

**Division of Air Resources
Permit Review Report**

**Permit ID: 7-3124-00575/00004
11/04/2025**

Facility Identification Data

Name: MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC
Address: 5171 RTE 31
Clay, NY 13041

Owner/Firm

Name: MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC
Address: 8000 S FEDERAL WAY
BOISE, ID 83716, USA
Owner Classification: Corporation/Partnership

Permit Contacts

Division of Environmental Permits:
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**Permit Description
Introduction**

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

Summary Description of Proposed Project

Micron New York Semiconductor Manufacturing LLC (Micron), a Delaware limited liability company (LLC) and wholly owned subsidiary of Micron Technology, Inc., is proposing to construct a semiconductor manufacturing campus in the Town of Clay, New York, at the White Pine Commerce Park (WPCP), an approximately 1,400-acre industrial park.

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The proposed project will be a major facility under the Title V air permitting Program, a major source of hazardous air pollutants (HAP), and a major new facility under both the Prevention of Significant Deterioration (PSD) and the Non-attainment New Source Review (NNSR) programs. The facility is a PSD major for Carbon Monoxide, Greenhouse Gases, Particulate Matter, Particulate Matter less than 10 microns (PM-10), and Particulate Matter less than 2.5 microns (PM-2.5). The facility is a NNSR major for Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NO_x). The emission sources at the facility will meet Best Available Control Technology (BACT) for PSD contaminants and Lowest Achievable Emission Rate (LAER) levels of control for NNSR contaminants. The emission sources at the facility will meet all federal and New York State air emission control regulations, most notably 6 NYCRR Part 212: Process Operations and 6 NYCRR Part 257-4: Air Quality Standards - Fluorides.

Attainment Status

MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC is located in the town of CLAY in the county of ONONDAGA.

The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

Criteria Pollutant	Attainment Status
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Particulate Matter (PM)	ATTAINMENT
Particulate Matter< 10μ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO ₂)	ATTAINMENT
Ozone*	TRANSPORT REGION (NON-ATTAINMENT)
Oxides of Nitrogen (NO _x)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT
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* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NO_x) which are ozone precursors.

** NO_x has a separate ambient air quality standard in addition to being an ozone precursor.

Facility Description:

The facility will consist of two semiconductor fabrication facilities (referred to as Fab 1 and Fab 2) and associated supporting facilities.

Fab 1 and Fab 2 will manufacture semiconductors and other devices on silicon-based wafers. To remain competitive and meet market demands, Micron will constantly adapt to changing product mix, architecture, and functionality. Both Fab 1 and Fab 2 will generally consist of the following operations which allow independent operation of either fab:

- A main production cleanroom space of approximately 600,000 square feet (sq. ft.) that includes a mix of process tools;
- A sub-fab area that prepares and stores raw materials (e.g., process gases, chemical mixtures/slurries in the liquid state, etc.) used in the fab buildings;
- Support buildings storing bulk raw materials and preparing raw materials that are transferred to the fab or sub-fab;

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- A central utilities building;
- Bulk gas storage yards;
- Ancillary support equipment including cooling towers and emergency generators; and,
- Wastewater treatment plant (WWTP) operations.

This permit is dedicated to the memory of Brian S. Noel, P.E.

Permit Structure and Description of Operations

The Title V permit for MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices
- process - any device or contrivance which may emit air contaminants that is not included in the above categories.

MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC is defined by the following emission unit(s):

Emission unit 1CMBOP - This emission unit consists of combustion equipment supporting Fab 1 operations. Equipment includes water bath vaporizers, boilers, and diesel and natural gas fired emergency generators.

Emission unit 1CMBOP is associated with the following emission points (EP):

1FP01, 1U001, 1U002, 1U003, 1U004, 1U005, 1U006, 1U007, 1U008, 1U009, 1U010, 1U011, 1U012, 1U013, 1U014, 1U015, 1U016, 1U017, 1U018, 1U019, 1U020, 1U021, 1U022, 1U023, 1U024, 1U025, 1U026, 1U027, 1U028, 1U029, 1U030, 1U031, 1U032, 1U033, 1U034, 1U035, 1U036, 1U037, 1U038, 1U039, 1U040, 1U041, 1U042, 1U043, 1U044, 1U045, 1U046, 1U047, 1U048, 1U049, 1U050, 1U051, 1U052, 1U053, 1U054, 1U055, 1U056, 1U057, 1U058, 1U059, 1U060, 1U061, 1U062, 1U063, 1U064, 1U065, 1U066, 1U067

Process: BL1 is located at Building CUB1 - Natural-gas fired boilers.

Process: DFP Diesel-fired backup fire pump engine.

Process: EM1 is located at Building CUB1 - Diesel-fired emergency generators.

Process: WV1 Water bath vaporizers fired by natural gas as a backup measure to vaporize liquid nitrogen.

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Emission unit 1FABOP - Process operations associated with semiconductor manufacturing in Fab 1. Includes process tools, process equipment exhaust conditioners (PEECs), point-of-use (POU) control devices, general fab exhaust, and centralized control devices - acid gas scrubbers, regenerative catalytic systems for greenhouse gas abatement, ionizing wet scrubbers capable of scrubbing nitrogen dioxide, caustic gas scrubbers, and rotor-concentrator thermal oxidizers.

Emission unit 1FABOP is associated with the following emission points (EP):

1F001, 1F002, 1F003, 1F004, 1F005, 1F006, 1F007, 1F008, 1F009, 1F010, 1F011, 1F012, 1F013, 1F014, 1F015, 1F016, 1F017, 1F018, 1F019, 1F020, 1F021, 1F022, 1F023, 1F024, 1F025, 1F026, 1F027, 1F028, 1F029, 1F030, 1F031, 1F032, 1F033, 1F034, 1F035, 1F036, 1F037, 1F038, 1F039, 1F040, 1F041, 1F042, 1F043, 1F044, 1F045, 1F046, 1F047, 1F048, 1F049, 1F050, 1F051, 1F052, 1F053, 1F054, 1F055, 1F056, 1F057, 1F058, 1F059, 1F060, 1F061, 1F062, 1F063, 1F064, 1F065, 1F066, 1F067, 1F068, 1F069, 1F070, 1F071, 1F072, 1F073, 1F074, 1F075, 1F076, 1F077, 1F078, 1F079, 1F080, 1F081, 1F082, 1F083, 1F084, 1F085, 1F086, 1F087, 1F088, 1F089, 1F090, 1F091, 1F092, 1F093, 1F094, 1F095, 1F096, 1F097, 1F098, 1F099, 1F100, 1F101, 1F102, 1F103, 1F104, 1F105, 1F106, 1F107, 1F108, 1F109, 1F110, 1F111, 1F112, 1F113, 1F114, 1F115, 1F116, 1F117, 1F118, 1F119, 1F120, 1F121, 1F122, 1F123, 1F124, 1F125, 1F126, 1F127, 1F128, 1F129, 1F130, 1F131, 1F132, 1F133, 1F134, 1F135, 1F136, 1F137, 1F138, 1F139, 1F140, 1F141, 1F142, 1F143, 1F144, 1F145, 1F146, 1F147, 1F148, 1F149, 1F150, 1F151, 1F152, 1F153, 1F154, 1F155, 1F156, 1F157, 1F158, 1F159, 1F160, 1F161, 1F162, 1F163, 1F164, 1F165, 1F166, 1F167, 1F168, 1F169, 1F170, 1F171, 1F172, 1F173, 1F174, 1F175, 1F176, 1F177, 1F178, 1F179, 1F180, 1F181, 1F182, 1F183, 1F184

Process: FA1 is located at Building FAB1 - Fab 1 semiconductor manufacturing exhausting to centralized acid gas scrubbers, including Ion Implant, Plasma Etch, and Wet Etch/Wet Clean processes, as well as associated safety and support equipment and control devices, including point-of-use (POU) control devices and regenerative catalytic systems (RCS).

Process: FB1 is located at Building FAB1 - Fab 1 semiconductor manufacturing processes exhausting to centralized caustic gas scrubbers, including Photolithography, Wet Etch/Wet Clean, and Chemical-Mechanical Planarization processes, as well as associated safety and support equipment.

Process: FC1 is located at Building FAB1 - Fab 1 semiconductor manufacturing processes exhausting to centralized ionizing wet scrubbers capable of scrubbing NO₂, including Thin Films/Diffusion Deposition processes as well as associated safety and support equipment.

Process: FG1 is located at Building FAB1 - General ventilation for Fab 1 including the cleanroom, which may include emissions of air contaminants not collected by other semiconductor manufacturing process exhaust systems.

Process: FS1 is located at Building FAB1 - Fab 1 semiconductor manufacturing processes exhausting to centralized rotor-concentrator thermal oxidizers, including Photolithography and Wet Etch/Wet clean processes, solvent waste storage, as well as associated safety and support equipment.

Emission unit 1ADMPR - Quality assurance laboratories in the administrative and "probe" buildings supporting Fab 1.

Emission unit 1ADMPR is associated with the following emission points (EP):

1A001, 1A002, 1A003, 1A004

Process: AA1 is located at Building PROBE1 - Laboratory operations exhausting to acid gas scrubbers in

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the Admin/Probe buildings supporting Fab 1.

