Project XL

A New Era of Environmental Performance

RENEWAL OF FINAL PROJECT AGREEMENT FOR THE INTEL CORPORATION OCOTILLO SITE PROJECT XL

The attached renewal of the Final Project Agreement, dated November 13, 2001, was negotiated by a stakeholder group comprised of local residents and members of the public, Gila River Indian Community (GRIC), representatives from the City of Chandler, representatives from the Maricopa County Department of Environmental Services (MCESD), representatives from the Arizona Department of Environmental Quality (ADEQ), representatives from the Environmental Protection Agency (EPA) and Intel Corporation. This November 13, 2001, Final Project Agreement presents the decisions of the stakeholder team for this project.

Once this renewal of the Final Project Agreement is signed, Intel Corporation will begin execution, including quarterly reporting on the Internet. The first quarterly reporting as part of the renewed FPA will be issued within two months after the close of the first quarter of 2002. The stakeholder team will continue to monitor programs on the Final Project Agreement and take input from the public. The November 13, 2001 Final Project Agreement may, upon approval by the stakeholder team, be edited, modified or changed in the future. The public will be informed of future changes.

Final Project Agreement Renewal for the Intel Corporation Ocotillo Site Project XL

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I. INTRODUCTION

The U.S. Environmental Protection Agency ("EPA"), with the cooperation of State and local authorities, has initiated the Excellence in Leadership ("XL") Program to work with interested companies to develop innovative approaches for addressing environmental issues. See generally 60 Fed. Reg. 27282 (May 23, 1995). The XL Program encourages companies to come forward with new approaches that have the potential to advance environmental goals more effectively and efficiently than have been achieved using traditional regulatory tools.

The Intel Corporation ("Intel" or “the Company”), an early volunteer for the XL Program, has worked intensively with representatives of EPA, the State of Arizona, Maricopa County, the City of Chandler, Gila River Indian Community, and public stakeholders to develop and implement a site-specific XL Project. The project focuses on Intel's 720-acre manufacturing site in Chandler, Arizona (the "Site" or the "Ocotillo Site"), a description of which is included in Attachment 1 to this Agreement. Two semiconductor wafer fabrication facilities ("FABs 12 and 22") have been constructed and are operating on the Site, and additional semiconductor-related facilities may be built on the Site in the future.

Under the XL Project, a Site-wide environmental master plan has been developed, integrating both mandatory and voluntary environmental undertakings across all media--air, water, solid waste, and hazardous waste. Under the plan, Site-wide environmental goals for all media have been identified, and Intel has committed to provide public reports, in a consolidated and easily accessed format, to track progress in meeting these goals. In developing the master plan, the XL Project stakeholders have sought to reduce unnecessary, burdensome and duplicative requirements within the constraints of existing law. Several important innovations have resulted, including the creation of a consolidated reporting form, an integrated electronic contingency planning, and a streamlined air-permitting scheme.

This renewal of the Final Project Agreement ("FPA") extends the voluntary undertakings of the plan. The FPA memorializes the seriousness of the parties' intentions and that each party signing the FPA is putting its credibility and good faith on the line. The renewal of the FPA does not create legal rights or obligations and is not a contract, or a regulatory action such as a permit or rule, and is not legally enforceable or legally binding on any party. This applies to the procedural, as well as the substantive provisions of the FPA. Because it is not legally enforceable, the FPA is not an agency "action" that could be subject to review and could not subject the government to liability for breach of contract.

In developing innovative approaches for addressing environmental issues at the Ocotillo Site, Intel has been guided by four key principles. First, the Company is committed to complying with all applicable statutory or regulatory requirements. The Company has worked with authorities at all levels, however, to apply current legal requirements in a more effective manner, and to supplement these requirements with additional environmental goals.

Second, the Company has sought to improve the transparency of its environmental performance by consolidating its commitments across all media in this FPA, and by establishing an innovative reporting mechanism that allows information on all of these subjects to be publicly available in an integrated format. The Company has worked closely with all stakeholders, including interested members of the public, in developing these tools.

Third, the FPA identifies a single regulatory Agency, the Arizona Department of Environmental Quality ("ADEQ"), as the coordinating Agency for the FPA. The identification of a primary point of reference to coordinate environmental issues arising at the Ocotillo Site under the FPA should enhance the effective administration of the FPA, and provide a model for future agreements of this type. This administrative approach is not intended to reduce or conflict with the existing jurisdiction or enforcement authority of participating governmental agencies. Rather, it is intended to streamline regulatory oversight where possible; coordinate approaches to any environmental issues that arise at the Ocotillo Site, including issues that may have cross-media impacts; and make it easier for the public to obtain non-proprietary information on Intel.

Fourth, and finally, the Company has sought to improve overall environmental performance by including protective new features in the traditional air permit required for the Site, and augmenting mandatory legal requirements with significant voluntary commitments. This fresh look at overall environmental performance has been accompanied by the commitment to reduce paperwork and other procedural burdens that do not provide value-added contributions to these aggressive environmental goals. The process has been a team effort involving regulatory authorities at all levels-City, County, State, and Federal-as well as members of the local community.

