Redline version of Industry Requirements Report comparing the IRR for Fab 4X dated February 25, 2008 (revised July 29, 2008) and the IRR for Fab 8.2 dated January, 2013.

This redline version does not include markups on the title page, TOC, tables, figures and appendices.

1.0 INTRODUCTION

~~Advanced Micro Devices, Inc. (AMD)~~GLOBALFOUNDRIES is seeking regulatory approvals to enable the potential construction and operation of ~~a semiconductor manufacturing campus in the~~ the further expansion of the GLOBALFOUNDRIES Fab 8 Campus within Development Area 1 of the Luther Forest Technology Campus (LFTC~~). AMD~~), which is jointly located in the Towns of Malta and Stillwater, Saratoga County, New York. GLOBALFOUNDRIES is currently ~~reviewing~~assessing the feasibility of the project ~~in relation~~relative to its global manufacturing strategy and will separately determine whether ~~and when to make a formal commitment to move forward. Since this project is very important to AMD's long-term business strategy, AMD~~to proceed, as well as separately determining the necessary timing of that decision. GLOBALFOUNDRIES must be secure in the ~~understanding~~knowledge that the site is compatible with its operational needs and ready for construction at the appropriate time. Therefore, ~~AMD~~GLOBALFOUNDRIES is ~~initiating this effort to secure certain regulatory approvals in advance of any final decision.~~pursuing amendments to local law necessary to satisfy the programming prerequisites for the project.

LFTC is an existing nanotechnology manufacturing campus with prescribed, allowable ancillary uses situated on a ±1,350-acre[1] project site in the Towns of Malta and Stillwater, Saratoga County, New York. A Planned Development District (PDD) has been established for the LFTC project in both the Towns of Malta and Stillwater and specifies as an allowable use "nanotechnology manufacturing," which is defined to include semiconductor manufacturing, among other uses.

The design under consideration by ~~AMD~~GLOBALFOUNDRIES would be the ~~first semiconductor manufacturing facility ("fab") within~~third major project on the site, following Fab 8.1, construction of which began in 2009, and the

[1] The Malta PDD Legislation specifically designates 1099.57 acres in Malta plus ~315 acres in Stillwater which together totals ~1414.57 acres.

Technology Development ~~Area 1 of LFTC in the Town of Malta, Saratoga County, New York.~~Center, construction of which was announced in January 2013 to commence in March 2013. The ~~proposed, temporary project name for this first phase of development~~third project is ~~"Fab 4X". AMD~~named "Fab 8.2". Number 2 denotes the second production fab on the overall Fab 8 Campus. GLOBALFOUNDRIES would construct and operate Fab ~~4X~~8.2 consistent with the allowable land use for semiconductor manufacturing established in the Towns of Malta and Stillwater PDD legislation for LFTC. ~~The existing PDD legislation was developed based upon a generic Industry Requirements Report prepared by Abbie Gregg, Inc. (dated October 2, 2002, "AGI Report"). AMD is requesting certain amendments necessary to tailor the PDD legislation to company- and design-specific requirements.~~

- ~~Development Area 1 is inclusive of the land areas needed for both the proposed Fab 4X, as well as two (2) subsequent phases of development, which AMD anticipates will be constructed in the future and would extend into the Town of Stillwater. Each phase would involve the design and construction of one main fab as well as associated manufacturing space, administrative office space, central utility building and other support space. The timing, scope, and number of subsequent development phases may change as future needs dictate.~~

- Fab 8.2 includes the design and construction of its associated support structures, including a central utility building (CUB) for process, mechanical and electric services.

The technology upon which the semiconductor manufacturing process is based is continually undergoing refinement and further innovation. Corresponding development efforts are geared toward implementing new manufacturing technologies and integrating those into mainstream

production operations. Furthermore, as GLOBALFOUNDRIES continues to drive global competition in the semiconductor foundry sector, the production requirements necessary to justify the capital investment have grown. Fab 8.2 will require significantly more production cleanroom space to secure the economic sustainability of the Fab 8 Campus. The associated utility metrics are also higher than those for Fab 8.1.

- ~~Due to the large capital investment and infrastructure requirements, a viable site for development of a semiconductor manufacturing facility must provide the ability for future expansion. Accordingly, this AMD Industry Requirements Report addresses the full site potential of three (3) phases of AMD development, including more detail on the initial phase, which is centered on Fab 4X.~~

1.1 Document Purpose

This ~~AMD-specific~~ Industry Requirements Report ~~has been prepared~~reflects programming completed to ~~fully replace the 2002 AGI Report, which was included as Appendix C to the Draft GEIS~~date for ~~LFTC. The Draft GEIS evaluated four (4) phases of fab development within Development Area 1, with ancillary development taking place in other development areas of LFTC. The substantive basis for assessing the potential environmental impacts of semiconductor manufacturing in Development Area 1 was derived from the described "typical industry standards" set forth in the AGI Report. That report made various generic assumptions regarding the size and other specific metrics of the planned four (4) phases of semiconductor manufacturing facility development. This report is tailored to AMD's specific plans for development of its first phase semiconductor manufacturing facilities in Development Area 1 of LFTC and potential, future phases.~~ Fab 8.2. Numerical ~~limits~~values and thresholds described in this report are based upon best available knowledge~~. They~~ and are intended to ~~document~~describe estimated magnitude in order to provide the basis for assessment of impacts~~. Specific regulatory permit limits~~ associated with the proposed project. Design changes due to technology advances, changing business needs, and operational needs will ~~be established by the regulatory agencies such as the New York State Department of Environmental~~

~~Conservation in the normal course of permitting the uses and operations described in this report~~further refine these estimates as the project progresses through design.

2.0 SITE & BUILDING DETAILS

2.1 General Facility Description

~~AMD's~~GLOBALFOUNDRIES' proposed Fab ~~4X Campus is comprised of four (4)~~8.2 includes the following major building elements: (1) ~~administrative office~~ wafer fabrication building~~; (2~~ (Fab); (2) a combined Electric Service Building (ESB) and Central Utility Building (CUB); and (3) manufacturing support buildings~~, including spine building and bump test facility; (3) fabrication (fab) production building; and (4) central utility building (CUB),~~ as well as service yards and ~~small~~other ancillary support buildings.

The ~~fab~~Fab building ~~will house~~is the ~~facility's~~ main cleanroom production space, and ~~will consist of~~is a fire rated concrete and steel structure with insulated exterior panels~~ of insulated flush panels and concrete/masonry. The spine building will be the main, direct support building~~, similar to ~~the fab. The building will contain the main gowning rooms (for changing from street clothes to cleanroom protocol suits); personnel support areas (restrooms, lockers, exercise area, showers); and material supply staging areas. The building will also contain the bump test facility, and the main shipping and receiving areas~~Fab 8.1.