Process: AS1 is located at Building PROBE1 - Laboratory operations exhausting solvent gases in the Admin/Probe buildings supporting Fab 1.

Emission unit 1FUGEM - Facility Fab 1 fugitive emissions including roadways and circuit breakers containing SF6.

Process: RF1 FAB 1 FUGITIVE EMISSIONS - ROADWAYS

Process: SF1 FAB 1 FUGITIVE EMISSIONS - SF6

Emission unit 1WWBIO - Wastewater treatment processes and material storage in the WWT and BIO buildings supporting Fab 1.

Emission unit 1WWBIO is associated with the following emission points (EP):

1B001, 1B002, 1W001, 1W002, 1W003, 1W004, 1W005, 1W006, 1W007, 1W008, 1W009, 1W010, 1W011, 1W012

Process: BG1 is located at Building BIO1 - Biological treatment processes and storage of raw materials supporting Fab 1.

Process: FE1 is located at Building BIO1 - Fugitive emissions related to Fab 1.

Process: SL1 Solid material storage silos supporting Fab 1.

Process: WA1 is located at Building WWT1 - Wastewater treatment operations and storage of acidic raw materials and waste materials exhausting to acid gas scrubbers in the WWT building supporting Fab 1.

Process: WB1 is located at Building WWT1 - Wastewater treatment operations and storage of basic raw materials exhausting to caustic gas scrubbers in the WWT building supporting Fab 1.

Process: WS1 is located at Building WWT1 - Wastewater treatment operations and storage of solvents exhausting to rotor-concentrator thermal oxidizers in the WWT building supporting Fab 1.

Emission unit 2ADMPR - Quality assurance laboratories in the administrative and "probe" buildings supporting Fab 2.

Emission unit 2ADMPR is associated with the following emission points (EP):

2A001, 2A002, 2A003, 2A004

Process: AA2 is located at Building PROBE2 - Laboratory operations exhausting solvent gases in the Admin/Probe buildings supporting Fab 2.

Process: AS2 is located at Building PROBE2 - Laboratory operations exhausting solvent gases in the Admin/Probe buildings supporting Fab 2.

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Emission unit 2CMBOP - This emission unit consists of combustion equipment supporting Fab 2 operations. Equipment includes natural gas-fired boilers, natural gas-fired water bath vaporizers (WBV), diesel-fired emergency generators, and a diesel-fired backup fire pump.

Emission unit 2CMBOP is associated with the following emission points (EP):

2U001, 2U002, 2U003, 2U004, 2U005, 2U006, 2U007, 2U008, 2U009, 2U010, 2U011, 2U012, 2U013, 2U014, 2U015, 2U016, 2U017, 2U018, 2U019, 2U020, 2U021, 2U022, 2U023, 2U024, 2U025, 2U026, 2U027, 2U028, 2U029, 2U030, 2U031, 2U032, 2U033, 2U034, 2U035, 2U036, 2U037, 2U038, 2U039, 2U040, 2U041, 2U042, 2U043, 2U044, 2U045, 2U046, 2U047, 2U048, 2U049, 2U050, 2U051, 2U052, 2U053, 2U054, 2U055, 2U056, 2U057, 2U058, 2U059, 2U060, 2U061, 2U062, 2U063, 2U064, 2U065
Process: BL2 is located at Building CUB2 - Natural-gas fired boilers.

Process: EM2 is located at Building CUB2 - Diesel-fired emergency generators.

Process: WV2 Water bath vaporizers fired by natural gas as a backup measure to vaporize liquid nitrogen.

Emission unit 2FABOP - Process operations associated with semiconductor manufacturing in Fab 2. Includes process tools, process equipment exhaust conditioners (PEECs), point-of-use (POU) control devices, general fab exhaust, and centralized control devices - acid gas scrubbers, regenerative catalytic systems for greenhouse gas abatement, ionizing wet scrubbers capable of scrubbing nitrogen dioxide, caustic gas scrubbers, and rotor-concentrator thermal oxidizers.

Emission unit 2FABOP is associated with the following emission points (EP):

2F001, 2F002, 2F003, 2F004, 2F005, 2F006, 2F007, 2F008, 2F009, 2F010, 2F011, 2F012, 2F013, 2F014, 2F015, 2F016, 2F017, 2F018, 2F019, 2F020, 2F021, 2F022, 2F023, 2F024, 2F025, 2F026, 2F027, 2F028, 2F029, 2F030, 2F031, 2F032, 2F033, 2F034, 2F035, 2F036, 2F037, 2F038, 2F039, 2F040, 2F041, 2F042, 2F043, 2F044, 2F045, 2F046, 2F047, 2F048, 2F049, 2F050, 2F051, 2F052, 2F053, 2F054, 2F055, 2F056, 2F057, 2F058, 2F059, 2F060, 2F061, 2F062, 2F063, 2F064, 2F065, 2F066, 2F067, 2F068, 2F069, 2F070, 2F071, 2F072, 2F073, 2F074, 2F075, 2F076, 2F077, 2F078, 2F079, 2F080, 2F081, 2F082, 2F083, 2F084, 2F085, 2F086, 2F087, 2F088, 2F089, 2F090, 2F091, 2F092, 2F093, 2F094, 2F095, 2F096, 2F097, 2F098, 2F099, 2F100, 2F101, 2F102, 2F103, 2F104, 2F105, 2F106, 2F107, 2F108, 2F109, 2F110, 2F111, 2F112, 2F113, 2F114, 2F115, 2F116, 2F117, 2F118, 2F119, 2F120, 2F121, 2F122, 2F123, 2F124, 2F125, 2F126, 2F127, 2F128, 2F129, 2F130, 2F131, 2F132, 2F133, 2F134, 2F135, 2F136, 2F137, 2F138, 2F139, 2F140, 2F141, 2F142, 2F143, 2F144, 2F145, 2F146, 2F147, 2F148, 2F149, 2F150, 2F151, 2F152, 2F153, 2F154, 2F155, 2F156, 2F157, 2F158, 2F159, 2F160, 2F161, 2F162, 2F163, 2F164, 2F165, 2F166, 2F167, 2F168, 2F169, 2F170, 2F171, 2F172, 2F173, 2F174, 2F175, 2F176, 2F177, 2F178, 2F179, 2F180, 2F181, 2F182, 2F183, 2F184

Process: FA2 is located at Building FAB2 - Fab 2 semiconductor manufacturing process exhausting to centralized acid gas scrubbers, including Ion Implant, Plasma Etch, and Wet Etch/Wet Clean processes, as well as associated safety and support equipment and control devices, including point-of-use (POU) control devices and regenerative catalytic systems (RCS).

Process: FB2 is located at Building FAB2 - Fab 2 semiconductor manufacturing processes exhausting to centralized caustic gas scrubbers, including Photolithography, Wet Etch/Wet Clean, and Chemical-Mechanical Planarization processes, as well as associated safety and support equipment.

Process: FC2 is located at Building FAB2 - Fab 2 semiconductor manufacturing processes exhausting to centralized ionizing wet scrubbers capable of scrubbing NO₂, including Thin Films/Diffusion Deposition processes as well as associated safety and support equipment.

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Process: FG2 is located at Building FAB2 - General ventilation for Fab 1 including the cleanroom, which may include emissions of air contaminants not collected by other semiconductor manufacturing process exhaust systems.

Process: FS2 is located at Building FAB2 - Fab 2 semiconductor manufacturing processes exhausting to centralized rotor-concentrator thermal oxidizers, including Photolithography and Wet Etch/Wet Clean processes, solvent waste storage, as well as associated safety and support equipment.

Emission unit 2FUGEM - Facility Fab 2 fugitive emissions including roadways and circuit breakers containing SF6.

Process: RF2 FAB 2 FUGITIVE EMISSIONS - ROADWAYS

Process: SF2 FAB 2 FUGITIVE EMISSIONS - SF6

Emission unit 2HPMCU - Storage, waste treatment, and cooling towers in the hazardous process material (HPM) buildings and central utilities building (CUB2) supporting Fab 2

Emission unit 2HPMCU is associated with the following emission points (EP):

2C001, 2C002, 2C003, 2C004, 2C005, 2C006, 2C007, 2C008, 2C009, 2C010, 2C011, 2C012, 2C013, 2C014, 2C015, 2C016, 2C017, 2C018, 2C019, 2C020, 2C021, 2C022, 2C023, 2C024, 2C025, 2C026, 2C027, 2C028, 2C029, 2C030, 2C031, 2C032, 2C033, 2C034, 2C035, 2C036, 2C037, 2C038, 2C039, 2C040, 2C041, 2C042, 2C043, 2C044, 2C045, 2C046, 2C047, 2C048, 2C049, 2C050, 2C051, 2C052, 2C053, 2C054, 2C055, 2C056, 2C057, 2C058, 2C060, 2C061, 2C062, 2C063, 2C064, 2C065, 2C066, 2C067, 2C068, 2C069, 2C070, 2C071, 2C072, 2C073, 2C074, 2C075, 2C076, 2C077, 2C078, 2C079, 2C080, 2C081, 2C082, 2C083, 2C084, 2C085, 2C086, 2C087, 2C088, 2C089, 2C090, 2C091, 2C092, 2C093, 2C094, 2C095, 2C096, 2C097, 2C098, 2C099, 2C100, 2C101, 2C102, 2C103, 2C104, 2C105, 2C106, 2C107, 2C108, 2C109, 2D001, 2D002, 2D003, 2D004, 2G001, 2G002, 2G003, 2G004, 2G005, 2G006, 2H001, 2H002, 2H003, 2H004, 2H005, 2H006, 2H007, 2H008, 2H009, 2H010, 2H011, 2H012, 2H013, 2H014, 2H015, 2H016, 2H017, 2H018, 2H019, 2H020, 2H021, 2H022, 2H023, 2H024, 2H025, 2H026, 2H027, 2H028, 2H029, 2H030, 2H031, 2H032

Process: CA2 is located at Building CUB2 - Storage of acidic raw materials exhausting to acid gas scrubbers in the CUB building supporting Fab 2.

