Ether Acetate (PGMEA)	Characteristic	D001
N-Butyl Acetate	Characteristic	D001
Gamma Butyrolactone	Characteristic	D001
Photoresist Waste	Characteristic	D001, D023, D024, D025, D026
Containers/Tanks		
Spent Adsorption Carbon	Characteristic, Listed	FXXX, DXXX, VTXX, UXXX
Solid Organics	Characteristic, Listed	DXXX, FXXX, UXXX, VTXX, PXXX
Inorganic Acids	Characteristic, Listed	DXXX, UXXX, PXXX, VTXX
Organic Acids	Characteristic, Listed	DXXX, UXXX, PXXX, VTXX
Inorganic Bases	Characteristic, Listed	DXXX, UXXX, PXXX, VTXX
Organic Bases	Characteristic, Listed	DXXX, UXXX, PXXX, VTXX
Liquid Organics	Characteristic, Listed	DXXX, FXXX, UXXX, VTXX, PXXX
Inorganic Salts and Metals	Characteristic, Listed	DXXX, UXXX, PXXX
Organic Salts and Organo-Metallics	Characteristic, Listed	DXXX, UXXX, PXXX, VTXX
Arsenic Wastes	Characteristic	D004, D007, D008, DXXX
Waste Oils	Characteristic, Listed	DXXX, VTXX
Mercury Wastes	Characteristic	D009
PCB Articles	Listed	VT01
PFOS/PFOA	Listed	VT21, VT22
Waste Sludge	Characteristic, Listed	DXXX, VTXX, FXXX
Oxidizers	Characteristic, Listed	D001, UXXX
Spill	Characteristic, Listed	DXXX, FXXX, PXXX, UXXX, VTXX
Contaminated Materials (Including Soil)		

Ethylene Glycol	Listed	VT08
Table 3-1 Wastes, Basis For Hazard Classification, Associated Waste Codes (continued)		
Lab Packs	Characteristic, Listed	DXXX, FXXX, UXXX, PXXX, VTXX
Contaminated Debris	Characteristic, Listed	DXXX, FXXX, UXXX, PXXX, VTXX
Contained Gases	Characteristic, Listed	DXXX, FXXX, UXXX, PXXX, VTXX

3.2.1 Waste Characterization and Handling

The processes described within this section are utilized by GLOBALFOUNDRIES to authorize, characterize, and track the use of chemicals and generation of all waste. These processes provide the basis for generator knowledge used during waste characterization. GLOBALFOUNDRIES utilizes unique waste stream numbers to categorize and manage waste. Wastes are assigned to a waste stream that represents the waste being generated. If a waste stream does not exist that fits the waste being generated either a new waste stream is created or an existing waste stream is updated to meet the regulatory requirements of the waste.

In addition, detailed characterization documents are maintained as part of the facility operating record for GLOBALFOUNDRIES' 40 to 60 major recurring waste streams. The characterizations include applicable waste codes, underlying hazardous constituents, and land disposal information pertinent to each waste stream. The characterizations are updated as needed and the updates are based on either waste analysis or generator knowledge.

3.2.1.1 Chemical Authorization Process

Before any chemical is brought to GLOBALFOUNDRIES for use by GLOBALFOUNDRIES personnel or contractors working on behalf of GLOBALFOUNDRIES, the chemical is identified and authorized through the company's online chemical information and authorization management system. This system also provides access to supplier Safety Data Sheets (SDSs), which contain information about the chemical's health and safety hazards, storage compatibility, and handling characteristics. The authorization review process includes consideration of how any waste to be generated will be managed. Additional information may be obtained from the requester or the chemical supplier when necessary to properly characterize the waste expected to be generated.

3.2.1.2 Environmental Impact Assessment Process

Installation or modification of chemical-using equipment proposed to discharge waste to any drains leading to the bulk hazardous waste storage tanks is managed via an online environmental impact assessment system. The hazardous waste engineer or hazardous materials coordinator must review and approve all such bulk waste discharges. These reviews are conducted on an ongoing, real-time basis to ensure that compatibility is assessed and that waste codes or land disposal restrictions for the wastes in the bulk storage tanks are updated if needed. Additional information may be obtained from prior chemical authorization reviews, from equipment or process engineers,

or from laboratory analysis, when necessary to properly characterize the waste expected to be generated.