- ~~The administrative office building will contain, among other spaces: the primary reception area; an assembly space; training facilities; main data center; human resources; security center; engineering, staff, and~~

~~management offices; conference rooms; employee fitness center; and cafeteria.~~

~~A central utility building (CUB) will align parallel to the fab production building. It~~The combined ESB/CUB will contain the major support systems including boilers, chillers, ultra pure water treatment, waste treatment and electrical support systems. ~~It~~The ESB/CUB will be a high bay steel building, with exterior detail features similar to the fab to articulate and scale down what is functionally a box building. The main gas pad, emergency generators, and ~~hazardous production material storage building~~wastewater pump station will be located ~~beyond~~to the ~~CUB building in the security yard~~north and east of Fab 8 Module 2.

There is no new administrative office building proposed to be constructed with Fab 8.2, as Administrative Building 2 was approved and built in advance of this phase of development.

2.2 Building Heights

All building heights, not including stacks and other roof-top appurtenances will conform to the existing 110 foot height ~~threshold established within Development Area 1~~restriction contained in the ~~Malta LFTC Planned Development District (~~PDD~~)~~ legislation. Stacks and other roof-top appurtenances are proposed to have a height of up to 125 feet. See Appendix A.

2.3 Building Square Footage

The current ~~design~~programming of the proposed Fab ~~4X campus~~8.2 includes the following two principal buildings:

~~A breakdown of the primary fabrication cleanroom space in the current design includes:~~

~~Fab Manufacturing 249,005 GSF~~
~~Implant 22,713 GSF~~
~~**Total Manufacturing Clean Room** 271,718 GSF~~

~~A breakdown of the manufacturing support space, inclusive of the Bump Test Facility, in the current design includes:~~

~~Fab Manufacturing Support~~	~~40,027 GSF~~
~~Bump Test Facility~~	~~46,578 GSF~~
~~BTF Manufacturing Support~~	~~5,619 GSF~~
~~**Total Manufacturing Support**~~	~~92,224 GSF~~

Ancillary one-story buildings associated with Fab 8.2 include: Sulfuric Building (~15,000 ft^2), Compressor Building (~7,500 ft^2), Pyrophoric Bunker Building (~650 ft^2), and Silane Building (~2,500 ft^2).

Note that areas shown are current design assumptions. Variations may occur ~~through~~throughout the ~~final~~ design process.

2.4 LEED Construction

The U.S. Green Building Council's LEED™ (Leadership in Energy and Environmental Design) Green Building Rating System encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria. It is the ~~nationally~~internationally accepted benchmark for the design, construction and operation of high performance green buildings.

LEED is a point based system where projects earn LEED points for satisfying specific green building criteria. Within each of the six LEED credit categories, projects must satisfy particular prerequisites and earn points. The six categories include Sustainable Sites, Water Efficiency, Energy &

Atmosphere, Materials & Resources, Indoor Environmental Quality and Innovation in Design (projects can earn ID points for green building innovations). The number of points the project earns determines the level of LEED Certification the project receives. LEED certification is available in four progressive levels: Certified, Silver, Gold and Platinum.

LEED Rating Systems are developed through an open, consensus-based process led by LEED committees. The LEED for New Construction Rating System is designed to guide and distinguish high-performance commercial and institutional projects, including office buildings, high-rise residential buildings, government buildings, recreational facilities, manufacturing plants and laboratories.

LEED certified projects blend environmental, economic, and occupant-oriented performance. ~~AMD's initial programming effort incorporated LEED criteria and guidance from inception. Part of this effort was a focused energy efficiency and environmental sustainability design charette conducted by experts from the Rocky Mountain Institute with AMD representatives and its design firm, M&W Zander, as well as representatives from the New York State Energy Research and Development Authority and National Grid.~~ ~~AMD~~GLOBALFOUNDRIES intends to incorporate these LEED considerations to the extent practical and to apply for relevant and appropriate LEED Certifications for the project.

Fab ~~4X~~8.2 will not be the first ~~AMD~~GLOBALFOUNDRIES effort to achieve LEED certification for a major project. ~~AMD~~GLOBALFOUNDRIES is seeking LEED Gold certification ~~by the U.S. Green Building Council~~ for ~~its new Lone Star campus in Austin, Texas~~Fab 8.1. A wide variety of features to improve energy-efficiency and reduce environmental impact have been incorporated into the ~~Lone Star design. The site is equipped with one of the largest roof-based rainwater collection and recycling systems of its kind in the world, which is expected to save 7 million gallons of water per year. The site has also committed to using 100% "green" renewable energy from Austin Energy's GreenChoice™ program~~design.

- ~~The U.S. Green Building Council has not yet developed guidance specifically tailored to semiconductor operations. AMD has been and will~~

~~continue to be actively involved in industry efforts to promote development and adoption of such guidelines that will further assist the development of the Luther Forest campus, as well as lead further improvement in industry projects throughout the world.~~

2.5 Miscellaneous

The following miscellaneous details regarding Fab ~~4X~~8.2 are provided~~ with the objective of tailoring the specific content of this AMD report with the prior AGI Report~~:

- ~~The AGI Report~~It is currently assumed that 4 shifts ~~would~~will be used to maintain 24 hour a day, 7 day a week manufacturing operations.~~ AMD has retained that assumption.~~
- Fab ~~shift starting and ending times will be offset within the peak hour of the generator to reduce traffic intensity.~~
- ~~Approximately 1,465 semiconductor employees will be employed at Fab 4X under current design and operational assumptions. Among those, AMD estimates that there will be approximately 449 fab operators, 445 technicians, 119 management staff, 390 engineering staff, and 62 administrative staff. The specific numbers and positions will be determined as the Fab design and construction proceed.~~
- ~~Fab 4X~~8.2 will generate solid waste.~~ AMD will~~ GLOBALFOUNDRIES is proactively ~~seek~~seeking innovative ways to reuse and recycle waste, thereby minimizing solid and hazardous waste materials that require treatment and disposal in properly licensed off site facilities.~~

- ~~Fab 4X as well as the potential two future fabs require an area of ~215 acres within Development Area 1. The buffer areas are to be maintained by LFTCEDC consistent with the prior SEQRA record for LFTC.~~

- ~~Fab 4X~~Fab 8.2 will require connections for redundant network carrier services. Telephone service will utilize VOIP technology. The network services will accommodate the security system requirements as well as the life safety and utility system requirements.~~–~~

- ~~Consistent with the prior SEQRA record for LFTC, the semiconductor manufacturing processes require strict vibration and EMF thresholds. A setback of 500 to 1,000 feet from major roads is typically required to achieve the vibration criteria.~~

3.0 WASTE AND WASTEWATER

3.1 Waste and Wastewater Treatment Systems~~-~~

Waste and wastewater generated on the site will be collected prior to treatment. Wastewater is commonly treated on site to conform to applicable pretreatment requirements ~~of the Clean Water Act as codified within Title 40 of the CFR (Code of Federal Regulations)~~ and local sewer use laws. Typical treatment methods include neutralization; flocculation; micro/ultra filtration; and precipitation. ~~Electrowinning (the recovery of metals from solutions by electrolysis) is sometimes used for concentrated metal waste streams.~~ Review and approval of the specific pretreatment systems and the associated wastewater effluent quality will be required by Saratoga County Sewer District #1 (SCSD #1) as part of their local sewer use permitting process.