Process: CT2 is located at Building CUB2 - Cooling towers supporting Fab 2.

Process: DT2 Storage of diesel fuel to support Fab 2 engines.

Process: FU2 is located at Building CUB2 - Fugitive emissions related to Fab 2.

Process: HA3 is located at Building HPM2-S - Storage of acidic raw materials and waste materials exhausting to acid gas scrubbers in the HPM2-S building supporting Fab 2.

Process: HA4 is located at Building HPM2-N - Storage of acidic raw materials and waste materials exhausting to acid gas scrubbers in the HPM2-N building supporting Fab 2.

Process: HB3 is located at Building HPM2-S - Storage of basic raw materials exhausting to caustic gas

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scrubbers in the HPM2-S building supporting Fab 2.

Process: HB4 is located at Building HPM2-N - Storage of basic raw materials exhausting to caustic gas scrubbers in the HPM2-N building supporting Fab 2.

Process: HS3 is located at Building HPM2-S - Storage of solvents in the HPM2-S building supporting Fab 2.

Process: HS4 is located at Building HPM2-N - Storage of solvents in the HPM2-N building supporting Fab 2.

Emission unit 2WWBIO - Wastewater treatment processes and material storage in the WWT and BIO buildings supporting Fab 2.

Emission unit 2WWBIO is associated with the following emission points (EP):

2B001, 2B002, 2W001, 2W002, 2W003, 2W004, 2W005, 2W006, 2W007, 2W008, 2W009, 2W010, 2W011, 2W012

Process: BG2 is located at Building BIO2 - Biological treatment processes and storage of raw materials supporting Fab 2.

Process: FE2 is located at Building BIO2 - Fugitive emissions related to Fab 2.

Process: SL2 Solid material storage silos supporting Fab 2.

Process: WA2 is located at Building WWT2 - Wastewater treatment operations and storage of acidic raw materials and waste minerals exhausting to acid gas scrubbers in the WWT building supporting Fab 2.

Process: WB2 is located at Building WWT2 - Wastewater treatment operations and storage of basic raw materials exhausting to caustic gas scrubbers in the WWT building supporting Fab 2.

Process: WS2 is located at Building WWT2 - Wastewater treatment operations and storage of solvents exhausting to rotor-concentrator thermal oxidizers in the WWT building supporting Fab 2.

Emission unit 1HPMCU - Storage, waste treatment, and cooling towers in the hazardous process material (HPM) buildings and central utilities building (CUB1) supporting Fab 1

Emission unit 1HPMCU is associated with the following emission points (EP):

1C001, 1C002, 1C003, 1C004, 1C005, 1C006, 1C007, 1C008, 1C009, 1C010, 1C011, 1C012, 1C013, 1C014, 1C015, 1C016, 1C017, 1C018, 1C019, 1C020, 1C021, 1C022, 1C023, 1C024, 1C025, 1C026, 1C027, 1C028, 1C029, 1C030, 1C031, 1C032, 1C033, 1C034, 1C035, 1C036, 1C037, 1C038, 1C039, 1C040, 1C041, 1C042, 1C043, 1C044, 1C045, 1C046, 1C047, 1C048, 1C049, 1C050, 1C051, 1C052, 1C053, 1C054, 1C055, 1C056, 1C057, 1C058, 1C059, 1C060, 1C061, 1C062, 1C063, 1C064, 1C065, 1C066, 1C067, 1C068, 1C069, 1C070, 1C071, 1C072, 1C073, 1C074, 1C075, 1C076, 1C077, 1C078, 1C079, 1C080, 1C081, 1C082, 1C083, 1C084, 1C085, 1C086, 1C087, 1C088, 1C089, 1C090, 1C091, 1C092, 1C093, 1C094, 1C095, 1C096, 1C097, 1C098, 1C099, 1C100, 1C101, 1C102, 1C103, 1C104, 1C105, 1C106, 1C107, 1C108, 1C109, 1D001, 1D002, 1D003, 1D004, 1G001, 1G002, 1G003, 1G004, 1G005, 1G006, 1H001, 1H002, 1H003, 1H004, 1H005, 1H006, 1H007, 1H008, 1H009, 1H010, 1H011, 1H012, 1H013, 1H014, 1H015, 1H016, 1H017, 1H018, 1H019, 1H020, 1H021, 1H022, 1H023, 1H024,

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1H025, 1H026, 1H027, 1H028, 1H029, 1H030, 1H031, 1H032

Process: CA1 is located at Building CUB1 - Storage of acidic raw materials exhausting to acid gas scrubbers in the CUB building supporting Fab 1.

Process: CT1 is located at Building CUB1 - Cooling towers supporting Fab 1.

Process: DT1 Storage of diesel fuel to support Fab 1 engines.

Process: FU1 is located at Building CUB1 - Fugitive emissions related to Fab 1.

Process: HA1 is located at Building HPM1-S - Storage of acidic raw materials and waste materials exhausting to acid gas scrubbers in the HPM1-S building supporting Fab 1.

Process: HA2 is located at Building HPM1-N - Storage of acidic raw materials and waste materials exhausting to acid gas scrubbers in the HPM1-N building supporting Fab 1.

Process: HB1 is located at Building HPM1-S - Storage of basic raw materials exhausting to caustic gas scrubbers in the HPM1-S building supporting Fab 1.

Process: HB2 is located at Building HPM1-N - Storage of basic raw materials exhausting to caustic gas scrubbers in the HPM1-N buildings supporting Fab 1.

Process: HS1 is located at Building HPM1-S - Storage of solvents in the HPM1-S buildings supporting Fab 1.

Process: HS2 is located at Building HPM1-N - Storage of solvents in the HPM1-N building supporting Fab 1.

Title V/Major Source Status

MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC is subject to Title V requirements. This determination is based on the following information:

The proposed project will be a major facility under the Title V air permitting Program, a major source of hazardous air pollutants (HAP), and a major new facility under both the Prevention of Significant Deterioration (PSD) and the Non-attainment New Source Review (NNSR) programs. The facility is a PSD major for Carbon Monoxide, Greenhouse Gases, Particulate Matter less than 10 microns (PM-10), and Particulate Matter less than 2.5 microns (PM-2.5). The facility is also a NNSR major for Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NO_x).

Program Applicability

The following chart summarizes the applicability of MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability
PSD	YES
NSR (non-attainment)	YES
NESHAP (40 CFR Part 61)	NO

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NESHAP (MACT - 40 CFR Part 63)	YES
NSPS	YES
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

NOTES:

PSD Prevention of Significant Deterioration (40 CFR 52.21, 6 NYCRR 231-7, 231-8) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NSR New Source Review (6 NYCRR 231-5, 231-6) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NESHAP National Emission Standards for Hazardous Air Pollutants (40 CFR 61, 6 NYCRR 200.10) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

MACT Maximum Achievable Control Technology (40 CFR 63, 6 NYCRR 200.10) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

NSPS New Source Performance Standards (40 CFR 60, 6 NYCRR 200.10) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

Title IV Acid Rain Control Program (40 CFR 72 thru 78, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

RACT Reasonably Available Control Technology (6 NYCRR Parts 212-3, 220-1.6, 220-1.7, 220-2.3, 220-2.4, 226, 227-2, 228, 229, 230, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which

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specifically regulate VOC and NOx emissions.

SIP State Implementation Plan (40 CFR 52, Subpart HH, 6 NYCRR 200.10) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

Compliance Status

Facility is in compliance with all requirements.