Examples of the types of special performance features described more fully in the FPA include:

- Air
    - The air permit renewal in connection with this FPA utilizes Plant Site Emission Limits ("PSELs"), which require Intel to keep air emissions below "major source" levels for all criteria pollutants, even if Intel expands the operations on the Site during the permit term.
    - Modeling techniques for hazardous air pollutants have been used and will continue to be used to provide additional assurance that the relevant PSELs are protective for the neighboring community, and for employees and visitors to the Site.
    - Under the FPA, Intel also has agreed to limit emissions below the PSELs to levels that are commensurate with production activities on the Site. Toward that end, Intel has committed to maintain a production-based Production Unit Factor (“PUF”) performance standard that will allow the public to track the Company's performance against this commitment.

- Extensive reporting and record keeping requirements based on mass balance and/or emissions factor evaluations as provided in the air permit and in this FPA to track actual emissions, and to evaluate the effects on air emissions of changes in operations at the facility.
- The air permit provides operational flexibility for Intel by pre-approving changes in processes, and allowing the addition of new, semiconductor-related facilities at the Site, so long as PSELs and other requirements (e.g., reporting requirements) are satisfied.

- Water Use
  - Intel commits to voluntarily minimize its consumption of fresh water by using treated city effluent water or internal recycled water for the consumptive uses of manufacturing support cooling tower makeup and landscaping at the Ocotillo Site.
  - The Company also commits to arrange for the treatment of its manufacturing effluent for reuse internally or reinjection into the groundwater to replenish the aquifer.
  - The Company will publish information on the percentage of water conservation at the Ocotillo site.
  - Under this XL Project, Intel also commits to manage stormwater in retention basins rather than in dry wells.
- Management of Waste
  - Intel voluntarily commits to recycle significant volumes of solid waste generated at the Ocotillo Site, including but not limited to, paper, aluminum, wood, metal, and glass.
  - Intel also voluntarily commits to recycle chemical waste, which is comprised of both of hazardous and non-hazardous wastes generated at the Ocotillo Site.
  - Information on the Company's progress toward attaining its waste recycle goals for the Ocotillo Site will be made publicly available.
- Design for the Environment ("DFE") Program
  - Intel has incorporated its DFE program as a key element in its environmental management system for the Ocotillo Site. As part of its DFE program, Intel is committed to developing environmentally compatible products and processes by means of continuous improvement methodologies.
  - The DFE program prioritizes environmental management according to a hierarchy, which begins with reduction and is followed by reuse, recycle and environmentally proper disposal. The environmental improvement are

developed for each new technology generation and transferred to manufacturing facilities where they are consistently implemented.

- Integrated Electronic Contingency Planning
    - Intel will maintain an integrated electronic emergency plan for preventing, preparing for and responding to accidental spills or releases of chemical substances at the Ocotillo Site.
    - This integrated plan will enhance Intel's accident prevention measures and any necessary emergency response at the Ocotillo Site, as well as increase the community's access to and understanding of emergency response information. The plan will comply with all applicable environmental emergency-planning requirements.
- Integrated Reporting
    - Intel has combined routine environmental reporting requirements and accountability measures for voluntary goals set forth in this FPA into a single, integrated report form that will be publicly available and distributed to participating agencies on a quarterly and annual basis.
    - This consolidated report form is intended to increase public understanding of, and public access to, information regarding the Ocotillo Site. The ability to integrate routine reporting will provide Intel staff with more time to focus on real environmental improvements.
- Other Environmentally Beneficial Activities
    - As part of the XL Project, Intel also commits to maintain a setback of 1,000 feet from the closest manufacturing-related building structure on the Ocotillo Site to residential property, even though the legally required setback is only 56 feet.
    - In addition, Intel has committed the Ocotillo Site to be involved in the Company's environmental mentoring activities and in its equipment donation programs.
    - Intel also is committed to investigate additional innovative ways to meet the trip reduction requirements of Maricopa County.
    - Intel commits to look for opportunities for energy conservation and to provide information on its energy conservation activities in the quarterly consolidated report.
    - Intel commits to support the proliferation of the positive lessons learned from Project XL in order to provide an opportunity for other companies to leverage the lessons learned throughout the successful implementation of this Project. Intel will provide information on its transferability activities in the quarterly consolidated report.

This FPA establishes the framework for Intel's XL Project at the Ocotillo Site. In particular, the FPA includes as attachments the current air permit, wastewater permit, and the URL where the current consolidated reports for the Ocotillo Site can be found. These attachments form an integral part of the FPA, and the requirements set forth in them are enforceable under existing laws and regulations. In addition, as noted above, the text of the FPA includes specific long-term environmental goals for the Ocotillo Site that are not required by law.

II. TERMS AND CONDITIONS OF THE FPA

A. **AIR EMISSIONS:** Intel will comply with all applicable federal, state and Maricopa County air emissions requirements as set forth in the air permit, a copy of which is included in Attachment 2 to this Agreement. Under the air permit, Intel is required to limit its emissions of criteria and hazardous air pollutants from the Ocotillo Site to levels that are below specified Plant Site Emissions Limits ("PSELs"). The air permit provides operational flexibility to Intel through the pre-approval of certain activities, including changes in equipment and processes that are needed in advanced semiconductor manufacturing and the potential construction of new facilities at the Site [1], provided that air emissions remain below the PSELs and all other air permit conditions are satisfied. In addition, as part of this FPA, Intel commits to undertake additional voluntary initiatives to limit air emissions and to analyze the potential impacts of air emissions from the Ocotillo Site.