Some waste streams and byproducts of onsite treatment are collected for offsite treatment, fuel blending, or sold as a product to other industries. Liquid waste streams expected to be generated on-site include:

- solvent waste;

- isopropyl alcohol;

-

- hydrofluoric acid;
- slurry oxide wastewater;
- slurry metal wastewater;
- slurry copper wastewater;
- copper rinse wastewater;
- cobalt plating waste;
- ozone wastewater;
- ~~metal bump process waste;~~
- copper plating waste;
- ~~sulfuric acid;~~
- hydrogen fluoride/ethylene glycol;
- sulfuric acid;
- sulfuric acid/hydrogen fluoride; and
- first rinse and last rinse wastewaters (which ~~AMD~~GLOBALFOUNDRIES often reuses or recycles).

Potential on-site pretreatment methods are outlined below:

3.2 Wastewater Generation Rate

The anticipated wastewater generation rates of the facility on a ~~peak daily basis and on an average daily basis are as follows:~~daily basis are as follows. Peak flow rates are estimated at 125% of the average daily flow rate; the duration of peak flows is estimated to be for 30 minutes two times per day.

3.3 Wastewater Characteristics

~~AMD~~GLOBALFOUNDRIES will design its wastewater pretreatment systems to meet all applicable ~~federal, state and local~~regulations for wastewater treatment requirements. The discharge water quality will be monitored for compliance with the specific permit parameters before it is discharged to the SCSD #1, which is the publicly owned treatment works (POTW) that will receive wastewater from the facility. Wastewater treatment systems are custom designed based on the very specific process chemistries being conducted in that facility.

The following table represents the anticipated characteristics of wastewater generated at the facility, and compares the anticipated characteristics to ~~the~~some typical limits established in the existing SCSD #1 sewer use ordinance, as well as ~~to typical limits established~~ in other locales with semiconductor manufacturing facilities:

4.0 AIR EMISSIONS

4.1 General Description

Sources of regulated air emissions from Fab ~~4X~~8.2 will include:

- cleanroom/process fabrication areas;
- manufacturing support systems such as chemical and waste storage tanks; and
- site facilities such as boilers, backup generators and non-electric mechanicals.

~~A site environmental management team will be~~The Fab 8 Environmental, Health & Safety department has been established and ~~will be~~is fully staffed

and trained. This organization is responsible for ensuring air permit compliance, and more generally environmental performance, regulatory compliance and ~~for reduction, reuse and/or reclaim~~resource conservation efforts across the Fab 8 Campus, including future Fab 8.2.

4.2 Air Emission Characteristics

Air emissions anticipated from the operation of the facility include:

**Insignificant HAP emission levels* are defined by 6 NYCRR PART 201-6.3(d)(7) as emissions that do not exceed 1,000 pounds per year for any individual HAP.

4.3 Air Pollution Control Equipment

The chemical vapor and specialty gas emissions will be controlled by a combination of air pollutant abatement systems, designed specifically for the ~~type~~types of chemicals and specialty gases~~. AMD~~ that will be used. GLOBALFOUNDRIES fabs use a combination of the following abatement systems: wet scrubbers, thermal oxidizers, and carbon absorption systems. The abatement systems will be a combination of centrally located and point-of-use (POU) systems, depending upon the source to be controlled. Various operational parameters (e.g~~.~~., temperature, flow rates, pH) will be continuously monitored to assist in ensuring the proper operation of abatement systems.

~~Though not specifically required under the facility's air permit, AMD intends to develop a~~A Compliance Assurance Monitoring (CAM) plan will be used as a compliance monitoring measure for Fab 8.2, in accordance with the voluntary commitment made for Fab 8.1. The purpose of a CAM plan is ~~a Title V requirement that aims to have facilities~~to maintain control devices in

such a manner as to ensure compliance~~. The rule allows facilities to design~~ and is a typical requirement of a Title V permit. CAM plans are designed based on current requirements and operating practices; to select representative parameters upon which compliance can be assured; to establish indicator ranges or procedures for setting indicator ranges, using performance testing and other information to verify the parameters and ranges; and to correct control device performance problems as quickly as practicable. CAM plans include operating indicator parameter ranges for emission control equipment, which represent operation consistent with good air pollution control practices to minimize emissions and provide reasonable assurance of compliance with permit terms and conditions.

~~AMD has committed to~~As previously volunteered, GLOBALFOUNDRIES will install emission control equipment comparable to Best Available Control Technology (BACT). The ~~specific models of~~performance requirements for control equipment to be installed at the facility ~~have not been selected to date~~will be determined in the final design process, and specific equipment models will be determined through the procurement process, with reference to those performance specifications. The air emission calculations are based on levels of control efficiency achievable with BACT: acid and caustic wet scrubbers ~~for~~to control inorganics and rotary concentrator thermal oxidizers ~~for~~to control emissions of volatile organic compounds (VOCs).~~—~~

~~AMD~~GLOBALFOUNDRIES anticipates that this technology will achieve destruction and removal efficiencies (DRE) of ~~98~~95% for thermal oxidizers and 85% or greater for wet scrubbers. However, it is important to note that DRE is dependent upon concentration and emission streams consisting of low chemical concentrations may be limited in their ability to consistently achieve ~~the percent DRE previously stated~~these DRE's. Technology specifications for BACT ~~level technology~~ for these types of emission streams include specific concentration thresholds in lieu of meeting a percent reduction for the contaminants present. Furthermore, due to the potential variation in control efficiency for individual VOCs, a control efficiency of 90% for each individually speciated VOC was assumed for the purposes of the air dispersion modeling calculations in order to provide a conservative (worst-

case) estimate of the facility's anticipated emissions and associated offsite impacts.

~~The central~~Central scrubbers ~~AMD expects to use~~may have a horizontal or vertical packed bed design. A design with a high L/G ratio (liquid to gas) ~~to~~will assist in maximizing the DRE. ~~The systems have backup fans, backup power, and usually a backup scrubber to ensure emissions abatement in the unlikely event of an interruption.~~ At a minimum, system pressure drop, liquid flow rate, and scrubber liquor pH are monitored to ensure sound operation. See Appendix D for an example scrubber system diagram.