3.2.1.3 Chemical Waste Disposal Authorization Process

The primary tool for control and characterization of containerized hazardous waste is the Chemical Waste Disposal Authorization (CWDA) form (see Attachment 3-1 for a sample CWDA form; the location of information on this form may vary as the waste management application evolves). The CWDA is completed and reviewed online. The waste generator supplies a description of the waste and information on its components and the process generating it. The hazardous waste engineer or hazardous materials coordinator then reviews the CWDA, using additional information from SDSs, prior chemical authorization reviews, the generator, and/or laboratory analysis if needed. The hazardous waste engineer or hazardous materials coordinator assigns the waste to an appropriate existing waste stream or a new waste stream and defines container and storage requirements before approving the CWDA. The generator is notified that the CWDA is approved, and manages the waste according to the defined requirements. When a container of the waste is sent to the Chemical Distribution Center (CDC), the container is then consolidated or stored and ultimately disposed of according to the information on the CWDA. CWDAs are approved for a specific period of time, generally for no longer than one year. If waste generation will continue beyond this period, the CWDA must be resubmitted for approval. A change in the waste composition requires an immediate update to the CWDA and re-evaluation by the hazardous waste engineer or hazardous materials coordinator. Routine expiration and renewal of CWDAs provides for regular verification of waste stream composition, characterization, and handling requirements.

Containerized wastes to be consolidated into a bulk waste storage tank through the CDC Transfer Room would either be accompanied by a CWDA or evaluated on a case-by-case basis by the hazardous waste engineer or hazardous materials coordinator. Wastes piped directly to a bulk waste tank system are reviewed using the 3.2.1.2 “Environmental Impact Assessment Process”.

3.2.1.4 Contaminated Material Entering CDC From Decon Facility

GLOBALFOUNDRIES operates a decontamination (decon) facility under the large-quantity generator requirements of Vermont Hazardous Waste Management Regulations (VHWMR) Section 7-311(h) and 40 CFR Part 265 Subpart DD for containment buildings. The decon facility is not part of the permitted hazardous waste management facility. Tasks performed in the decon facility may include the cleaning of chemically contaminated equipment and containers; the sorting, treatment, and consolidation of contaminated trash; the collection of used batteries; and other operations. Hazardous wastes routinely handled by the decon facility are tracked through the CWDA process. The decon facility may also handle certain unique wastes, such as filter modules or other chemical-containing articles from discarded equipment, or items segregated from contaminated trash during processing. Decon facility procedures require that when such materials are transferred to the CDC, they are accompanied by a completed “Contaminated Material Entering CDC from Decon Facility” form. These materials are held in the waste staging area at the CDC for evaluation by the hazardous waste engineer or hazardous materials coordinator, including laboratory analysis as necessary for proper characterization. Typically these materials are

consolidated, or are managed as lab pack wastes and are logged into lab pack bins via the electronic inventory associated with each bin.

3.2.1.5 Lab Pack Waste Characterization

Containerized waste managed as lab pack waste is reviewed by the hazardous waste engineer or hazardous materials coordinator (via CWDA or in the CDC waste staging area as described above) and assigned to a lab pack waste category (for example, oxidizer, corrosive acid, corrosive base, flammable organic, etc.) based on its properties and handling requirements. Lab pack wastes are then segregated by category into separate bins. Bins containing hazardous waste bear a "Hazardous Waste" label. Contents of each lab pack bin are listed in an electronic inventory associated with that bin. Hazardous waste codes are assigned to individual lab pack wastes at the time of shipment preparation.

3.2.1.6 Waste Characterization for Wastes Treated at the Wastewater Treatment Facility

Wastes that are to be treated at the wastewater treatment facility will be assessed by the hazardous waste engineer and wastewater treatment plant chief operator using knowledge from the chemical authorization, environmental impact assessment, and CWDA processes described above. This assessment is completed prior to treatment to ensure that only wastes permitted under the National Pollutant Discharge Elimination System program are treated. GLOBALFOUNDRIES reserves the right to use knowledge of certain wastes streams to determine acceptability of treatment in the system.