[1] The types of new facilities that can be built on the Site under the Preapproval procedure of the air permit are limited to semiconductor related operations.

1. **Plant Site Emissions Limits:** The air permit establishes PSELs for emissions of volatile organic compounds ("VOCs"), oxides of nitrogen ("NOx"), carbon monoxide ("CO"), particulate matter of 10 microns or smaller ("PM_{10}"), sulfur dioxide ("SO_2"), combined organic hazardous air pollutants ("HAPs")[2], combined inorganic HAPs, sulfuric acid, phosphine, and arsine (also inorganic HAPs). In particular:

   - The PSEL for VOC emissions for the Ocotillo Site is 49 tons per year.
   - The PSEL for NO_x emissions for the Ocotillo Site is 49 tons per year.
   - The PSEL for CO emissions for the Ocotillo Site is 49 tons per year.
   - The PSEL for PM_{10} emissions for the Ocotillo Site is 10 tons per year.
   - The PSEL for SO_2 emissions for the Ocotillo Site is 5 tons per year.
   - The PSEL for aggregate combined organic HAP emissions for the Ocotillo Site is 10 tons per year.
   - The PSEL for aggregate combined inorganic HAP emissions for the Ocotillo Site is 10 tons per year.
   - The PSEL for sulfuric acid emissions for the Ocotillo Site is 1 ton per year. Sulfuric acid emissions also shall be included in the aggregate combined inorganic HAP emissions PSEL.
   - The PSEL for phosphine emissions for the Ocotillo Site is 1 ton per year. Phosphine emissions also shall be included in the aggregate combined inorganic HAP emissions PSEL.

- The PSEL for arsine emissions for the Ocotillo Site is 14 pounds per year. Arsine emissions also shall be included in the aggregate combined inorganic HAP emissions PSEL.

These PSELs establish enforceable limits on emissions of VOCs, NOx, CO, PM_{10}, SO_2, organic HAPs, inorganic HAPs, sulfuric acid, phosphine, and arsine from the Ocotillo site. Under the air permit, Intel is required to comply with these PSELs even if it makes process or equipment changes or constructs new facilities at the Ocotillo Site. The PSELs are set at levels that are below the current threshold for major sources of VOCs, NOx, CO, PM_{10}, SO_2 and HAPs under the federal Clean Air Act and Maricopa County Pollution Control Regulations. The 9-ton increase in the VOC PSEL to 49 tons per year is intended for any expansion to the Ocotillo site beyond the current and projected FAB 12 and 22 facilities' capacities.

[2] HAPs are defined in this FPA, and in the air permit, as the hazardous air pollutants that are identified in Section 112(b) of the federal Clean Air Act, as amended.

2. **Operational Flexibility**; **Preapproval Of Modifications:** The air permit allows for operational flexibility through the pre-approval of certain activities, including changes in equipment and processes that are needed in advanced semiconductor manufacturing and the potential construction of new facilities at the Site, provided that air emissions remain below the PSELs and all other permit conditions are satisfied. Intel will include a list of all significant changes made at the Ocotillo Site in the reports discussed in Section II(A)(4) below.

3. **Additional Protective Measures:**

a. **Air Quality Evaluation:** To provide additional assurance that the PSELs for HAPs are sufficiently protective of human health, Intel, in consultation with EPA, ADEQ and MCESD, determined through screen modeling that the May 11, 1999 1-hour, 24-hour, or annual (if available) Arizona Ambient Air Quality Guidelines ("AAAQGs") will not be exceeded at the property line for any HAP listed in attachment 3 of this FPA if that HAP is emitted at its PSEL. The modeling is based on the conservative assumption that each chemical could be emitted at a constant level of 10 tons per year (or 1 ton per year in the case of phosphine or sulfuric acid and 14 pounds per year in the case of arsine), even though the PSELs limit aggregate emissions from all inorganic HAPs at 10 tons per year, and all organic HAPs at 10 tons per year. In addition to HAPs, Intel has performed screen modeling for a number of additional chemicals identified in attachment 3 of this FPA. An explanation of the screen modeling that has been completed for these chemicals is also provided in Attachment 3 to this FPA.

Intel also is required by its air permit to undertake a screen modeling analysis in connection with the utilization of a new chemical that generates air emissions for which an AAAQG has been established, but which has not

been subject to the screen modeling described above. That is, Intel will apply the conservative assumption that the new chemical will be emitted at a constant rate of 10 tons per year, or at a rate that corresponds to the expected emissions level for that chemical, and then utilize screen modeling to evaluate whether the AAAQG would be exceeded under such circumstances. Intel will limit annual emissions of any such chemical to below the appropriate AAAQG as predicted by the screen model[3] at the property line.