The type of central VOC abatement system ~~AMD~~GLOBALFOUNDRIES uses concentrates and pre-heats the emissions before the oxidizer to maximize the DRE. Pre-heating is accomplished using heat recovery from the post abatement air, which minimizes the energy required for the system. The system has backup fans and power to ensure abatement in the unlikely event of an interruption. The oxidizer temperature is continuously monitored to ensure proper operation.

POU abatement is chosen for specific tool emissions from individual processes. Therefore, the need, type and design of these systems ~~is~~are variable~~,~~; depending on the process. Many of these systems include an oxidizer and a scrubber. Operational parameters such as oxidizer temperature and liquid flow rate are typically monitored to ensure proper operation. Typically, the exhaust from these systems is routed to a central abatement system for a second level of abatement.

A graphical representation of a typical air pollution control equipment configuration is presented below:

The facility will develop and maintain written operating and maintenance procedures for its specific abatement systems, such as:

- start-up and shutdown procedures;
- operating parameters and procedures;
- preventive maintenance procedures;
- incident response procedures; and
- hazardous materials leak detection and alert/shutdown/evacuation system.

4.4 Climate Change Programs

~~AMD's fab operations are a significant consideration in the company's strategy to reduce its climate impacts. AMD published its first Global Climate Protection Plan in 2001. This annual report, which is reviewed at the executive management level, focuses on goals and strategies to reduce impacts on global warming. AMD Green, our corporate environmental stewardship initiative, includes designing energy-efficient products, partnering with government and industry in leadership initiatives, and~~GLOBALFOUNDRIES has a corporate commitment to continually seek to improve the efficiency of its operations relative to greenhouse gas emissions and climate impacts. Its implementation program is designed around fab operational requirements and capabilities. GLOBALFOUNDRIES partners with governmental agencies, customers, and industry groups in a range of research and policy initiatives which focus on reducing the energy use, greenhouse gas emissions, and overall environmental impact associated with ~~manufacturing, design, and administrative~~design and manufacturing of semiconductors while also maintaining operational flexibility necessary to ensure sustainable operations.

~~AMD~~GLOBALFOUNDRIES has partnered in multiple voluntary environmental stewardship initiatives, including ~~The Green Grid consortium, the EPA's Climate Leaders program, ENERGY STAR®,~~the World Semiconductor Council ESH Task Force, the ~~Green Power Partnership~~International SEMATECH

Manufacturing Initiative's (ISMI) ESH Technology Center, and the SIA/EPA PFC Reduction Partnership for the Semiconductor Industry.

~~In February 2007, AMD helped create and joined The Green Grid consortium, a group of key leaders in the data center industry who are interested in lowering the overall consumption of power in datacenters and business computing centers around the globe. AMD is also working with partners like EPA, DOE, and NYSERDA to improve datacenter energy efficiency.~~

~~AMD was the first member of the semiconductor industry to join the EPA Green Power Partnership and received EPA's Green Power Leadership award in 2002. AMD set an EPA Climate Leaders goal to reduce greenhouse gas emissions, normalized for production, 40 percent by 2007 compared to 2002 levels. By the end of 2006, AMD had reduced normalized emissions by more than 50 percent compared to 2002 levels, exceeding the goal ahead of schedule. AMD has established a new Climate Leaders goal to further reduce emissions 33% by 2010 compared to 2006.~~

~~AMD has made significant reductions in perfluorocarbon (PFC) and energy use in~~From the foundation of Fab 8 design, GLOBALFOUNDRIES has collaborated with like-minded partners such as the Rocky Mountain Institute and the New York State Energy Research and Development Authority (NYSERDA) as we strive to optimize our design relative to operational requirements and environmental sustainability. GLOBALFOUNDRIES has set the objective of LEED® (Leadership in Energy and Environmental Design) Gold certification, which is a high bar for semiconductor manufacturing at this scale of operations. Furthermore, GLOBALFOUNDRIES seeks to achieve that certification through a rigorous focus on cost-benefit analysis that spans capital investment and long term operating expense so that we can be assured that we are optimizing the use of the resources (financial and

natural) for the long term sustainability of the facility. Multiple energy efficiency measures have already been implemented in Fab 8.1 and ancillary facilities on the Fab 8 Campus, and GLOBALFOUNDRIES continues to strive to improve resource conservation across current operations and future designs, implementing lessons learned within the company and benchmarking to external experience.

GLOBALFOUNDRIES is a leader in the reduction of perfluorocompound (PFC) emissions from manufacturing processes. ~~AMD set and achieved a goal to reduce absolute PFC emissions to 50 percent of 1995 levels to support~~For many years the GLOBALFOUNDRIES Fab 1 Campus in Dresden, Germany has supported the World Semiconductor Council's worldwide goal of a 10 percent reduction in PFC emissions by 2010~~. This goal was achieved~~ compared to 1995 levels. The Fab 1 Campus achieved its own goal to reduce absolute PFC emissions 50 percent below 1995 levels primarily through adopting advanced low-emission technologies in ~~AMD's fabs in Dresden, Germany~~Dresden. For this and other voluntary initiatives, GLOBALFOUNDRIES' legacy operations received EPA's Climate Protection Award in 2008. GLOBALFOUNDRIES has continued to apply industry best practices for PFC reduction throughout the Fab 8 Campus.

5.0 HAZARDOUS WASTE

5.1 Hazardous Waste Generation / Waste Minimization Programs

It is ~~AMD's~~GLOBALFOUNDRIES' policy and intent to effectively manage hazardous waste in a manner that will not require the facility to be regulated as a Resource Conservation and Recovery Act (RCRA) Treatment, Storage or Disposal (TSD) facility.

5.2 Waste Identification / Characterization

Waste will be identified and segregated to ensure proper disposal, prevent mingling of incompatible compounds, and promote pollution prevention activities on-site. The Environmental, Health and Safety (EHS) department

will determine the proper waste disposal methods for wastes generated at the site.

Proper characterization of all industrial solid waste generated at the site is an essential and mandatory requirement under the responsibility of EHS. Analytical data and/or process knowledge are used to characterize each waste, and all relevant information will be documented. Waste profiles will be used to identify all regulated waste streams that are transferred off-site. Each waste profile will contain information pertinent to the contents and hazardous properties of the specific waste stream.

5.3 Hazardous Waste Storage / Handling

Hazardous waste will be appropriately segregated and placed in registered waste management units. Corporate policy requires that logs be maintained in each waste accumulation area to track compliance with ~~the 90-day hazardous waste accumulation limit.~~applicable regulations. Containers of incompatible wastes shall be separated during accumulation by means of a dike, berm, wall, or other device. Corporate policy also requires all tanks used for on-site hazardous waste accumulation to be labeled with the words “Hazardous Waste”, and to be labeled with the accumulation start date in order to track compliance with the 90-day accumulation limit.

Compatible waste container types have been determined for the anticipated waste streams for the facility and are listed below.