GLOBALFOUNDRIES is authorized to treat VT02 and VT08 Vermont-listed hazardous waste at the biological wastewater treatment plant (BWTP). GLOBALFOUNDRIES will not treat any other Vermont or federal RCRA-listed waste without obtaining permission from the proper authorities first.

3.2.2 Waste Labeling

Empty containers issued by the CDC for waste collection or accumulation will have a barcode label affixed which identifies the unique container number, CWDA number, and other waste stream and container tracking information. The hazardous waste labeling requirements are met either by the use of a separate label or by including these requirements on the barcode label.

Wastes not requiring a CDC issued container will be accompanied by an approved CWDA or a completed "Contaminated Material Entering CDC from Decon Facility" form.

Aboveground tanks are labeled with the name of the waste stream as defined for characterization purposes (general solvent tanks are labeled as General Solvent). This procedure supplies operating personnel with necessary information to permit safe handling. Details of GLOBALFOUNDRIES' waste storage tank and container management practices and personnel training are provided in Sections 5.0, 4.0, and 12.0, respectively.

3.3 WASTE ANALYSIS PLAN

Where laboratory analysis is required, methods are in compliance with VHWMR Section 7-219. Alternate methods may be used with the concurrence of the VT DEC's Waste Management & Prevention Division.

For GLOBALFOUNDRIES' 40 to 60 major recurring waste streams, waste analysis plans (WAP) are documented as part of the facility operating record and are updated as needed. Each waste analysis plan describes how GLOBALFOUNDRIES will compile all information necessary to store, treat, and dispose of its hazardous waste properly. These WAPs may include the use of generator knowledge and/or laboratory analysis. Where laboratory analysis is required, specific parameters, test methods, and sampling methods are listed. These analyses provide all information required to ensure proper management of GLOBALFOUNDRIES wastes. See Attachment 3-2 for an example of a WAP.

Unique or intermittent waste streams are characterized through the processes outlined in Section 3.2.1, which may include the use of generator knowledge and/or laboratory analysis.

3.3.1 Parameters and Rationale

Periodic analyses of hazardous wastes are not generally needed because of the characterization process for all wastes generated (described in Section 3.2.1) and the extensive documentation already established for wastes routinely generated. However, analyses are conducted when:

A. A current waste stream is changing, making previous analytical results outdated.

B. A new waste stream is being reviewed for proper disposal and process knowledge is not deemed sufficient.

C. A current waste stream is highly variable and must be characterized prior to offsite shipment.

D. The waste to be managed is unique or its characteristics are unknown.

E. To confirm existing generator knowledge.

New or unknown waste streams will be evaluated by process knowledge or analyzed for the parameters needed to fully characterize the waste. If analysis is done, the parameters will be selected based on the physical nature of the waste, on the suspected source and/or constituents of the waste, and on the judgment of the hazardous waste engineer. Supplemental analysis will be conducted as needed if preliminary data do not result in adequate waste characterization.

3.3.2 Sampling Methods

Sampling methods for each category of waste stored at GLOBALFOUNDRIES are summarized below.

3.3.2.1 Tanks

The tank liquid will be recirculated through the discharge pump in a closed loop for a minimum of 30 minutes. The recirculation provides for a 0.6-tank volume change prior to sampling. The system allows GLOBALFOUNDRIES to provide a representative sample for analysis.

Samples shall be taken from the tank using one of the following methods:

1. The sample can be collected from the pump discharge pipe during recirculation. Attachment 3-3 provides a schematic typical of the recirculation system used at GLOBALFOUNDRIES.

2. The sample can be collected by lowering a sampling device into the tank through a 6- to 10-inch-diameter sampling port in the waste tank manhole cover.

3.3.2.2 Containers

For liquids and/or sludges, a Coliwasa sampler or equivalent device shall be used. For drummed contaminated soils and similar debris, a split-tube sampler, thief sampler, scoop sampler, or equivalent device will be used.