[3] If application of a screen modeling analysis indicates a potential for exceeding the relevant AAAQG, the permit allows Intel to use a more refined, EPA-approved analysis. The permit requires that any additional modeling or analysis must be undertaken in consultation with, and with the approval of, ADEQ and MCESD. The permit also requires that such modeling shall take into account any changes in relevant parameters that may have occurred due to activities at the Site.

Finally, under this FPA, Intel also commits to undertake a special analysis for other new chemical substances that are introduced to the Site in the future which generate air emissions and have not already been evaluated under the air permit, or under the AAAQG screen modeling procedure set forth above, and which present potential concerns to human health or the environment. In such a case, Intel agrees to consult with MCESD and the Arizona Department of Health Services to determine if emissions from such a chemical may pose a concern based on screen modeling of potential property line concentrations. Intel will use its best efforts to initiate consultations as early as practicable before the new chemical substance is used in production quantities at the Site. If it is determined that an emissions limit at the property line is necessary to protect human health, Intel will limit its annual emissions below the limit which is identified.

In addition to these commitments to model the impact on the community of air emissions at the property line, Intel also will evaluate maximum on-site (i.e., inside-the-property line) modeled ambient air concentrations of certain chemicals that generate air emissions to ensure employee safety and the safety of individuals that may visit the Site. Specifically, Intel commits to evaluate maximum on-site modeled concentrations of all chemicals used at the Ocotillo Site, which have been modeled under the air permit, to assess the potential for exposure to employees and visitors on the property at the 1-hour AAAQG exposure level for such chemicals. If Intel's inside-the-property line screen model analysis indicates a potential for exceeding the relevant AAAQG for a particular chemical used on-site, Intel may conduct a more refined, EPA-approved analysis. Any additional modeling or analysis will be undertaken in consultation with, and the approval of, EPA, ADEQ and MCESD. If Intel declines to perform this additional analysis, or if such analysis confirms the results of the screen modeling, Intel commits to limit its emissions of that chemical below the level that would not exceed the 1-hour AAAQG at the point of maximum concentration within the property line.

b. **Air Emissions Management:** The air permit for the Ocotillo Site does not restrict Intel to its current level of production activity and provides pre-

approval for changes and construction that may increase production, provided Intel's air emissions remain below the PSELs and all other permit conditions are satisfied. Under the FPA, however, Intel commits that it will not increase the level of its emissions beyond the levels proportional to increases in production activities. To demonstrate this commitment, Intel agrees to maintain the production- based performance standard. The production-based performance standard will measure pounds of total VOCs and aggregate HAPs emitted per standardized unit of production. Intel will include in the annual Project XL reports the total VOC and aggregate HAP emissions per unit of production at the Ocotillo Site. This measurement will allow the public to verify that any increase in VOC and HAP emissions at the Ocotillo Site is the result of increased production activities and not a consequence of decreased environmental control.

4. **Reporting of Air Emissions:** Compliance with the PSELs will be verified through periodic emissions reporting. This reporting, which satisfies all MCESD reporting requirements, has been incorporated into the integrated reporting form for the Ocotillo Site. The emissions reporting requirements include:

    - Quarterly reporting of actual air emissions of all pollutants that are subject to a PSEL or for which specific limits have been identified under the procedures described above. The emissions calculations will be based on mass balance and/or emissions factor calculations, as described more fully in the air permit;
    - Annual summary of actual aggregate emissions of all pollutants for which a PSEL exists;
    - Annual summary of known actual emissions of individual HAPs emitted above 1,000 pounds per year, the emissions of sulfuric acid, phosphine, and arsine per year and a listing of any known individual HAPs that were emitted in quantities less than 1,000 pounds per year; and
    - Annual reporting of VOC and HAP emissions per unit of production.

    The quarterly and annual reporting requirements on air emissions are based on 12-month rolling averages, which indicate the actual emissions of regulated pollutants for the preceding 12 months. Such periodic reporting will allow the public to verify on an ongoing basis that Intel has fully complied with the PSELs in the air permit. In addition, Intel will disclose on an annual basis its total VOC and aggregate HAP emissions per unit of production at the Ocotillo Site.

B. **WATER USE:** Intel's Ocotillo Site will comply with federal and local requirements relating to the pretreatment and discharge of wastewater. These requirements are set forth in the industrial user permit in Attachment 4. The Company has incorporated the pretreatment reporting requirements into the

Project XL report for the Ocotillo Site. In addition, as part of this FPA, Intel will undertake certain water conservation activities to minimize the Company's use of fresh water, and to maximize the beneficial reuse of treated water, as explained below.

1. **Site Wide Water Conservation**

   - *Intel commits to a site wide water conservation goal of 75%. This will be attained through reuse or recycle of process effluent water for supply to the semiconductor manufacturing operations at the Ocotillo Site. This water may be supplied by the City of Chandler's Ocotillo Water Reclamation Facility or from on site recycling efforts.*

   - *Intel will report net City Water use per capita in the Project XL Annual Report for comparison with other water users*

   This percentage is calculated by the ratio of total water reused and recycled divided by the total volume of water purchased by Intel from the City of Chandler. The Company will account for this percentage of water utilized for purposes of calculating water conservation performance. Results will be included in the consolidated progress reports issued quarterly.