Plastic bags, with color-coded labels, will be used to line the inside of the waste containers. Waste containers will also have the appropriate label fixed to the front or top of the can, except those used for non-contaminated debris. This label identifies the general waste type allowed in the container.

5.4 Hazardous Waste Disposal and Documentation

~~AMD~~GLOBALFOUNDRIES' waste management policy follows the preferential hierarchy of reduce, reuse, and recycle, with disposal as the least favored, as described in the Reuse and Recycling section below.

Hazardous waste management, including storage, handling, and transportation, is highly regulated under state and federal law. ~~AMD~~GLOBALFOUNDRIES will ensure that all wastes are disposed of in accordance with municipal, state, and federal regulations. As an initial measure to ensure sound management of chemical use and ultimate reuse or disposal, ~~AMD~~GLOBALFOUNDRIES requires that the EHS organization review and approve chemicals before they are brought on site. Departments purchasing chemicals will be required to complete a Chemical Review Form prior to bringing a new chemical onsite. The proper chemical storage, handling, and waste disposal procedures will be identified and developed as part of this chemical review and approval process.

The transportation of hazardous materials to and from the site is highly regulated. ~~The Uniform Hazardous Waste Manifest provides uniform, centralized documentation and tracking. AMD Fab 4X~~GLOBALFOUNDRIES Fab 8.2 personnel will be well trained in hazardous materials transportation and waste management requirements.

5.5 Inspections/Audits

Qualified EHS personnel will conduct or direct inspections of ~~RCRA~~waste tank systems and waste accumulation areas. Inspections of bulk waste tank systems and non-bulk containers in waste accumulation areas will occur to ensure that proper storage/handling practices are occurring.

Outside facilities providing transportation, treatment, storage and/or disposal services for regulated wastes will be reviewed prior to using their service and periodically thereafter. An audit team will be established to conduct such assessments and will consist of representatives from EHS.

5.6 Training

Employees responsible for the shipping, receiving, handling, storing, labeling, or marking of hazardous materials, including hazardous wastes, will be trained in performing these duties. Hazard Communication training will also be provided to all employees working with or around chemicals. This training provides information on chemical safety, chemical hazards, personnel protective equipment, reporting emergencies, chemical information (MSDS), and emergency procedures.

5.7 Records

~~AMD~~GLOBALFOUNDRIES will generate and maintain the documentation required by this program (e.g., Inspection forms, training records, waste manifests, waste profiles, and waste characterizations) in accordance with the applicable regulations and corporate record retention policies.

5.8 Reuse and Recycling

At all ~~AMD~~GLOBALFOUNDRIES facilities, reuse and recycling is encouraged as a means of waste minimization. Reduction in usage levels can be accomplished through the identification of innovative recycle opportunities in lieu of disposal. By careful segregation of waste streams, chemical waste can become a raw material source and can be put to productive use, thus replacing the need for new production.

~~AMD~~GLOBALFOUNDRIES attempts to reduce, reuse, and recycle~~, and~~ ; with abatement as a last resort~~, abate~~. EHS resources are prioritized towards identifying opportunities to design waste generation out of production processes. In conjunction, significant effort is focused on proactive collaboration with tool vendors towards preferential material substitution and minimization of consumption.

6.1 Chemical Use and Storage

Fab ~~4X~~8.2 will be engineered, designed, constructed, and operated taking into account applicable codes, guidelines, and good management practices. The operations will conform to current environmental and safety regulations including the conditions specified in local permits. In addition, spill prevention and risk management plans will be required to identify standard practices related to storage, transfer, and distribution of chemicals, as well as information on spill reporting and response measures.

~~AMD~~GLOBALFOUNDRIES will maintain written operating and maintenance procedures for its specific chemical management systems, addressing:

- delivery, movement, storage, and removal;
- bulk liquid storage (for diesel fuel, chemical, and waste liquids);
- loading and unloading of bulk liquids;
- chemical and gas handling; and
- incident response.

~~AMD~~GLOBALFOUNDRIES will use a number of operational control systems to address changes that can affect environmental or safety performance. Change control mechanisms will include:

- Chemical review and approval. This will include a review by site EHS staff for potential EHS concerns associated with the new chemicals proposed for use on-site.~~-~~
- A review of any change in the manufacturing equipment, process, or facilities that may impact environmental and/or safety performance.
- Specialized training for employees involved in chemical handling and management.
-

The following table presents an overview of the types and relative amounts of chemicals anticipated for the facility, based on current processing at similar facilities. Continuous technology development and integration will drive variation over time, and this list of chemicals is not intended to be exhaustive or fixed.

CMP slurries are used to polish the surface of a wafer to even the surface topography. This step can be used at different points throughout the process, so a different chemical mixture is needed depending on the surface needing polishing. The chemical mixture is called a “polish” or a “slurry”. Slurries are usually between 50 and 95% water, normally on the high end of that range. As such, the pH is usually close to neutral, but can be slightly acidic or caustic in some cases. An organic acid (e.g., citric acid) or caustic (e.g., ammonium hydroxide) is added to adjust the pH as needed, usually at a concentration of less than 5%. The second most common constituent of a slurry is the abrasive, usually silicon dioxide. The abrasive is used to mechanically polish the surface, not unlike sandpaper used on wood. Other constituents, if any, are normally at a concentration of 1% or less. These constituents can be used to alter the surface chemistry of the wafer, prevent corrosion on the wafer, or to prevent bacteria growth.

- ~~The following table presents an overview of the types and relative amounts of non-bulk chemicals anticipated to be stored on a typical basis in the HPM Warehouse.~~

6.2 Typical Storage Systems for Chemicals

6.2.1 Storage and Delivery of Liquid Chemicals

Bulk chemical storage and delivery systems are used for the majority of liquid chemicals used in fab facilities. This reduces the amount of chemical handling necessary to sustain equipment, increases uptime for expensive fab tools, decreases exposure of the chemicals to possible contamination, reduces the space needed to store and handle chemicals, reduces the interactions with personnel, and thus, reduces the possibility of an inadvertent release to the environment.

In Fab ~~4X~~8.2, bulk chemical delivery systems (BCDS) will deliver high purity, high volume chemicals from protected chemical storage rooms and areas. Liquid chemicals will be stored in storage tanks of various sizes depending on required usage. Tanks will be segregated by hazard class in separate chemical storage rooms. Chemical bulk storage tanks will be provided with secondary containment and liquid leak detection. Chemicals will be dispensed to individual process tools by means of a chemical dispense module connected to a bulk storage tank, chemical tote, or ~~housing~~ 55 gallon drums. Chemicals will be pumped to valve manifold boxes located close to the process tools. The valve manifold boxes will regulate and distribute the chemical to individual tools. The chemical dispense modules, valve manifolds, and lines will be secondarily contained or enclosed and equipped with excess flow and leak detection and exhaust. Detection of excess flow and/or a leak will automatically shut off the flow of chemical and notify site personnel. Portions of chemical storage and dispense systems used for flammable liquids will also be equipped with special fire detection and suppression systems. The materials of construction and specific safeguards and controls will depend on the hazards of the chemical(s) being stored and dispensed.