SIC Codes

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

SIC Code

Description

3674

SEMICONDUCTORS & RELATED DEVICES

SCC Codes

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code

Description

1-02-006-02

EXTERNAL COMBUSTION BOILERS - INDUSTRIAL
INDUSTRIAL BOILER - NATURAL GAS
10-100 MMBtu/Hr

2-01-001-02

INTERNAL COMBUSTION ENGINES - ELECTRIC
GENERATION
ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE
- DISTILLATE OIL (DIESEL)
Reciprocating

2-02-001-02

INTERNAL COMBUSTION ENGINES - INDUSTRIAL
INDUSTRIAL INTERNAL COMBUSTION ENGINE -
DISTILLATE OIL (DIESEL)
Reciprocating

3-05-016-13

MINERAL PRODUCTS
MINERAL PRODUCTS - LIME MANUFACTURE
Lime Silos

3-13-065-00

ELECTRICAL EQUIPMENT
ELECTRICAL EQUIPMENT - SEMICONDUCTOR
MANUFACTURING

3-13-065-99

INTEGRATED CIRCUIT MANUFACTURING - GENERAL
ELECTRICAL EQUIPMENT
ELECTRICAL EQUIPMENT - SEMICONDUCTOR
MANUFACTURING

3-85-001-10

SEMICONDUCTOR MFG-MISCELLANEOUS OPERATIONS-
GENERAL-SPECIFY MATERIAL
COOLING TOWER

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4-04-001-21	COOLING TOWER - PROCESS COOLING OTHER NOT SPECIFIED BULK TERMINALS/PLANTS BULK TERMINALS FIXED ROOF TANKS (TANK DIA INDEPENDANT) - DIESEL FUEL-STANDING LOSS
4-07-146-97	ORGANIC CHEMICAL STORAGE ORGANIC CHEMICAL STORAGE - FIXED ROOF TANKS - MISCELLANEOUS FIXED ROOF TANKS:MISCELLANEOUS:SPECIFY IN COMMENTS:BREATHING LOSS

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE for each contaminant that is displayed represents the facility-wide PTE in tons per year (tpy) or pounds per year (lbs/yr). In some instances the PTE represents a federally enforceable emissions cap or limitation for that contaminant. The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant	PTE lbs/yr	PTE tons/yr	Actual lbs/yr	Actual tons/yr
020654-88-0	[11B]BORON TRIFLUORIDE	0.00001			
000077-92-9	1,2,3-PROPANETRICARBOXYLIC ACID,2-HYDROXY		166.5		
000107-21-1	1,2-ETHANEDIOL		173.5		
000096-27-5	1,2-PROPANEDIOL, 3-MERCAPTO-C3H8O2S		1476		
017464-88-9	1,3,4,6-TETRAKIS(METHOXYMETHYL)GLUCURIL	0.05			
000542-92-7	1,3-CYCLOPENTADIENE	30			
000123-91-1	1,4-DIETHYLENE DIOXIDE	0.19			
002634-33-5	192 BENZISOTHIAZOLIN-3-ONE	0.0041			
000288-88-0	1H-1,2,4-TRIAZOLE	7299			
002592-95-2	1H-	3.02			

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	BENZOTRIAZOLE	
	,1-HYDROXY	
000872-50-4	1-METHYL-2- PYRROLIDONE	5017
069991-67-9	1-PROPENE- HEXAFLURO, OXIDIZED POLYMER	2011.9
000141-43-5	2- AMINOETHANOL	71.3
000110-16-7	2-BUTENEDIOIC ACID (Z)- C4H4O4	8.17
000110-43-0	2-HEPATANONE	14.2
001589-47-5	2-METHOXY-1- PROPANOL	0.0492
070657-70-4	2-METHOXY-1- PROPANOL ACETATE	717.1
002682-20-4	2-METHYL-3(2H)- ISOTHIAZOLONE	5.19
000108-11-2	2-PENTANOL, 4- METHYL-	788
001569-02-4	2-PROPANOL, 1- ETHOXY	0.00001
000107-98-2	2-PROPANOL, 1- METHOXY	214.9
000108-65-6	2-PROPANOL, 1- METHOXY-, ACETATE	87410
000919-30-2	3(TRIETHOXSIL YL)-1- PROPANAMINE	0.00001
056539-66-3	3-METHOXY-3- METHYLBUTAN OL	4295
014309-57-0	3-NONEN-2-ONE	2.99
026172-55-4	5-CHLORO-2- METHYL-4- ISOTHIAZOLIN-3- ONE	20.6
000064-19-7	ACETIC ACID	419.4
000123-86-4	ACETIC ACID, BUTYL ESTER	10682
000074-86-2	ACETYLENE	375.2
001344-28-1	ALUMINUM OXIDE	420.6
007664-41-7	AMMONIA	109231
001341-49-7	AMMONIUM BIFLUORIDE (NH4)(HF2)	0.00001
012125-01-8	AMMONIUM FLUORIDE	0.00001
007631-86-9	AMORPHOUS SILICA	52185
000100-66-3	ANISOLE	0.00001
007784-42-1	ARSINE	4.15
138529-81-4	BIS(CYCLOHEXY LSULFONY) DIAZOMETHANE	1.68
001303-86-2	BORIC OXIDE	1134
007726-95-6	BROMINE	26103
000142-96-1	BUTYL ETHER	630.8
0NY750-00-0	CARBON DIOXIDE	2180036000

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	EQUIVALENTS	
000630-08-0	CARBON	2819978.34
	MONOXIDE	
000108-32-7	CARBONIC ACID,	0.00001
	CYCLIC	
	PROPYLENE	
	ESTER	
000463-58-1	CARBONYL	14.4
	SULFIDE	
007782-50-5	CHLORINE	791.8
007790-91-2	CHLORINE	0.00001
	FLUORIDE CLF3	
001319-77-3	CRESYLIC ACID	0.19
000108-94-1	CYCLOHEXANO	1565
	NE	
000120-92-3	CYCLOPENTANO	0.98
	NE	
019287-45-7	DIBORANE	1.97
000075-10-5	DIFLUOROMETH	86.4
	ANE	
000096-48-0	DIHYDRO 2(3H)-	82.6
	FURANONE	
211919-60-7	ETHANAMINE, 2-	2.32
	(METHOXYMETH	
	OXY)-N,N-BIS[2-	
	(METHOXYMETH	
	OXY)ETHYL]-	
000074-84-0	ETHANE	186.9
000076-16-4	ETHANE,	796.2
	HEXAFLUORO-	
	FREON 116	
000144-62-7	ETHANEDIOIC	1351
	ACID	
000929-06-6	ETHANOL, 2-(2-	65.1
	AMINOETHOXY)	
000064-17-5	ETHYL	1691
	ALCOHOL	
	(ETHANOL)	
000074-85-1	ETHYLENE	0.00001
068188-85-2	FLUORIDES	4963.5
007782-41-4	FLUORINE	3488
000050-00-0	FORMALDEHYDE	14.8
000068-12-2	FORMAMIDE,	0.00001
	N,N-DIMETHYL	
001310-53-8	GERMANIUM (IV)	34.1
	OXIDE	
062566-74-9	GERMANIUM	0.00001
	TETRAFLUORIDE	
000056-40-6	GLYCINE	588.3
000142-73-4	GLYCINE, N-	4.08
	(CARBOXYMETH	
	YL)-	
012055-23-1	HAFNIUM OXIDE	383.4
000685-63-2	HEXAFLUORO-	26.5
	1,3-BUTADIENE	
000999-97-3	HEXAMETHYLDI	1318
	SILAZANE	
010035-10-6	HYDROGEN	528.4
	BROMIDE	
007647-01-0	HYDROGEN	1462
	CHLORIDE	
007664-39-3	HYDROGEN	24423
	FLUORIDE	
007722-84-1	HYDROGEN	17121
	PEROXIDE	

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007783-06-4	HYDROGEN SULFIDE	186.4
007681-52-9	HYPOCHLOROUS ACID, SODIUM SALT	26.1
0NY515-00-0	INORGANIC HAPS	26703.762
000067-63-0	ISOPROPYL ALCOHOL	253314
007439-92-1	LEAD	3.6
000075-59-2	METHANAMINIU M N,N,N- TRIMETHYL- HYDROXIDE	963.8
000074-82-8	METHANE	1410078
000067-56-1	METHYL ALCOHOL	575.9
000593-53-3	METHYL FLUORIDE	65.5
000121-44-8	N,N-DIETHYL ETHANAMINE	9.82
064742-94-5	NAPHTHA HEAVY AROMATIC	7106
007697-37-2	NITRIC ACID	26902
007783-54-2	NITROGEN TRIFLUORIDE	3048
010024-97-2	NITROUS OXIDE	327782
000115-25-3	OCTAFLUOROCY CLOBUTANE	90.1
0NY514-00-0	ORGANIC HAPS	20712
0NY210-00-0	OXIDES OF NITROGEN	714466.3
010028-15-6	OZONE	1000
0NY075-00-0	PARTICULATES	155116.7
000107-41-5	PENTANEDIOL,M ETHYL	0.00001
086508-42-1	PERFLUORO N- ALKYLMORPHOL INE	15588.8
000150-76-5	PHENOL, 4- METHOXY-	6.71
007803-51-2	PHOSPHINE	8.12
007664-38-2	PHOSPHORIC ACID	458.9
001314-56-3	PHOSPHORUS PENTOXIDE	2028
0NY075-00-5	PM-10	137396.6
0NY075-02-5	PM-2.5	111880.7
009036-19-5	POLY(OXY- 1,2ETH ANEDIYL),A- (1,1,3,3- TETRAMET H(C2H4O)NC14H2	0.000186
001310-58-3	POTASSIUM HYDROXIDE	11.9
000074-98-6	PROPANE	2.32
000687-47-8	PROPANOIC ACID, 2 HYDROXY-, ETHYLE ESTER	215.7
000594-61-6	PROPANOIC ACID, 2- HYDROXY-2-	0.0334