   Intel commits to provide recycled or reclaimed water for consumptive uses of manufacturing support cooling tower makeup and landscaping at the Ocotillo Site and commits to the treatment of manufacturing effluent for internal reuse or for reinjection into the ground water supply.

   Intel commits to purchase treated water from the City of Chandler-Ocotillo Wastewater Reclamation Facility and utilize on site recycled water for the consumptive uses of manufacturing support cooling tower makeup and landscaping at Intel's Ocotillo Site.

   The Company commits to arrange for treatment of the manufacturing effluent that may be reused on site or, alternatively, reinjected by the City of Chandler into ground water to replenish the aquifer.

C. **MANAGEMENT OF WASTE:** As part of this Agreement, Intel commits to continue the same aggressive recycling efforts displayed in the past for solid waste, hazardous waste and non-hazardous chemical waste recycled, and to report on its waste recycling activities in the consolidated report.

1. **Solid Waste**: Intel commits to recycle 60% of solid waste (including but not limited to, paper, plastic, aluminum, wood, pallets, metal, glass, cardboard, etc.) generated at the Ocotillo Site.

   Attainment of the solid waste recycling goals will be measured by tracking the ratio of the mass of material recycled to the total mass of solid waste generated. These measurements will be included in the consolidated reports issued quarterly.

2. **Hazardous Waste**: Intel commits to recycle 60% of hazardous waste generated at the Ocotillo Site.

   Intel continues to convert as much of the hazardous waste into the non-hazardous chemical waste as practical. Intel's hazardous waste goals complement the Company's existing pollution prevention efforts by decreasing the impact Intel's facilities may have on hazardous waste treatment or disposal facilities and the environment generally. Attainment of the hazardous waste recycling goals will be measured by tracking the ratio of the mass of material recycled, which includes energy recovery, to the total mass of hazardous waste generated. These measurements will be included in the consolidated reports issued quarterly.

3. **Non-Hazardous Chemical Waste**: Intel commits to recycle 70% of non-hazardous chemical waste generated at the Ocotillo Site. Intel's non-hazardous chemical waste recycling goals at the Ocotillo Site will complement the Company's existing pollution prevention efforts by decreasing the impact Intel's facilities may have on treatment or disposal facilities and the environment generally. Attainment of the non-hazardous chemical waste recycling goals will be measured by tracking the ratio of the mass of material recycled to the total mass of non-hazardous chemical waste generated. These measurements will be included in the consolidated reports issued quarterly.

D. **MANAGEMENT OF STORMWATER:** A very progressive stormwater management approach has been taken at the Ocotillo Site. Sources that may potentially impact stormwater have either; (i) been moved indoors, (ii) placed in a covered area or (iii) are secondarily contained. Within secondary containment areas, Intel will implement best management practices prior to releasing stormwater into on-site retention basins. Intel has avoided the use of dry wells at the Ocotillo Site. Intel's stormwater management system at the Ocotillo Site will:

- *Provide enhanced environmental performance. In particular, retention basins provide greater protection of groundwater as compared to dry wells.*

There is no regulatory permitting or reporting requirements associated with the use of the existing retention basins for the management of stormwater from the Ocotillo Site.

E. **DESIGN FOR THE ENVIRONMENT ("DFE"):** Intel has incorporated its DFE program as a key element in its environmental management system for the Ocotillo Site.[4] The DFE program is designed to conserve natural resources and reduce the environmental burden of waste generation and emissions to air, water and land by developing environmentally compatible products and processes. The DFE program is implemented at the corporate level and drives environmental improvements before the new manufacturing processes reach Intel's factories, such as FABs 12 and 22. Specifically, Intel's Chemical & Natural Resources Strategic Capability Segment (C&NR SCS), ensures that the Company's facilities, products and processes are designed with improvements in chemical, water and energy use for each new technology generation. The C&NR SCS helps drive Intel's DFE program, which prioritizes environmental management according to a hierarchy that begins with reducing resource consumption and is followed by reusing, recycling and disposing in an environmentally responsible manner. The environmental improvements are developed for each new technology generation and transferred to manufacturing facilities where they are consistently implemented.

In summary, greater leverage and environmental performance are achieved through Intel's DFE methodology. As a result, toxic use reduction and pollution prevention at the Ocotillo Site may be accomplished through Intel's DFE program. Intel's DFE program is part of the Company's efforts to be a leader in reducing, reusing, and recycling chemical substances, and ensuring that any wastes remaining are properly disposed of in a safe and environmentally responsible manner.

[4] The DFE Program is only part of Intel's overall commitment to the protection of human health and the environment, as reflected in the Company's Environmental Health & Safety Policy (included as Attachment 5).

F. **INTEGRATED ELECTRONIC CONTINGENCY PLANNING:** Various federal statutes require the development and implementation of emergency plans in the

event of industrial accidents and/or releases of chemical substances that may be harmful to human health or the environment. Intel is required to implement for the Ocotillo Site a contingency plan under the Resource Conservation and Recovery Act, Emergency Planning and Community Right-to-Know Act, and a hazardous materials management plan under the Uniform Fire Code.