Liquid chemicals will be received in containers such as 55~~-~~ gallon drums or 300~~-~~ gallon totes or by tank trucks. Containerized chemicals will be delivered to a designated chemical delivery dock and stored in segregated chemical storage rooms equipped with spill containment, liquid leak detection, and exhaust. Tank trucks will off load chemicals through specially keyed and monitored fill stations. See Appendices E and F for example bulk chemical delivery system diagrams.

6.2.2 Storage and Delivery of Gases

State of the art gas delivery systems will be used to deliver a variety of compressed gases to process tools. Compressed specialty gases will be supplied in individual gas cylinders. Hazardous gas cylinders will be segregated by hazard class (corrosive, flammable, toxic, pyrophoric) and stored in separate gas storage rooms or areas equipped with exhaust ventilation and gas monitoring. In-use hazardous gas cylinders will be housed in metal gas cabinets within gas dispense rooms or areas.

Gas delivery will be regulated and controlled by a gas panel within the gas cabinet and dispensed through welded metal gas lines to valve manifold boxes located close to the process tool(s). The valve manifold box will distribute the gas to various process tools in the Fab areas. Gas cabinets, valve manifold boxes, and process tool gas panels using hazardous gases will be exhausted and monitored for leaks. Typical safety features for hazardous gases include automatic shutoff of gas flow upon detection of a leak, loss of gas cabinet exhaust, loss of power, excess flow, and manual activation of an emergency shut off button. Some gas cylinders will be equipped with a restricted flow orifice that limits the flow of gas from the cylinder if a leak should occur. Flammable and pyrophoric gas cabinets will be equipped with automatic sprinkler protection in addition to flame detectors for pyrophoric gases.

Some semiconductor manufacturing equipment is designed to use ~~toxic~~ gases contained in small cylinders that deliver the gas at or below atmospheric pressure~~ (non-pressurized).~~. Because ~~the cylinders are not under~~high pressure gas delivery lines are avoided, the risk of a release is significantly reduced. The cylinders are typically located in an exhausted enclosure integrated into the process tool, which also eliminates the use of

gas lines within the facility. ~~AMD~~GLOBALFOUNDRIES uses ~~this~~these safer ~~alternative~~alternatives for toxic gases when available and ~~technically~~operationally feasible for the process and tool operation.

~~Work areas~~There will also be ~~continuously monitored~~continuous monitoring for gas leaks. Detection of a monitored gas will activate local and remotely monitored alarm(s) to notify employees in the work areas and initiate emergency response personnel. Automatic shutdown of the gas may also be initiated depending on the type of gas monitored and location of the monitoring point.

The following table presents an overview of the types and relative amounts of specialty gases contemplated for use at the facility, based on current processing at similar ~~AMD~~GLOBALFOUNDRIES facilities. Continuous technology development and integration will drive variation over time, and this list of gases is not intended to be exhaustive or fixed.

Bulk gases anticipated to be stored at the facility's hazardous production materials (HPM) gas pad include: nitrogen trifluoride (NF_3), carbon dioxide (CO_2), nitrous oxide (N_2O), nitrogen (N_2), helium (He), argon (Ar), oxygen (O_2), hydrogen (H_2), silane (SiH_4), and forming gas (4% H_2 in N_2).

6.2.3 Hazardous Production Materials (HPM) Gas Pad

Semiconductor manufacturing facility "house gases" typically consist of: Nitrogen, Helium, Argon, Oxygen, and Hydrogen. These gases will be purchased in bulk or may be produced at in-house plants. An in-house plant consists of a system or systems, which would use processes such as cryogenic air separation (a process in which air is compressed and cooled to cryogenic temperatures, liquefied, and then separated into its components in a distillation column) to produce gases such as nitrogen, oxygen and argon. Gases are sometimes stored as liquids as the liquid form reduces the storage areas required. Federal and state codes regulate gas deliveries, handling, storage, and removal. Hydrogen liquid tanks are normally detached from any buildings or other tanks, as required by local codes.

7.0 OTHER UTILITIES

7.1 Water

Purity and consistency of water supply to the process is critical for successful operation. Ultra pure water (UPW) is essential to properly fabricate semiconductor devices, as it is the primary cleaning agent used to rinse away contaminants and remnants of silicon etched away during the production process. The geometry of semiconductor devices is so minute and complex that even the smallest contaminant can prevent a circuit from functioning properly, and these contaminants decrease the production yield of usable circuits. The preliminary design of the specific water treatment plant will continue to be refined based upon further analysis of the anticipated source water. Anticipated water treatment techniques include reverse osmosis (RO), filtration, ultraviolet (UV) sterilization, ozone sterilization and degassing. De-Ionization is conducted for the DI water streams using ion exchange technologies. Additional treatment of DI water can include sub-micron filtration, and UV and ozone treatments (used to destroy bacteria and other organic matter). Such treatments are necessary to ensure the process waters meet the stringent criteria required for semiconductor processing. Preliminary design drawings of the UPW system are included in Appendices G and H of this report, and indicate the types of treatment included in the conceptual design for the system at this time.

~~AMD~~GLOBALFOUNDRIES has implemented numerous projects to limit fresh-water consumption. State-of-the-art systems to recycle water include UPW reclaim systems, which can recycle the filter rinses and backwash waters from the UPW process water. ~~AMD~~GLOBALFOUNDRIES collects much of the process rinse waters and recycles them back through all or parts of the UPW

manufacturing system. Systems will also be designed to allow RO reject to be used in scrubbers or in the cooling tower. In addition, other recycle systems collect factory water for reuse in cooling towers, scrubbers or other mechanical systems. ~~AMD~~ GLOBALFOUNDRIES aspires to ~~achieve a minimum~~reduce projected water demand by 40% for Fab 8.2, largely through UPW reuse ~~and recycle rate of 65%.~~.

The anticipated water usage rates of the facility on a daily basis are as follows. Peak flow rates are estimated at 125% of the average daily flow rate; the duration of peak flows is estimated to be for 30 minutes two times per day.

7.2 Natural Gas

Natural gas usage will be required for the following facility functions:

- ~~Conditioning~~conditioning of the air (HVAC) and humidification~~.~~;
- ~~Heating~~heating of process and facility water~~.~~;
- ~~Warming~~warming of the air for offices~~.~~;
- ~~Fuel~~fuel for Point of Use (POU) abatement systems~~.~~; and
- ~~Fuel~~fuel for VOC abatement systems.