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002110-78-3	METHYL- PROPANOIC ACID, 2- HYDROXY-2- METHYL-, METHYL ESTER	37
000097-64-3	PROPANOIC ACID, 2-METHYL- , 1,2-ETHANEDIYL ESTER	190.9
052125-53-8	PROPANOL, 1(OR 2)-ETHOXY	111.7
000115-07-1	PROPYLENE	70.2
000110-86-1	PYRIDINE	2.27
007446-09-5	SULFUR DIOXIDE	43443
002551-62-4	SULFUR HEXAFLUORIDE	59.7
007664-93-9	SULFURIC ACID	6718.93
000075-73-0	TETRAFLUORO METHANE	114405
009014-85-1	TETRAMETHYL DECYNDIOL	17.7
000373-68-2	TETRAMETHYLA MMONIUM FLUORIDE TETRAHYDRATE	1475
013463-67-7	TITANIUM DIOXIDE	2318
0NY100-00-0	TOTAL HAP	47415.4
003458-72-8	TRIAMMONIUM CITRATE	83.3
000075-46-7	TRIFLUOROMET HANE	503.4
007783-82-6	TUNGSTEN HEXAFLUORIDE	0.00001
001314-35-8	TUNGSTEN OXIDE (WO ₃) C.I.77901	838.2
0NY998-00-0	VOC	411433.5
001314-23-4	ZIRCONIUM OXIDE	783.8

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b)

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

Item B: Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.2(a)(4)

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

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- Item C: Certification by a Responsible Official - 6 NYCRR Part 201-6.2(d)(12)**
Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- Item D: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.4(a)(2)**
The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- Item E: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.4(a)(3)**
This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- Item F: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.4(a)(5)**
It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.
- Item G: Property Rights - 6 NYCRR 201-6.4(a)(6)**
This permit does not convey any property rights of any sort or any exclusive privilege.
- Item H: Severability - 6 NYCRR Part 201-6.4(a)(9)**
If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.
- Item I: Permit Shield - 6 NYCRR Part 201-6.4(g)**
All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:
- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution

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presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;

- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item J: Reopening for Cause - 6 NYCRR Part 201-6.4(i)

This Title V permit shall be reopened and revised under any of the following circumstances:

- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.
- ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.
- iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

Item K: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official

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Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

Item L: Federally Enforceable Requirements - 40 CFR 70.6(b)

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
- (2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;
- (3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- (4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement. item_02

Item B: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such

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person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
--			
FACILITY	ECL 19-0301	161	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 60-IIII	101	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
FACILITY	40CFR 63-A.10 (b)	105	Part 63 General Recordkeeping Requirements
FACILITY	40CFR 63-A.6 (e) (1)	102	General Provisions - Operations and Maintenance Requirements During Startup, Shutdown, and Malfunction
FACILITY	40CFR 63-A.6 (e) (3)	103	Startup, Shutdown and Malfunction Plan
FACILITY	40CFR 63-A.8 (c)	104	Operation and maintenance of continuous monitoring systems
FACILITY	40CFR 63-BBBBB	117, 118, 119	Semiconductor Manufacturing NESHP
FACILITY	40CFR 63-BBBBB.7183 (a) (	120	Compliance Date - New Affected Sources After May 22, 2003
FACILITY	40CFR 63-BBBBB.7184	121	Emission limitations, operating limits, and work practice standards
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FACILITY	40CFR 63-BBBBB.7184 (e)	128	Applicable Work Practice Standards and Operating Limits
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FACILITY	40CFR 63-SS.994(a)	107	Halogen scrubber and other halogen reduction device equipment and operating requirements.
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1-FABOP/-/FA1	40CFR 63-SS.996	160	GMACT - General monitoring requirements for control and recovery devices
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FACILITY	6NYCRR 201-1.2 (a)	24	Permitting
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FACILITY	6NYCRR 202-2.4 (a) (3)	39	Emission statement methods and procedures
FACILITY	6NYCRR 202-2.5	7	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 211.1	164	General Prohibitions - air pollution prohibited
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FACILITY	6NYCRR 212-1.5 (d)	41	BACT or T-BACT for process emission sources
FACILITY	6NYCRR 212-1.5 (g)	42	Maintain all process emission sources, including the associated air pollution control and monitoring equipment
FACILITY	6NYCRR 212-1.6 (a)	43	Limiting of Opacity
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FACILITY	6NYCRR 212-2.1 (a)	165, 166	HTACs applicable to Table 212-2.3 Table 4
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FACILITY	6NYCRR 229.3 (e) (2) (iv)	51	Volatile organic liquid storage tanks
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FACILITY	6NYCRR 257-4.2	167	Standards Fluorides
FACILITY	6NYCRR 257-5.3	168	Hydrogen Sulfide Standards

Applicability Discussion:

Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

ECL 19-0301

This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

6 NYCRR 200.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6 NYCRR 200.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6 NYCRR 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.

6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR 201-3.3 (a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a

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period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-6

This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.4 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.4 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)

This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.4 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)

This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.4 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

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6 NYCRR 201-6.4 (d) (4)

This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6 NYCRR 201-6.4 (e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 202-1.1

This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

6 NYCRR 202-2.5

This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

6 NYCRR 211.2

This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

40 CFR Part 68

This Part lists the regulated substances and their applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances.

40 CFR Part 82, Subpart F

Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act Amendments of 1990. This subpart applies to any person servicing, maintaining, or repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

Facility Specific Requirements

In addition to Title V, MICRON NEW YORK SEMICONDUCTOR MANUFACTURING LLC has been determined to be subject to the following regulations:

40 CFR 63.10 (b)

This condition states the general recordkeeping requirements for 40 CFR Part 63 regulations.

40 CFR 63.6 (e) (1)

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This citation states the general requirement to operate and maintain equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions.

40 CFR 63.6 (e) (3)

Paragraph 63.6(e)(3) requires a startup, shutdown, and malfunction (SSM) plan for MACT-affected sources and that the plan be followed.

40 CFR 63.7183 (a) (2)

This citation states that the facility owner or operator must comply with the emission standards in 40 CFR Part 63 NESHAP Subpart BBBBBB upon startup.

40 CFR 63.7184

This section specifies compliance options for process vents and tanks subject to the requirements of 40 CFR 63 Subpart BBBBBB.

40 CFR 63.7184 (b)

This citation states the organic HAP emission limits for process vents.

40 CFR 63.7184 (c)

This citation states the inorganic HAP emission limits for process vents.

40 CFR 63.7184 (d)

The facility must reduce the emissions of inorganic HAP from each storage tank by 95 percent by weight or reduce or maintain the concentration of emitted inorganic HAP from the process vent to less than or equal to 0.42 ppmv.

40 CFR 63.7184 (e)

The facility must comply with the applicable work practice standards and operating limits contained in § 63.982(a)(1) and (2). The closed vent system inspection requirements of § 63.983(c) do not apply.

40 CFR 63.7184 (f)

This regulation limits the emissions of hazardous air pollutants, from combined process vents, to less than 14.22 parts per million (volume). These limitations can be met by venting emissions from the process

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vent through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).

40 CFR 63.7185 (c)

The facility must develop a written startup, shutdown, and malfunction plan.

40 CFR 63.7185 (d)

The facility must submit notifications, submit compliance reports, and maintain records as required.

40 CFR 63.7186

For each process vent or storage tank vent emission limitation in § 63.7184 for which initial compliance is demonstrated by meeting a percent by weight HAP emissions reduction, or a HAP concentration limitation, the facility must conduct performance tests or an initial compliance demonstration within 180 days after startup of the affected source.

40 CFR 63.7187 (a)

The facility must conduct various performance tests under maximum operating conditions or HAP emissions potential for process vents and storage tanks.

40 CFR 63.7187 (e)

The facility must develop a monitoring plan for each monitoring system.

40 CFR 63.7187 (g)

The facility must conduct performance evaluation of each Continuing Monitoring System (CMS).

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40 CFR 63.7187 (i) (4)

The facility must demonstrate that a control device meets the required percent by weight inorganic HAP emission reduction limitation. The design evaluation must address the composition of the inorganic HAP concentration of the vent stream entering the control device.

40 CFR 63.7188 (b)

The facility must comply with the emission limitations of § 63.7184 by venting the emissions of a semiconductor process vent through a closed vent system to a control device. The facility has the choice of two different compliance demonstration strategies. One compliance option is the facility must meet the monitoring, installation, operation, and maintenance requirements specified for closed vent systems and applicable control devices in §§ 63.983 through 63.995. A second compliance option the facility may utilize is the design evaluation procedure in § 63.7187(i). Information from the design evaluation must be used to establish the operating parameter level for monitoring of the control device.

40 CFR 63.7189 (c)

The facility must submit an initial notification of the start-up of an affected source not later than 120 calendar days after they become subject to 40 CFR 63 Subpart BBBBBB.

40 CFR 63.7189 (d)

If the facility is required to conduct a performance test, a notification of intent to conduct a performance test must be submitted at least 60 calendar days before the performance test is scheduled to begin as required in § 63.7(b)(1).

40 CFR 63.7190 (a) (1)

This citation states the requirements for periodic compliance reports.

40 CFR 63.7190 (a) (2)

This citation states the requirements for immediate startup, shutdown, and malfunction reports.

40 CFR 63.7190 (b)

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The facility must follow the specified compliance reporting schedule.

40 CFR 63.7190 (c)

The facility must include the specified information in its compliance report submissions.

40 CFR 63.7190 (d)

The facility must report, as specified, deviations and the total operating time for affected sources that do not utilize a CMS to comply with emission limitations.