3.3.2.3 Unknowns and New Waste Streams

Waste will be classified as “unknown” whenever there is a reasonable doubt as to the contents, i.e., illegible, missing, or apparently incorrect labels. Unknown wastes and new waste streams that require analysis will be sampled by means appropriate to the nature of the waste. This may include any of the solid and liquid waste sampling methods described earlier.

3.3.2.4 Contaminated Soil

Depending on the volume and nature of soil, a minimum of three (3) and a maximum of fifteen (15) discrete soil samples shall be collected and composited into a single sample for analysis. Samples shall be collected with a trowel or scoop. The locations and numbers of samples will be chosen and compositing procedures will be conducted to ensure that a representative sample is obtained for analysis.

IBM retains responsibility for any soil contamination associated with its historical operations. The Essex Junction site was an IBM electronics manufacturing facility from 1957 through June 30,

2015. Past usage of solvents in the production process has resulted in impacts to soil and groundwater from releases of these chemicals associated with facility operations. There are currently five (5) study areas which contaminated soil owned by IBM could be excavated and managed as hazardous waste:

1. The former Industrial Waste Sludge Landfill, where IBM disposed of its industrial waste treatment plant sludge directly in unlined trenches from 1971 to 1978.
2. The Chemical Distribution Center, which has served as the main chemical storage area at the facility since 1981.
3. The Building 900 Area, which was the location of the former Chemical Operations Building and Chemical Storage Shed and Waste Storage Area before 1981.
4. Building 963 Area, where several underground chemical storage tanks, underground chemical distribution and waste pipelines, and a perchloroethylene distillation system were formerly located.
5. The Fire Training Area (FTA), where petroleum products and organic solvents were burned in unlined pits during fire training exercises from the mid-1960's until the mid-1980's. The FTA also includes the Soil Staging Area, which was designed to store steel roll-off containers that contained solvent contaminated soil excavated on the IBM site, and a collection system to collect all rainfall and snowmelt which runs off these containers.

3.3.3 Quality Assurance and Quality Control (QA/QC)

Strict adherence to QA/QC protocols will be maintained throughout the sampling and analysis of all wastes. These protocols will be consistent with those presented in U.S. Environmental Protection Agency (EPA) SW-846 or equivalent, and will include the following:

- Sample containers and sampling equipment
- Sample labeling
- Chain-of-custody documentation
- Sample storage and transport
- Sample analysis and data validation

Applicable laboratory QA/QC protocols will be available upon request from the laboratory.

3.4 REQUIREMENTS FOR OTHER WASTES GENERATED

3.4.1 Wastes from Offsite GLOBALFOUNDRIES locations

Offsite locations may be used for satellite operations as business needs dictate, and these operations may generate hazardous waste. GLOBALFOUNDRIES is not currently using any offsite locations. In addition, hazardous waste may be generated by emergency incidents to which GLOBALFOUNDRIES Emergency Services responds. GLOBALFOUNDRIES also operates

similar manufacturing facilities in New York State that could potentially send waste to this location for storage and shipment with similar wastes generated at this location.

The processes described above for control of chemicals and characterization of waste are used for the GLOBALFOUNDRIES Essex Junction facility as well as for any satellite GLOBALFOUNDRIES locations. Similar but equivalent processes are used at the other GLOBALFOUNDRIES manufacturing facilities. All hazardous waste generated offsite is sent to the CDC under a hazardous waste manifest and will be stored in the tank storage or container storage units.

3.4.2 Tenant Waste

Tenants generating waste on GLOBALFOUNDRIES property will follow one of the following processes for characterization of waste:

1. Follow the GLOBALFOUNDRIES processes described within this section; or

2. Provide GLOBALFOUNDRIES with equivalent data to that provided by the processes described within this section. Specifically, information on the process generating the waste and the composition of the waste will be provided; or

3. Manage, characterize, and ship waste directly from the tenant location without utilizing GLOBALFOUNDRIES' tank storage or container storage units.