Under this FPA, Intel will maintain an electronic emergency plan for the Ocotillo Site that integrates all applicable environmental requirements as they relate to emergency planning, to the extent authorized by law. In particular, these emergency-planning requirements will be incorporated within the already effective and nationally recognized Chandler Fire Department Hazardous Materials Management Plan ("HMMP") for Intel. The information in the HMMP will be integrated into the computer-based Emergency Information System maintained by Intel and the Chandler Fire Department. The benefits associated with this innovative approach are:

- *Enhanced community accessibility and understanding of emergency response information, including public availability of the Emergency Information System;*
- *Enhanced preparedness and prevention activities by Intel and the Chandler Fire Department due to increased clarity of requirements; and*
- *Enhanced emergency response by the City of Chandler Fire Department due to an on-board HMMP Emergency Information System computer on emergency response vehicles.*

With a single consolidated electronic emergency plan, Intel's preparedness and prevention activities will be more effective. Moreover, emergency response by qualified responders is enhanced because of their greater familiarity with the Ocotillo Site and being able to respond to all emergencies with consistent information. As a result, such a plan will provide greater protection of human health and the environment. This plan also will reduce the administrative burden associated with developing and maintaining several plans for essentially the same types of risks.

G. **REPORTING TO REGULATORY AUTHORITIES:** Various federal, state and local statutes and regulations require reporting on the storage, generation or treatment of waste as well as releases or discharges of chemical substances in different environmental media. Under this FPA, Intel will integrate all of the recurring and routine reporting requirements for the Ocotillo Site into one form or consolidated report, with the exception of the following reports:

The report under Section 312 of the Emergency Planning and Right-to-Know Act will be prepared and submitted separately. (Tier II)

The annual report under Section 313 of the Emergency Planning and Community Right-to-Know Act will be prepared and submitted separately. (TRI)

Maricopa County's Annual Emissions Inventory report to be submitted every third year when MCESD prepares its Periodic Monitoring report.

The proposed consolidated reporting formats for both the quarterly and annual reporting on Intel Corporation's progress to achieve the goals established within our five-year environmental master plan for Intel's Ocotillo campus in Chandler, Arizona. Attached to each report is a glossary of terms to assist in the review of the information. In addition, this integrated reporting system will include other indicators that will enable stakeholders to evaluate Intel's progress towards attainment of the voluntary goals that it has established for the Ocotillo Site under this FPA.

The Annual Report is an expanded presentation of the Quarterly Report. Where appropriate, the Annual Report also presents breakdowns regarding specific environmental goals. The Quarterly Report and Annual Report will be available both in hard copy and electronic version. Intel will operate the Intel Project XL Home Page:

http://www.intel.com/intel/other/ehs/projectxl

The Quarterly Report will be issued two months after the close of the quarter in order to allow sufficient time to review all laboratory analyses and quality control the data. The Annual Report will be issued on or before April 1, following the close of the calendar year.

Intel will review each Quarterly Report with our Project XL Stakeholder Team . Twice a year, Intel will hold public meetings to review our progress on the five-year environmental master plan. These public meetings will be held in April and October of each year.

Such an integrated reporting system not only will streamline reporting, but also

- *Increase public access to and understanding of information regarding the Ocotillo Site's use of resources and impact on the environment;*
- *Enhance community understanding of the information reported; and*
- *Free up Intel staff time to focus on real environmental improvements.*

Intel's routine reporting obligations, which are set forth in the attached integrated reporting form, are fulfilled by the Company's timely submission of the quarterly consolidated reports with the signatory Agencies.

FPA REPORTING REQUIREMENTS OCOTILLO SITE

REPORT	AGENCY	SCHEDULE
Tier II	MC LEPC, City of Chandler Fire Department, AZ Emergency Response Commission	March 1 (each year). Include data in the Q1 Progress report
TRI	EPA	July 1 (each year). Include data in the Q2 Progress report
Air Emissions Inventory Report (Periodic Monitoring Reporting Timeframe)	MCESD	May 1 or 90 days after MCESD's request (every third year)
Quarterly FPA Progress Report	Public / Agencies	2 months after close of quarter
Annual FPA Progress Report	Public / Agencies	April 1 (each year)

FPA KEY MILESTONES OCOTILLO SITE

TASK	MILESTONE
Stakeholder Meetings to Review Progress Reports	Quarterly – 2nd Tuesday February, May, August, and November
Public Meetings to Review Progress Reports	Semiannual – 3rd Tuesday October and April
FPA Expiration Meeting	At least 180 days prior to this termination date, ADEQ shall notify and coordinate a meeting between the Parties to negotiate a renewal of the FPA and ensure that the process receives appropriate public input.
Air & Wastewater Permit Modifications	The regulatory agency with permit authority shall follow their appropriate regulatory processes in any permit modification. Parties will ensure that the process receives appropriate public input.
Mid-Course Review Meeting	April 2004 - Hold a mid-course meeting to review the progress of the Project XL Renewal. This meeting will be combined with the routine April Annual Public meeting.