40 CFR 63.7190 (e)

The facility must report, as specified, deviations for affected sources that utilize a CMS to demonstrate compliance with emission limitations.

40 CFR 63.7191 (b)

The facility must keep records detailing the operation of each CMS.

40 CFR 63.7192 (b)

The facility must keep records for 5 years following the record's creation.

40 CFR 63.7192 (c)

The facility must keep records for 5 years following the record's creation. The records must be kept onsite for at least the first 2 years and the remainder of time they may be kept offsite.

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40 CFR 63.7515 (d)

This regulation requires facilities with industrial, commercial or institutional boilers to tune-up their boilers on an annual, biennial, or every five years basis.

40 CFR 63.7545 (a)

This section outlines the notification requirements for owners and operators of boilers and process heaters subject to the requirements of 40 CFR 63 Subpart DDDDD.

40 CFR 63.7545 (f)

This condition states the notification requirements for owners and operators that plan to switch from gas 1 category fuels to another fuel

40 CFR 63.7550 (b)

This condition states when reports must be submitted.

40 CFR 63.8 (c)

This citation states the requirements for the operation and maintenance of continuous monitoring systems.

40 CFR 63.983 (a)

This citation states the closed vent system equipment and operating requirements.

40 CFR 63.983 (b)

This citation states the closed vent system inspection and monitoring requirements.

40 CFR 63.983 (d)

This citation states the closed vent system leak repair provisions.

40 CFR 63.988

This citation states the requirements for incinerators, boilers, and process heaters.

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40 CFR 63.994 (a)

The facility must reduce the overall emissions of hydrogen halides and halogens by the specified control device performance level. These control devices must be operated at all times when emissions are vented to them.

40 CFR 63.994 (b)

This citation states the halogen scrubber and other halogen reduction device performance test requirements.

40 CFR 63.994 (c)

This citation states the monitoring requirements for halogen scrubbers and other reduction devices subject to Subpart SS.

40 CFR 63.995 (a)

If the facility uses a control device other than one listed in §§ 63.985 through 63.990 to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement. The facility must meet the requirements of § 63.995 and these control devices must be operated at all times when emissions are vented to them.

40 CFR 63.995 (b)

If the facility uses a control device other than one listed in §§ 63.985 through 63.990 to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement. The facility must conduct an initial performance test on the control device and submit the test report as specified.

40 CFR 63.995 (c)

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If the facility uses a control device other than those listed in 40 CFR Part 63 Subpart SS, the facility must submit a description of planned monitoring, recordkeeping and reporting procedures as specified.

40 CFR 63.996

This citation states the general monitoring requirements for control and recovery devices.

40 CFR 63.997

This citation states performance test and compliance assessment requirements for control devices.

40 CFR 63.998

This citation states the recordkeeping requirements for Subpart SS.

40 CFR 63.999

This citation states the notification and reporting requirements for Subpart SS.

40 CFR Part 60, Subpart IIII

Subpart IIII applies to new and reconstructed compression ignition reciprocating internal combustion engines. Sources subject to Subpart IIII must comply with emission standards for hydrocarbons, nitrogen oxides, carbon monoxide, and particulate matter.

40 CFR Part 63, Subpart BBBBB

Subpart BBBBB applies to semiconductor manufacturing processes at major sources of HAP. Sources subject to Subpart BBBBB must comply with emission limits for organic and inorganic HAP, work practice standards, and operating limits.

40 CFR Part 63, Subpart ZZZZ

Subpart ZZZZ applies to reciprocating internal combustion engines. Sources subject to Subpart ZZZZ must limit emissions of carbon monoxide and formaldehyde. Sources must also comply with work practice standards and operating limits.

6 NYCRR 201-1.2 (a)

To streamline permitting efforts, the several hundred process tools have been assigned a single uniform emission source ID for each respective tool type in each Fab. When conducting the addition, removal, or

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modifications of any process tool, that change shall be considered a change to the relevant permitting source ID. As such, the facility will need to comply with the applicable provisions of 6 NYCRR Part 201 to complete the process tool change. Facility must maintain a process tool logbook to track the addition and removal of tools via unique source IDs. The logbook will facilitate effective facility compliance evaluation inspections by the Department.

6 NYCRR 201-6.4 (f)

This section describes the potential for certain operational changes to be made by the facility owner or operator without first obtaining a permit modification. Changes made pursuant to this provision must meet all of the criteria described in this section to qualify for consideration as operational flexibility. The Department reserves the right to require the facility owner or operator to obtain a permit modification prior to making any changes at the facility pursuant to this section.

6 NYCRR 201-6.4 (f) (2)

This section describes the requirements for operational flexibility protocols included in Title V permits. The facility owner or operator may make certain changes to the facility that have been reviewed and approved pursuant to the protocol without first obtaining a permit modification for those changes.

6 NYCRR 201-6.5 (a)

This subdivision states that the Department shall include state enforceable conditions in Title V permits. State enforceable conditions related to regulations developed pursuant to the Climate Leadership and Community Protection Act (CLCPA) and Article 75 of New York State Environmental Conservation Law may be included in future versions of this permit, as applicable.

6 NYCRR 202-2.4 (a) (3)

Once a facility is required to submit annual emission statements electronically, emission statements must be submitted to the department per the specified schedule, in this regulation beginning the reporting year that a Title V permit containing a condition mandating electronic submittal is issued.

6 NYCRR 211.1

This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

6 NYCRR 212-1.5 (d)

This provision allows for the department to specify a less restrictive permissible emission rate or degree of air cleaning for the process emission source or emission point than required under Subpart 212-2 in instances where a facility owner or operator can demonstrate to the satisfaction of the department that the

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facility owner will apply the Best Available Control Technology (BACT) for that criteria air contaminant or the Best Available Control Technology for a toxic air contaminant (T- BACT).

6 NYCRR 212-1.5 (g)

This provision requires the facility owner or operator to operate and maintain all process emission sources, including the associated air pollution control and monitoring equipment, in a manner consistent with safety, good air pollution control practices, good engineering practices and manufacturers' recommendations for minimizing emissions.

6 NYCRR 212-1.6 (a)

This provisions requires that the facility owner or operator not cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source or emission point, except for the emission of uncombined water.

6 NYCRR 212-1.7 (b) (5)

This paragraph requires the source owner to monitor specific stack parameters to demonstrate on-going compliance.

6 NYCRR 212-2.1 (a)

This provision is for an air contaminant listed in Section 212-2.2 Table 2 - High Toxicity Air Contaminant List (HTAC). The facility owner or operator must either limit the actual annual emissions from all process operations at the facility so as to not exceed the mass emission limit listed for the individual HTAC; or demonstrate compliance with the air cleaning requirements for the HTAC as specified in Subdivision 212-2.3(b), Table 4.

6 NYCRR 212-2.3 (b)

Table 4 of 212-2.3 describes the reduction in emissions required for a non-criteria air contaminant based on its uncontrolled emission rate. The uncontrolled emission rate in conjunction with the assigned environmental rating determines the degree of controlled applied.

6 NYCRR 212-2.4 (b)

Particulate emissions from any process emission source, which received a B or C Environmental Rating, and for which an application was received by the department after July 1, 1973 are restricted to 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis.

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6 NYCRR 225-1.2 (d)

This subdivision sets the sulfur-in-fuel limitation for distillate oil fired emission sources throughout the State.

6 NYCRR 226-2.3 (a)

This section contains control requirements for industrial cleaning solvents.

6 NYCRR 227-1.3 (c)

This subdivision requires that all stationary combustion installations subject to this subpart perform an annual tune-up.

6 NYCRR 227-1.4 (a)

This subdivisions sets the opacity standard for subject stationary combustion installations.

6 NYCRR 229.3 (e) (2) (iv)

This section requires a tank with submerged fill for storage of volatile organic liquids

6 NYCRR 229.3 (e) (2) (v)

This section requires the tank to be equipped with conservation vents for storage of volatile organic liquids.

6 NYCRR 231-3.2

This section lists the applicability of facilities to each Subpart of 231.

6 NYCRR 231-5.4

This section outlines what LAER is and how it is determined.

6 NYCRR 231-5.5

This section states what the emission offset requirements are for a facility subject to this Subpart.

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6 NYCRR 231-7.6

This section outlines what BACT is and how it is determined.

6 NYCRR 257-4.2

The term fluorides refers to a heterogeneous group of compounds formed from the highly reactive, nonmetallic gaseous element known as fluorine. For the purpose of this Subpart, the term fluoride will include material that tests as fluoride by methods acceptable to the commissioner.

6 NYCRR 257-5.3

This citation lists a numerically prescribed contaminant level that shall not be exceeded in the State for Hydrogen Sulfide (H₂S).

6 NYCRR Subpart 202-1

This subpart of Part 202 establishes the general criteria for verifying emissions by means of emissions sampling, testing and associated analytical determinations.

6 NYCRR Subpart 231-5

This Subpart applies to new major facilities and modifications to existing non-major facilities in non-attainment areas and attainment areas of the State within the Ozone Transport Region (OTR).

6 NYCRR Subpart 231-7

This Subpart applies to new major facilities and modifications to existing non-major facilities in attainment areas (prevention of significant deterioration (PSD)).