ATTACHMENT 3-1

SAMPLE CWDA

Chemical Waste Disposal Authorization

CWDA NUMBER	STATUS	APPROVAL DATE	EXPIRATION DATE
30589	APPROVED TO GENERATE	02/19/2019	09/26/2019

REQUESTER INFO

Trevon Noiva
802-310-5935
trevon.noiva@globalfoundries.com

Burlington/FAB9
FAC-CHEMICALS
MAIN SITE BLDG. 966

Authorized Users

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WASTE GENERATION INFORMATION

Waste State: SOLID
Description: ARSENIC CONTAMINATED SOLID/DUST
Process: ARSENIC CONTAMINATED DUST FROM GLASS SHOP SANDBLASTING OPERATIONS
Volume: 55 GALLONS EVERY 3 WEEKS **Duration:** INDEFINITE

CHEMICAL INFORMATION

Have Chemicals: N
Waste is a Mixture: Y

WASTE COMPONENT INFORMATION

Description: ARSENIC
Concentration: UNKNOWN **Range:** UNKNOWN

WASTE GENERATOR/CDC INFORMATION

General Instructions

"HAZ: SUBMIT A ""NEW CONTAINER"" REQUEST ON THIS SYSTEM TO ORDER A CDC ISSUED CONTAINER (DRUM). THE DRUM MUST HAVE A YELLOW HAZARDOUS WASTE LABEL PRIOR TO USE. DO NOT ACCUMULATE WASTE, RETURN THE DRUM TO THE CDC WITHIN 72 HOURS OF WHEN WASTE IS FIRST PUT IN THE DRUM. A CONTAINER PICKUP REQUEST MUST BE SUBMITTED THROUGH THIS SYSTEM TO NOTIFY THE CDC THAT THE CONTAINER IS READY FOR PICK-UP. THE WASTE CONTAINER MUST THEN BE MOVED TO AN APPROVED CHEMICAL DROP AREA AND A SIGNED COPY OF THIS CWDA MUST BE ATTACHED."

CDC/Decon Instructions

CDC USE ONLY - PLACE DRUM IN INVENTORY. PROVIDE A FIBER DRUM TO BE PLACED INSIDE A METAL DRUM. FIBER DRUM DOES NOT NEED TO BE LABELED. ALL LABELING MUST BE ON THE OUTER DRUM.

General Comments

ADDED TEAM MEMBERS THAT ARE PART OF THE AEC TEAM RESPONSIBLE FOR GENERATING.

REMOVED TEAMMATE WHO MOVED TO IWTP
Storage Requirements
STORE WITH POISONS. SEGREGATE FROM ALL OTHER CLASSES.
Waste Stream: (BURL0367) - DUST COLLECTOR WASTE;
Required Labels: (HAZARDOUS WASTE) (BAR CODE) (SIGNED CWDA) (POISON)
Authorized Drop-off Locations:
(B962 C-5/C-6)
Container Types:
(1 Cubic Yard Box) (30 Gallon Drum, Fiberboard, Open Top) (55 Gallon Drum, Fiberboard, Open Top) (55 Gallon Drum, Metal, Open Top, 46 Lbs)

Requester Notification: 30 days
Line1 Notification: 15 days
Line2 Notification: 7 days
EPA Waste Codes: D004;D007;D008
State Waste Codes: OUTS319H[TX]
Hazardous Constituents: SILVER[0007440-22-4];ANTIMONY[0007440-36-0]
Previous CWDA #: 30390
Rejection Notes:

ATTACHMENT 3-2

SAMPLE WASTE ANALYSIS PLAN (WAP)

Waste Analysis Plan

Waste Stream: MUV Waste
Waste Stream #: 320
Date: October 6, 1994
Reviewed: 12/21/2018

Description of Waste Stream

This waste stream consists of bulk solvent waste from mid UV (MUV) lithography processes. Solvent is collected through a central piping system and stored in a 10,000 gallon storage tank at the CDC prior to off-site disposal.

This waste stream is primarily comprised of Propylene Glycol Methyl Ether Acetate (PGMEA). The second largest constituent is g-Butyrolactone (GBL), due to the use of GBL/nBA for wafer prewet. The third largest constituent is n-Butyl Acetate (nBA). This waste stream also contains components from all photoresists, adhesion promoters, and anti-reflective coatings discharged to the MUV drain.