H. **OTHER INTEL ACTIVITIES THAT BENEFIT ENVIRONMENTAL HEALTH AND SAFETY:** Intel will include the Ocotillo Site in several other activities that benefit environmental health and safety. In particular, Intel is committed to investigate additional, innovative ways to meet the trip reduction requirements of Maricopa County. In addition, the Ocotillo Site will participate voluntarily in Intel's environmental education activities and equipment donation program as described in subsections 2 and 3 below. Finally, any new construction at the Ocotillo Site will comply with the voluntary setback commitment set forth in subsection 4 below.

1. **Implementation Of Trip Reduction Program**: Maricopa County requires employers to participate in its Trip Reduction Program ("TRP") to reduce air pollution from automobiles. The existing program is incentive-based and requires Intel to look for better ways to reduce Single Occupant Vehicle ("SOV") miles traveled.

   - *Intel is committed to investigate additional, innovative ways to meet the trip reduction requirements of Maricopa County.*
   - *Intel will report SOV percentage showing progress to the County goal of 60% SOV in the Project XL Annual Report.*

   Intel maintains a database for all Chandler facilities on the length of the trips of its employees who are participating in the TRP, which provides the information necessary to implement its commitment regarding the TRP.

2. **Education Programs On The Environment**: Intel currently is involved in a number of environmental mentoring and educational activities targeted at various groups in the community, including policy makers, other companies, students in all grade levels and other interested parties. Intel has or is developing partnerships with other organizations, such as the Arizona Environmental Strategic Alliance Partnership and the Joint Arizona Center for Manufacturing, Education and Training (JACMET), to provide high quality environmental programs and presentations to the public. In addition, the Company has distributed materials to the community targeted at household hazardous waste reduction and assisted in coordinating the collection process of such waste to help ensure its proper management.

   Under this FPA, the Ocotillo Site will be an active participant in Intel's environmental education activities and it will coordinate its activities, where appropriate, with programs implemented at either the Intel Arizona Site or at the corporate level. These activities will:

   - *Increase both public stewardship and awareness of environmental issues in the Chandler community; and*
   - *Provide information to help achieve more informed decision-making by policy makers.*

A summary of the environmental education activities engaged in by Intel's staff at the Ocotillo Site will be included in the consolidated reports issued quarterly.

3. **Donation Of Computers And Manufacturing Equipment**: Intel has a policy of donating new and used computers to schools and libraries as well as used manufacturing equipment to universities. As part of this FPA, the Ocotillo Site will participate in Intel's equipment donation program, which will provide the following benefits:

   - *Longer equipment life, thus potentially reducing the burden on landfills; and*
   - *Recipients obtain equipment they might not otherwise acquire due to budget constraints, which enhances the quality of their education.*

   Intel also will promote programs in the community for other organizations and individuals to be able to donate used electronic equipment for reuse or recycling.

   A summary of the status of the Ocotillo Site's participation in Intel's program for donating computers and manufacturing equipment will be included in the consolidated reports issued quarterly.

4. **Property Setback For The Ocotillo Site**: The current City of Chandler building code requires a minimum setback of fifty-six (56) feet between manufacturing-related buildings and residential property, plus one foot for each story of building. Intel has established a setback of one thousand (1,000) feet from the closest manufacturing-related building structure of FAB 12 to residential property. Intel also has contoured the landscaping to break up the horizon and add to the aesthetic appeal of the setback. As part of this FPA:

   - *Intel commits to maintaining a minimum setback of one thousand (1,000) feet from the closest manufacturing-related building structure on the Ocotillo Site to residential property. Thus, the 1,000 feet setback from residential property will apply to all new manufacturing-related building structures at the Ocotillo Site.*

   This commitment will provide continued open space between the Ocotillo Site manufacturing-related buildings and residential dwellings, and thus enhance the well being of neighboring residents

5. **Energy Conservation Initiative:** Intel commits to investigate and implement a broad spectrum of energy conservation initiatives. This commitment will also provide the community with information about these energy conservation initiatives occurring at Intel. A summary of the energy conservation initiatives

engaged in by Intel will be included in the consolidated reports issued quarterly.

6. **Transferability:** Intel commits to support transferability through local community education and mentoring programs. This commitment will provide an opportunity for other Intel sites, other companies, organizations, and suppliers to leverage the positive lessons learned throughout the successful implementation of Intel's Project XL. A summary of the transferability activities engaged in by Intel will be included in the consolidated reports issued quarterly.

I. IMPLEMENTATION OF THE FPA

1. **Agency Contacts**: Any notice required to be given or which shall be given under this FPA must be in writing and delivered to the Agency contacts listed in Attachment 5. If a Party's contact changes, that Party shall provide written notice of the change to all other Parties. This Agreement may be signed in multiple counterparts, which together will constitute a single Agreement.

2. **ADEQ As The Coordinating Agency**: The Parties to this FPA are Intel, EPA, ADEQ, Maricopa County and the City of Chandler. The Parties designate ADEQ as the coordinating Agency for the FPA. This role includes assuming specific responsibilities with regard to the activities outlined in subparagraphs (a) and (b) below. ADEQ also agrees to assist in the administration of the FPA procedures applicable to the modification, termination and renewal of the FPA. See Section II (J) below. Finally, as the coordinating Agency, ADEQ is expected to notify and coordinate meetings with the appropriate parties, including interested members of the public, to address multi-media issues that might arise during the term of this FPA.