7.3 Fuel Oil

No. 2 Fuel oil will be required to power emergency backup generators, as well as to provide a backup fuel supply for the boiler system in the event of a natural gas outage.

* Fuel oil will be used for backup purposes only~~, and as such, the rate of usage shown is not intended to represent a continuous usage level, but instead represents the worst-case usage of fuel oil~~.

7.4 Electricity

A redundant electrical power supply will be required to operate Fab ~~4X~~8.2. Electrical demand is projected as follows:

8.0 COMMUNITY RELATIONS

8.1 Community Response Board

~~AMD~~GLOBALFOUNDRIES values open communications with its neighbors at its facilities around the world. These communications take different forms, depending upon the preferences of the community. At ~~Luther Forest, AMD welcomes participation in~~the Fab 8 Campus, GLOBALFOUNDRIES provides an open invitation to the community on a quarterly basis to hear updates on operations and projects and provide a forum for questions and answers. GLOBALFOUNDRIES also participates in meetings and committees formed from time-to-time by the Town Board or Community concerning issues related to the LFTC Campus. One specific committee called out in the PDD is the Luther Forest Technology Campus Community Response Board (CRB). The purpose of the board ~~will be~~is to advise the Malta Town Board on issues related to the Campus. GLOBALFOUNDRIES has consistently met with the CRB since its inception in 2008.

8.2 Environmental Auditing

~~AMD~~GLOBALFOUNDRIES has an established third party environmental compliance auditing policy and program for its operations worldwide. ~~AMD~~GLOBALFOUNDRIES will continue to implement its internal environmental auditing program, as well as observe and comply with all relevant State or federal laws, regulations, or policies.

In general, all ~~AMD~~GLOBALFOUNDRIES manufacturing sites are audited once every three years, with the discretion for greater or lesser frequency, dependent upon regulatory changes, business conditions, site modifications, certification to ISO 14001 and~~/or~~ OHSAS 18001, other pertinent changes in operations, and the site's audit history. Third-party consultants, with specific EHS auditing expertise, including practical familiarity with local or regional regulations applicable to ~~AMD~~GLOBALFOUNDRIES operations, conduct the audits.

Any preliminary Regulatory Audit Findings (RAFs) made during the audit are summarized in writing and presented to site management, then a preliminary Corrective Action ~~Plans~~Plan (CAP) is developed. The intent is to develop a mutually agreed-upon CAP to resolve RAFs in an expeditious manner, including identifying follow-up actions to be taken and the needed documentation. Facilities are then required to implement the actions outlined in the ~~Corrective Action Plan~~CAP. The CAP describes the specific tasks proposed to resolve the issue, the time frame in which each task will be completed, and the documentation the site will generate to support completion of the CAP.

8.3 Noise Monitoring

~~AMD~~GLOBALFOUNDRIES will continue to conduct noise monitoring in order to assess if offsite impacts are within acceptable limits or if additional mitigation is necessary. It is anticipated that the noise monitoring program will consist of ~~quarterly monitoring through the first year after commencement of full operation, followed by~~ monitoring on an as-requested basis by the Town Board. Noise monitoring would also be performed on an as-needed basis in response to specific episodic noise impacts as reported to GLOBALFOUNDRIES or the Town Board.

8.4 Community "Right-to-Know"

8.4.1 Emergency Planning and Community Right-to-Know Act (EPCRA), Hazardous Chemical Storage Reporting Requirements, EPCRA Sections 311-312

For any hazardous chemical used or stored in the workplace, facilities must maintain a material safety data sheet (MSDS) and submit the MSDS (or a list of the chemicals) to their State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local fire department. Facilities must also report an annual inventory of select chemicals by March 1 of each year to their SERC, LEPC and local fire department. The information required under the program must be made available to the public.

As the Fab ~~4X~~8 facility is anticipated to use or store various chemicals in quantities that equal or exceed the following thresholds, ~~AMD~~GLOBALFOUNDRIES will be required to report under EPCRA Sections 311-312:

- for Extremely Hazardous Substances (EHSs), either 500 pounds or the Threshold Planning Quantity (TPQ), whichever is lower; and
- for all other hazardous chemicals, 10,000 pounds.

Hazardous substances are any substances for which a facility must maintain a Material Safety Data Sheet (MSDS) under the OSHA Hazard Communication Standard, which lists the criteria used to identify a hazardous substance. MSDSs are detailed information sheets that provide data on health hazards and physical hazards of chemicals along with associated protective measures. Over 500,000 products have MSDSs which are normally obtained from the manufacturer.

Under EPCRA Section 311, facilities must submit the same MSDSs they maintain for OSHA to their SERC, LEPC, and local fire department. Alternatively, facilities may choose to submit a detailed list of the same

chemicals. This is a one-time submittal, and facilities have three months after becoming subject to the OSHA regulations to submit the documentation. Facilities that need to submit MSDSs or chemical lists under Section 311 also need to submit an annual inventory report for the same chemicals (EPCRA Section 312). This inventory report must be submitted to the SERC, LEPC and local fire department by March 1 of each year.

Facilities covered by these requirements must submit an emergency and hazardous chemical inventory form to the LEPC, the SERC and the local fire department annually. Facilities provide either a Tier I or Tier II form. Tier II forms require basic facility identification information, employee contact information for both emergencies and non-emergencies, and the following information about chemicals stored or used at the facility:

- the chemical name or the common name as indicated on the MSDS;
- an estimate of the maximum amount of the chemical present at any time during the preceding calendar year and the average daily amount;
- a brief description of the manner of storage of the chemical;
- the location of the chemical at the facility; and
- an indication of whether the owner of the facility elects to withhold location information from disclosure to the public.

8.4.2 EPCRA Toxic Release Inventory Program EPCRA Section 313

EPCRA Section 313 requires EPA and the States to annually collect data on releases and transfers of certain toxic chemicals from industrial facilities, and make the data available to the public in the Toxics Release Inventory (TRI). The regulation requires facilities in certain industries that manufacture, process, or use significant amounts of toxic chemicals, to report annually on their releases of these chemicals. The reports contain information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management. The Toxics Release

Inventory contains information on releases of nearly 650 chemicals and chemical categories from various industries.

- ~~AMD has a history of proactive reporting of its emissions. For its formerly owned US manufacturing operations, AMD published on the internet and provided at community meetings its own report of EPCRA information well in advance of US EPA's public release of the reported data. AMD anticipates that it will continue this proactive reporting when it resumes US manufacturing at Luther Forest (although EPA has begun to publish the collected data more quickly, reducing the importance of proactive, early data release such as AMD's previous practice).~~

EPCRA Section 313 reporting is required if threshold quantities are exceeded. Separate thresholds apply to the amount of the EPCRA Section 313 chemical that is manufactured, processed or otherwise used. Reports are required for any listed Section 313 chemical which is manufactured or processed in a quantity of 25,000 pounds or more over the calendar year; or which is otherwise used in a quantity of 10,000 pounds or more over the calendar year. For persistent, bioaccumulative and toxic (PBT) chemicals, reports are required if the chemical is manufactured, processed, or otherwise used above the designated threshold for that chemical.