Compliance Certification

**Summary of monitoring activities at MICRON NEW YORK SEMICONDUCTOR
MANUFACTURING LLC:**

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring
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FACILITY	104	record keeping/maintenance procedures
FACILITY	117	intermittent emission testing
FACILITY	118	intermittent emission testing
FACILITY	119	intermittent emission testing
FACILITY	122	monitoring of process or control device parameters as surrogate
FACILITY	123	monitoring of process or control device parameters as surrogate
FACILITY	124	monitoring of process or control device parameters as surrogate
FACILITY	125	monitoring of process or control device parameters as surrogate
FACILITY	126	monitoring of process or control device parameters as surrogate
FACILITY	127	monitoring of process or control device parameters as surrogate
FACILITY	129	monitoring of process or control device parameters as surrogate
FACILITY	130	record keeping/maintenance procedures
FACILITY	131	record keeping/maintenance procedures
FACILITY	132	record keeping/maintenance procedures
FACILITY	133	record keeping/maintenance procedures
FACILITY	134	record keeping/maintenance procedures
FACILITY	135	record keeping/maintenance procedures
FACILITY	136	record keeping/maintenance procedures
FACILITY	137	record keeping/maintenance procedures
FACILITY	138	record keeping/maintenance procedures
FACILITY	139	record keeping/maintenance procedures
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FACILITY	144	record keeping/maintenance procedures
FACILITY	145	record keeping/maintenance procedures
FACILITY	146	record keeping/maintenance procedures
FACILITY	147	record keeping/maintenance procedures
FACILITY	148	record keeping/maintenance procedures
FACILITY	149	record keeping/maintenance procedures
FACILITY	152	record keeping/maintenance procedures
FACILITY	106	record keeping/maintenance procedures
1-FABOP/-/FA1	158	record keeping/maintenance procedures
1-FABOP/-/FA1	159	record keeping/maintenance procedures
1-ADMPR/-/AA1	156	record keeping/maintenance procedures
FACILITY	108	record keeping/maintenance procedures
FACILITY	109	record keeping/maintenance procedures
FACILITY	110	record keeping/maintenance procedures
FACILITY	111	record keeping/maintenance procedures
FACILITY	113	record keeping/maintenance procedures
FACILITY	114	record keeping/maintenance procedures
1-FABOP/-/FA1	160	record keeping/maintenance procedures
1-ADMPR/-/AA1	157	record keeping/maintenance procedures
FACILITY	115	record keeping/maintenance procedures
FACILITY	19	record keeping/maintenance procedures
FACILITY	20	record keeping/maintenance procedures
FACILITY	21	record keeping/maintenance procedures
FACILITY	22	record keeping/maintenance procedures
FACILITY	23	record keeping/maintenance procedures
FACILITY	24	record keeping/maintenance procedures
FACILITY	26	work practice involving specific operations
FACILITY	27	work practice involving specific operations
FACILITY	28	work practice involving specific operations
FACILITY	29	work practice involving specific operations

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FACILITY	30	record keeping/maintenance procedures
FACILITY	31	record keeping/maintenance procedures
FACILITY	32	record keeping/maintenance procedures
FACILITY	4	record keeping/maintenance procedures
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	35	record keeping/maintenance procedures
FACILITY	163	record keeping/maintenance procedures
FACILITY	36	intermittent emission testing
FACILITY	37	intermittent emission testing
FACILITY	38	intermittent emission testing
FACILITY	41	record keeping/maintenance procedures
FACILITY	43	monitoring of process or control device parameters as surrogate
FACILITY	44	record keeping/maintenance procedures
FACILITY	165	monitoring of process or control device parameters as surrogate
FACILITY	166	monitoring of process or control device parameters as surrogate
FACILITY	45	intermittent emission testing
FACILITY	46	intermittent emission testing
FACILITY	47	work practice involving specific operations
FACILITY	48	record keeping/maintenance procedures
FACILITY	49	record keeping/maintenance procedures
FACILITY	50	monitoring of process or control device parameters as surrogate
FACILITY	53	record keeping/maintenance procedures
FACILITY	54	monitoring of process or control device parameters as surrogate
FACILITY	55	monitoring of process or control device parameters as surrogate
FACILITY	56	monitoring of process or control device parameters as surrogate
FACILITY	57	record keeping/maintenance procedures
FACILITY	58	record keeping/maintenance procedures
FACILITY	59	monitoring of process or control device parameters as surrogate
FACILITY	60	record keeping/maintenance procedures
FACILITY	61	monitoring of process or control device parameters as surrogate
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FACILITY	63	intermittent emission testing
FACILITY	64	intermittent emission testing
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FACILITY	66	intermittent emission testing
FACILITY	67	intermittent emission testing
FACILITY	68	intermittent emission testing
FACILITY	69	intermittent emission testing
FACILITY	70	record keeping/maintenance procedures
FACILITY	71	record keeping/maintenance procedures
FACILITY	72	record keeping/maintenance procedures
FACILITY	73	monitoring of process or control device parameters as surrogate
FACILITY	74	monitoring of process or control device parameters as surrogate
FACILITY	75	monitoring of process or control device parameters as surrogate
FACILITY	76	monitoring of process or control device parameters as surrogate
FACILITY	77	monitoring of process or control device parameters as surrogate
FACILITY	78	record keeping/maintenance procedures
FACILITY	79	record keeping/maintenance procedures
FACILITY	80	monitoring of process or control device parameters as surrogate
FACILITY	81	monitoring of process or control device parameters

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FACILITY	82	as surrogate monitoring of process or control device parameters as surrogate
FACILITY	83	intermittent emission testing
FACILITY	84	record keeping/maintenance procedures
FACILITY	85	record keeping/maintenance procedures
FACILITY	86	record keeping/maintenance procedures
FACILITY	87	monitoring of process or control device parameters as surrogate
FACILITY	88	monitoring of process or control device parameters as surrogate
FACILITY	89	intermittent emission testing
FACILITY	90	intermittent emission testing
FACILITY	91	intermittent emission testing
FACILITY	92	intermittent emission testing
FACILITY	93	intermittent emission testing
FACILITY	94	intermittent emission testing
FACILITY	95	intermittent emission testing
FACILITY	96	intermittent emission testing
FACILITY	97	intermittent emission testing
FACILITY	98	intermittent emission testing
FACILITY	99	intermittent emission testing
FACILITY	100	intermittent emission testing
FACILITY	167	record keeping/maintenance procedures
FACILITY	168	record keeping/maintenance procedures

Basis for Monitoring

6 NYCRR 200.6: This citation and conditions provide requirements to promote acceptable ambient air quality and compliance with the national ambient air quality standards (NAAQS) and New York State ambient air quality standards. The conditions cited under this subpart include: a modeling demonstration for perfluorinated compounds, total inorganic fluoride testing provisions, and emergency engine operations for the facility.

6 NYCRR 202-1: The conditions cited under this subpart require organic and inorganic HAP testing initially and subsequently once per permit term. Process exhaust types that were found to have measurable concentrations of organic or inorganic HAPs during the initial compliance test will be required to test once per permit term.

6 NYCRR 212: Part 212 applies to process operations at the facility that include the following: semiconductor manufacturing process tools, tool cleaning operations, Rotor-Concentrator Thermal Oxidizers (RCTOs), Regenerative Catalytic Systems (RCSs), Point-of-use control devices (POUs), wastewater treatment operations, bulk chemical storage tanks 10,000 gallons or larger, except for those storing B- or C-rated Volatile Organic Compounds (VOCs) that are subject to Part 229, and Spin-On Dielectric (SOD) waste neutralization operations. Part 212 requires the facility to demonstrate that non-criteria air pollutants will be emitted in a quantity that does not pose a threat to public health. This rule allows for several compliance options in which the facility may demonstrate compliance with another rule and be concurrently considered compliant with Part 212. A process emission source subject to the Federal National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR Part 61 or Part 63 satisfies the requirements of Part 212 for the respective air contaminant regulated by the Federal standard if

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the facility can demonstrate that the process emission source is in compliance with the relevant Federal regulation. In accordance with 6 NYCRR 212-1.5(e)(2), the facility will satisfy Part 212 requirements by complying with 40 CFR Part 63 Subpart BBBBBB. This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for semiconductor manufacturing facilities.

Nitrous oxide is emitted from sources subject to Part 212 and has been assigned an Environmental Rating (ER) of “B” by the Department. The facility has submitted a toxic - best available control technology (T-BACT) analysis per the procedure under 6 NYCRR 212-1.5(d) demonstrating that meeting the required 90% degree of air cleaning of Fab Chemical Vapor Deposition (CVD) exhaust nitrous oxide emissions per 6 NYCRR 212-2.3(b), Table 4, is technically infeasible. The Department has reviewed the facility’s T-BACT analysis and determined that based on the parameters under 212-1.2(b)(20), the facility is implementing the best available control technology on the sources that emit nitrous oxide. To reduce nitrous oxide emissions and impacts and meet T-BACT requirements, the facility must comply with the limits, monitoring, mitigation, maintenance, and recordkeeping requirements consistent with the analysis and the Department's determination. The T-BACT determination must be reevaluated every five years or prior to any changes that could significantly affect the previously approved T-BACT determination. Also, per 6 NYCRR 212-2.3(b), Table 4, the facility was required to perform air dispersion modeling to demonstrate compliance with the annual guideline concentration (AGC) for nitrous oxide established in DAR-1.