Parameters for Analysis and Corresponding Test Methods

Analysis is not required. Confirmatory analysis may be performed using the following methods:

Parameter	**Test Method**
Solvent scan (major constituents)	8015
Water	Karl Fischer
Volatile organics	8260-Total
Semi-volatile organics	8270-Total
o-Cresol	8270
p-Cresol	8270
m-Cresol	8270
Cresols,Total	8270
Metals	6010-TCLP
Mercury	7470-TCLP
PFOA/PFOS (2018 only)	537 - EPA drinking water method currently there is no waste method

Rationale for Selection of Parameters and Test Methods (Existing Knowledge)

MUV waste is collected in a dedicated drain system. Constituents which are added to this system are identified using generator knowledge and are reviewed for characterization based on information obtained during the chemical authorization process. These reviews have identified no chemical constituents which meet the definition of F, K, U, or P listed, reactive, or corrosive.

Generator knowledge is obtained from a review of tool information from process engineering and from a list of MUV photochemicals currently in use. See listing of chemicals used in these processes in the characterization folder on the p: drive. This information is used to determine what chemicals are being discharged into the MUV waste tank. Parameters for analysis are selected to provide additional information on the presence or concentration of certain constituents which cannot be determined with generator knowledge or for which confirmatory testing is desired.

Generator knowledge is used to identify potential Universal Treatment Standard (UTS) constituents which could reasonably be expected to be present in the MUV waste stream.

Sampling Method

Sampling is not required. Optional samples may be obtained per the procedure outlined in the RCRA facility certification.

Frequency of Analysis/Review of Generator Knowledge

The characterization of the MUV (formerly n-Butyl Acetate) waste stream will be reviewed annually. Suspected or known changes in the waste will trigger immediate review.

Waste Characterization

Waste Stream: MUV Waste
Waste Stream #: 320
Date: October 6, 1994
Reviewed: 12/21/2018

Waste Codes

D001 - Ignitability
D023 - o-Cresol
D024 - m-Cresol
D025 - p-Cresol
D026 – Cresols
VX51 – Vermont Specific Recycling Tax Rate*

*NOTE: The Vermont VX51 code is applicable only when the MUV waste stream is sent to Chemrec, Inc. in Cowansville, QC or Safety-Kleen in Linden, NJ for hazardous waste recycling. See "VX51 Recycling Tax Rate" folder for additional information.

Land Disposal Restrictions

MUV Waste is restricted form land disposal as a nonwastewater as follows:

D001 - High TOC Ignitable Subcategory, Nonwastewater:
Treatment standard is RORGS; CMBST; or POLYM.

D023 - o-Cresol:
Treatment standard is 5.6 mg/kg and meet 268.48 standards[1].

D024 - m-Cresol:
Treatment standard is 5.6 mg/kg and meet 268.48 standards[1].

D025 - p-Cresol:
Treatment standard is 5.6 mg/kg and meet 268.48 standards[1].

D026 - Cresol-mixed isomers (sum of o-, m-, and p-cresol concentrations):
Treatment standard is 11.2 mg/kg and meet 268.48 standards[1].