Under the TRI program, facilities are required to submit the required reporting form (EPA Form R) on or before July 1 to cover activities which occurred the previous calendar year.

For each EPCRA Section 313 chemical at the facility in yearly amounts exceeding the respective thresholds, the following information is required to be submitted:

- the name and location of the facility;
- the identity of the EPCRA Section 313 chemical(s);
- whether the chemical is manufactured, imported, processed, or otherwise used;
- the maximum quantity of the EPCRA Section 313 chemical on-site at any time during the year;
- the total quantity of the EPCRA Section 313 chemical released during the year (separate estimates are to be provided for: on-site releases to air, water, land and injected underground; and transfers off-site for disposal);
- the total quantity of the EPCRA Section 313 chemical otherwise managed as waste during the year (separate estimates are to be provided for on-site treatment, on-site combustion for energy recovery, on-site recycling, transfers off-site for treatment, transfers off-site for combustion energy recovery and transfers off-site for recycling~~).~~);
- off-site locations to which waste was shipped containing the EPCRA section 313 chemical and the quantities of that EPCRA section 313 chemical sent to those locations for recycling, energy recovery, treatment, or disposal;
- on-site recycling, energy recovery, or treatment methods used for wastes containing the EPCRA Section 313 chemical and estimates of the treatment efficiency for each chemical; and
- source reduction activities involving the EPCRA Section 313 chemical.

~~9.0 EMERGENCY RESPONSE~~

~~**AMD WILL PREPARE AND IMPLEMENT AN**~~**9.0 EMERGENCY RESPONSE**

GLOBALFOUNDRIES is currently implementing a rigorous emergency response program ~~appropriate for the~~ that integrates all operations and activities ~~planned for~~on the Fab ~~4X.~~8 Campus. Fab 8.2 will likewise be integrated into those efforts from the earliest phases of design through construction and to full ramp of operations. The emergency response program ~~will prescribe~~prescribes the procedures and plans for the response, stabilization, remediation and recovery from anticipated emergency situations that could pose a threat to life safety or the environment. This approach has been developed with input from and collaboration with local external response organizations with which GLOBALFOUNDRIES has a long history of engagement and collaboration.

~~It is anticipated that the~~The response program will cover the following response capabilities:

- medical emergencies – chemical and injuries and illnesses;
- chemical spill containment and clean-up;
- hazardous gas release response;
- fire alarm and incipient fire response;
- employee evacuation;
- weather related emergency response; and

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- power outages.

The role of the site Emergency Response Team (ERT) ~~will be~~is to provide immediate 24/7 response, stabilization, and recovery to incipient fires, hazardous gas leaks, chemical spills, and medical emergencies that occur at the facility. In addition, it is anticipated that members will be trained and capable of confined space rescue and intervention in site events that can threaten personnel, production, facility damage, or offsite impact. The ERT will be comprised of ~~AMD~~GLOBALFOUNDRIES employees from various organizations and possibly third party service providers~~ associated with the site's chemical management system~~.

~~Approximately 50 to 100 personnel are anticipated to be members of the ERT. ERT members will be~~ERT members are drawn from all shifts and operations on site, and are required to attend and successfully complete initial and annual training and participate in routine emergency exercises.

~~AMD will obtain and maintain~~GLOBALFOUNDRIES maintains on site, emergency equipment and supplies such as first aid/medical supplies, respiratory ~~protections,~~ protective equipment, chemical protective equipment, monitoring equipment, ~~communications~~communication devices, and chemical cleanup supplies as determined appropriate.

The Incident Command System (ICS) ~~will be~~ is in place and used ~~in managing~~to manage site emergencies. ~~It is anticipated that AMD will maintain~~ GLOBALFOUNDRIES maintains contract services ~~with a vendor(s)~~ for additional emergency response resources as a contingency and will likely utilize existing arrangements such as on-call medical assistance resources.

Site management and ERT ~~will~~ coordinate and work closely with local emergency response organizations and medical facilities in developing and maintaining the emergency response program and capabilities.

A site Emergency Management Plan ~~will be established to manage~~ensures effective management of events that could impact site business activities. The site's Emergency Management Plan or its components ~~will be~~are implemented as needed to assure appropriate response to any unplanned

condition that could affect normal business operations. The plan ~~will ensure~~ensures that actions taken during recovery address personnel and business needs.

~~It is anticipated that the site activities will necessitate the preparation of an~~An Integrated Contingency Plan (ICP) ~~to address~~documents the site's emergency response plans as required by Federal, State and local regulations. Hazards and potential risks of chemical spills, fire, explosions, and environmental impacts will be identified within the ICP.

~~Resources, The ICP describes the~~ internal and external resources, including supplies, personnel and services necessary to address each anticipated emergency~~, will be addressed within the ICP.~~. ICP drawings ~~will~~ show the location and approximate quantities of hazardous materials, hazardous wastes, site drainage, utility mains, and controls ~~will be included.~~. The ICP ~~will identify~~identifies the location of emergency supplies, equipment and systems such as emergency generators, fire suppression systems, spill containment supplies, and Emergency Response Team (ERT) supplies.

Site management and ERT ~~will~~ coordinate and work closely with local emergency response organizations and medical facilities in developing and maintaining the emergency response program, plans, and capabilities. These activities will likely include:

- ~~Site~~site familiarization tours and development of response plans;
- ~~On~~on-site joint emergency response drills and exercises; and
- ~~Information~~information sharing regarding potential hazards/emergencies, ERT training, response capabilities, and ERT equipment~~; and~~.

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~~• Participation in local mutual aid programs and activities.~~

A continuously attended (24/7) Security ~~Control Station will monitor~~Command Center (SCC) monitors site fire/life safety and chemical monitoring alarms. Alarms such as fire/smoke, gas and chemical leak, building evacuation, and emergency calls will be received by the ~~Control Station.~~SCC. Trained security personnel ~~will~~ activate the on~~-~~-site ERT and initiate notification to external response agencies following established emergency response notification procedures.

Fab ~~4X~~8.2 will be fully protected by automatic fire sprinkler and smoke detection systems. Special fire ~~sprinkler and~~ sprinklers or suppression systems, such as FM200 or C02, will be used to protect some areas and equipment using flammable materials.

Site security ~~will be~~is provided by 24/7 on-site security services.~~–~~ Security protection specific to Fab 8.2 will include the Security ~~Control Station~~Command Center, controlled access, closed circuit television (CCTV) surveillance, intrusion alarms, guard tours, and other security measures.


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