The Department reviewed contaminants that are emitted from sources subject to Part 212 and these contaminants have been assigned an Environmental Rating (ER) of “B” or “C” by the Department. The facility has demonstrated compliance with Part 212 by completing air dispersion modeling demonstrating that the maximum offsite air concentrations of these contaminants do not exceed their respective (AGCs) and Short-term Guideline Concentrations (SGCs).

6 NYCRR 231: The facility is required to comply with the New York Prevention of Significant Deterioration (PSD) program for new major facilities in attainment areas via 6 NYCRR 231-7.1(a)(1) due to NO_x and CO emissions exceeding the applicable Major Facility Threshold. The facility is also required to comply with the New York Nonattainment NSR (NNSR) program for new major facilities in nonattainment areas via 6 NYCRR 231-5.1(a)(1) and is considered a NNSR Major Facility due to NO_x and VOC emissions exceeding the applicable Major Facility Thresholds. The Clean Air Act (CAA) sets out specific requirements for a group of northeast states that make up an Ozone Transport Region (OTR). States with areas located in an OTR are required to submit a State Implementation Plan (SIP) and facilities must install a certain level of controls for the pollutants that form ozone, even if they meet ozone standards. All of New York State is located in an OTR. Areas within an OTR are, at a minimum, categorized as a moderate nonattainment area. Greenhouse Gas (GHG) emissions are subject to regulation under the NSR program per 6 NYCRR 231-4.1(b)(50) if the facility is a new major facility for a regulated NSR contaminant other than GHGs and the facility has the potential to emit GHGs exceeding 75,000 tons per year.

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Volatile Organic Compound (VOC) RACT: The facility exceeds the VOC thresholds listed in 6 NYCRR 212-3.1(a)(2) and is subject to 6 NYCRR 212-3, which requires a VOC Reasonably Available Control Technology (RACT) compliance plan per 6 NYCRR 212-3.1(f). The facility will meet VOC RACT requirements by complying with the more stringent VOC Lowest Achievable Emission Rate (LAER) requirements that they are subject to due to the facility's location in an Ozone Transport Region (OTR).

Oxides of Nitrogen (NOx) RACT: The facility exceeds the annual potential to emit Nitrogen Oxides (NOx) threshold of 100 tons listed in 6 NYCRR 212-3.1(a)(2) and is subject to 6 NYCRR 212-3, which requires a NOx RACT compliance plan per 6 NYCRR 212-3.1(f). The facility will meet NOx RACT requirements by complying with the more stringent NOx LAER requirements that they are subject to due to the facility's location in an OTR.

Carbon Monoxide (CO) BACT: For a proposed new facility, Best Available Control Technology (BACT) is required for each emission source that is part of the proposed new facility, for all regulated New Source Review (NSR) contaminants to be emitted by the proposed new facility which equal or exceed the applicable significant project threshold listed in Table 6 of Part 231-13. The significant project threshold is exceeded for CO, subjecting the facility to CO BACT requirements. CO BACT has been determined to be the implementation of good combustion and maintenance practices for the emergency engines, boilers, water bath vaporizers, and the fire pump engine, and the adherence of the CO BACT emission limit on the emergency engines, natural gas fired boilers, water bath vaporizers, and the fire pump engine.

Particulate Matter (PM) BACT: For a proposed new facility, BACT is required for each emission source that is part of the proposed new facility, for all regulated NSR contaminants to be emitted by the proposed new facility which equal or exceed the applicable significant project threshold listed in Table 6 of Part 231-13. The significant project threshold is exceeded for PM, subjecting the facility to PM BACT requirements. PM BACT has been determined to be the use of mist eliminators on the ammonia and acid scrubbers, the implementation of the ionizing wet scrubbers (IWS) on the CVD exhaust, the implementation of good combustion and maintenance practices for the emergency engines, boilers, water bath vaporizers, process equipment exhaust conditioners (PEECs), and the fire pump engine, tracking of the total hours of operation of the Spin On Dielectric (SOD) process, the paving of on-site roads, the periodic watering of roads that cannot be paved, the implementation of speed limits on on-site roads, and the adherence of the PM BACT emission limit on the emergency engines, natural gas fired boilers, water bath vaporizers, and the fire pump engine.

NOx BACT: For a proposed new facility, BACT is required for each emission source that is part of the proposed new facility, for all regulated NSR contaminants to be emitted by the proposed new facility which equal or exceed the applicable significant project threshold listed in Table 6 of Part 231-13. The significant project threshold is exceeded for NOx, subjecting the facility to NOx BACT requirements. The

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facility will meet NO_x BACT requirements by complying with the more stringent NO_x LAER requirements that they are subject to due to the facility's location in an OTR.

Carbon Dioxide Equivalents (CO₂e) BACT: The facility requires CO₂e BACT because it is otherwise subject to PSD for another regulated NSR pollutant other than CO₂e and has the potential to emit 75,000 tons/yr CO₂e (100-yr GWP) or more per 231-4.1(b)(50)(i). CO₂e BACT has been determined to be the implementation of good combustion and maintenance practices for the emergency engines, boilers, water bath vaporizers, and the fire pump engine, tracking of the total hours of operation of the Spin On Dielectric (SOD) process, the cleaning of CVD chambers with NF₃ in place of carbon-based fluorinated GHGs when technically feasible, the adherence of the CO₂e BACT emission limit on the emergency engines, fire pump engine, natural gas fired boilers, and water bath vaporizers, the operation of point-of-use (POU) control devices or regenerative catalytic systems (RCS) on the fab acid exhaust systems that are certified to meet the standards listed in the Intergovernmental Panel on Climate Change's (IPCC) 2019 Refinement Table 6.17, and the use of SF₆ leak detection systems on circuit breakers.

VOC LAER: The facility's potential VOC emissions exceed the major facility threshold for VOCs listed in 6 NYCRR 231-13 and the facility is subject to VOC Lowest Achievable Emission Rate (LAER). VOC LAER has been determined to be the implementation of good combustion and maintenance practices for emergency engines, boilers, water bath vaporizers, fire pump engine, and the Probe building lab and wastewater treatment (WWT) lab acid gas scrubbers and thermal oxidizers, tracking of the total hours of operation of the Spin On Dielectric (SOD) process, and the adherence of the VOC LAER emission limit on the emergency engines, natural gas fired boilers, fire pump engine, and water bath vaporizers.

NO_x LAER: The facility's potential NO_x emissions exceed the major facility threshold for NO_x listed in 6 NYCRR 231-13 and the facility is subject to NO_x LAER. NO_x LAER has been determined to be the implementation of good combustion and maintenance practices for emergency engines, boilers, water bath vaporizers, and the fire pump engine, the implementation of good operating practices and maintenance procedures according to manufacturer's specification of process equipment exhaust conditioners (PEECs) and IWSs, tracking of the total hours of operation of the Spin On Dielectric (SOD) process, and the adherence of the NO_x LAER emission limit on the emergency engines, natural gas fired boilers, fire pump engine, and water bath vaporizers.

40 CFR 63 BBBBBB: National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing - The facility is a major source of hazardous air pollutants (HAPS) as hydrogen fluoride emissions exceed the major source threshold (10 tons per year) on a potential to emit (PTE) basis. The process vents and storage tanks at the facility are subject to the organic and inorganic HAP reduction provisions of this subpart. Compliance with the organic and inorganic HAP limits of this subpart must be verified by emissions (stack) testing. The facility is required to test at maximum HAP emissions potential within 180 days after startup unless justification is provided in writing.

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40 CFR 63 SS: National Emission Standards for Closed Vent Systems – Facilities required to demonstrate compliance with the HAP reduction productions of 40 CFR 63: BBBB are subject to the control device monitoring provisions of this subpart including: pH and flow rate monitoring for scrubbers and temperature monitoring for incinerators or oxidizers. The facility will employ scrubbers used for control of hydrogen halide and halogen compounds mainly emitted from Fab Acid (FA) and Fab Chemical Vapor Deposition (FC) processes. For purposes of compliance with 40 CFR 63: SS, the scrubbers utilized by the facility shall be considered halogen scrubbers as defined as: “a halogen scrubber can be a wet or dry scrubber used for cleaning a harmful gas containing a halogen or a halogen-compound such as fluorine, chlorine, bromine, iodine, chlorine trifluoride, hydrogen fluoride, hydrogen chloride, boron trifluoride, silicon tetrafluoride and tungsten hexafluoride that are used mainly in semiconductor manufacturing processes.”

Compliance Assurance Monitoring (CAM): To be subject to the CAM requirements at 40 CFR 64, an emission source must: be subject to an emission limitation or standard that is not exempt per 40 CFR 64.2(b)(1), use a control device to comply with any such limitation or standard, and have potential pre-control emissions of the applicable regulated pollutant that are equal to or greater than the major source threshold for that pollutant. As discussed at 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed by the Administrator after November 15, 1990 are exempt from CAM requirements. The emission sources at this facility are subject to 40 CFR 63 Subparts BBBB, SS, ZZZZ, and DDDDD and 40 CFR 60 Subpart IIII. These standards were promulgated after November 15, 1990 and are therefore exempt from CAM requirements. Accordingly, this facility is not subject to CAM.