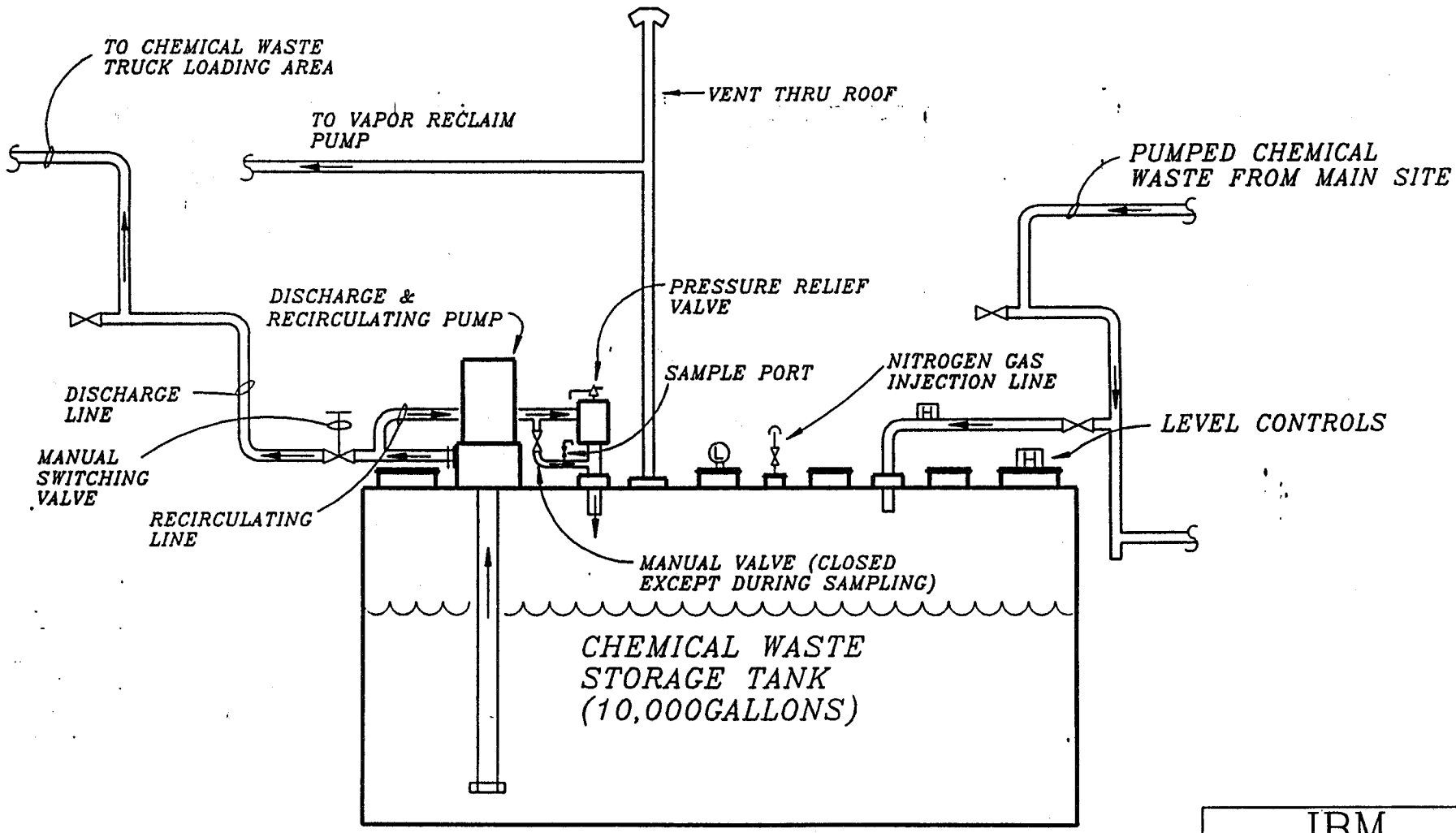
[1] "These wastes, when rendered nonhazardous and then subsequently managed in CWA, CWA-equivalent, or Class I SDWA systems are not subject to treatment standards. (See 148.1(d) and 268.1 (c)(3 and (4)).", Footnote 8 to Table "Treatment Standards for Hazardous Waste", 40 CFR 268.40.

Underlying Hazardous Constituents

71-36-3	n-Butanol
74-87-3	Chloromethane
80-62-6	Methyl Methacrylate
100-41-4	Ethylbenzene
108-88-3	Toluene
108-94-1	Cyclohexanone
110-86-1	Pyridine
123-91-1	1,4-Dioxane
1330-20-7	Xylene

ATTACHMENT 3-3

TANK SAMPLING SYSTEM



TYPICAL FOR EACH OF EIGHT (8) WASTE STORAGE TANKS.

IBM
GENERAL TECNOLOGY DIVISION
ESSEX JUNCTION, VERMONT

WASTE STORAGE TANK TYPICAL PIPING & SAMPLING PROCEDURES

SCALE NOT TO SCALE	DRAWN BY:	APPROVED	DATE

DWG. NO.	BUILDING	FL	ZONE	TRADE	NUMBER

B13