   Nothing in this FPA shall be construed to reduce or conflict with the legal authority, statutory jurisdiction and/or enforcement powers of each participating Agency, or affect in any manner any existing delegation agreements between participating agencies. Rather, the designation of ADEQ as the coordinating Agency for the FPA is intended to (i) streamline regulatory oversight where possible; (ii) reduce confusion as to which Agency to consult regarding implementation issues; (iii) provide a means for developing and coordinating integrated approaches to any multi-media environmental issues that arise during the term of this Agreement; and (iv) make it easier for the public to obtain non-proprietary information on Intel's Project XL. ADEQ is not considered an agent of any other Party by virtue of being the coordinating Agency for this FPA.

   a. **Maintenance Of Public Records**: ADEQ will maintain publicly accessible files containing copies of the FPA and any amendments

to it, consolidated reports issued by Intel pursuant to Section II (G) of this Agreement, meeting records of all stakeholder processes and public notices regarding the FPA. Public files also will reference the location of relevant back-up documentation. These publicly accessible files will be located at:

The Arizona Department of Environmental Quality
Office of Communications,
3033 North Central Avenue
Phoenix, AZ 85012

Contact ADEQ at (602) 207-4863 for questions on any documents contained in the public files for Intel's Project XL for the Ocotillo Site.

b. **Coordination Of Other Implementation Issues**: Any Party to this Agreement which intends to (i) conduct an inspection, (ii) raise a regulatory compliance issue or any other environmental issue with Intel, and/or (iii) bring an enforcement action related to any enforceable commitment undertaken by the Company pursuant to this FPA (which includes its attachments) should provide advance notice to ADEQ, unless the Agency determines that prior notice would be inappropriate. In such cases, notice shall be made as soon as practicable.

3. **Severability of FPA Provisions**: If any provision of this FPA is deemed contrary to law, any remaining provisions that can be implemented independently of the voided provision shall remain in full force and effect.

J. **MODIFICATION, TERMINATION AND RENEWAL OF THE FPA:**

1. **Modification of the FPA**: This FPA is designed to implement a streamlined, results-based, accountable system of measurable environmental goals for the Ocotillo Site. However, additional issues may arise as a result of FABs 12 and 22 technology changes, new construction or improvements of the Ocotillo Site, amendments to relevant statutory or regulatory requirements, or other developments related to the Ocotillo Site. In this regard, Parties may suggest revisions to the FPA. Proposed modifications to the FPA, including suggested revisions to its attachments, shall be subject to the following process:

   - *Notice of any proposed modifications shall be made promptly to ADEQ;*
   - *Within ten (10) days after receiving notice of any proposed modification, ADEQ will (i) notify all affected regulatory agencies*

and the Project XL Stakeholder Team of the proposed modification, and (ii) evaluate whether and/or how individual modifications might affect the text of the FPA from a multi-media perspective;

- *Where the proposed modification involves an attached permit, the integrated report form or the consolidated emergency plan, the Agency with statutory or regulatory jurisdiction over the proposed modification shall coordinate the process, including public input, for such modifications consistent with applicable requirements:*
    - *The Agency with jurisdiction over the proposed modification may request the assistance of ADEQ in coordinating public input and evaluating the merits of the modification where appropriate (e.g., where the modification may affect other aspects of the FPA and/or where the modification could raise multi-media issues);*
    - *The ultimate decision on whether to adopt a modification to an enforceable requirement in any of the attached permits or in the consolidated reports and emergency plan, rests with the Agency that has statutory and/or regulatory jurisdiction over such modification.*
- Where the proposed modification does not involve the attached air permit, the integrated report form or the consolidated emergency response plan, the process for any proposed modification shall be as follows:
    - *All such proposed modifications shall be in writing and include a signature page for their ratification and execution;*
    - *Within ten (10) days after ADEQ receives notice of any such proposed modification the Agency shall solicit public input on the modification from the Project XL Stakeholder Team, which shall be taken into account by the Parties in determining whether to ratify the modification;*
    - *Each Party must determine whether to ratify the proposed modification within thirty (30) days of the date ADEQ notifies the Party of any such proposed modification. If the Parties ratify the proposed modification, it will become effective as of the date of execution by all Parties;*
    - *If, within thirty (30) days of the date ADEQ notifies other Parties of any such proposed modification, one or more of the Parties informs ADEQ that it does not agree to the proposed modification, the majority of the Parties may choose to implement a non-binding Alternate Dispute*

Resolution ("ADR") mechanism to determine whether the proposed modification should be further discussed;

- *The non-binding ADR mechanism shall be selected by Intel and the coordinating Agency (ADEQ) in consultation with other interested Parties, and it shall entail, at a minimum, the use of a mediation expert to assist the Parties in discussing the merits of the proposed modification. A period of thirty (30) days shall be set aside for the ADR process. This period can be extended upon agreement by all of the Parties;*

- *If, after the use of non-binding ADR for the thirty (30) day period, one or more Parties still are not willing to ratify the proposed modification, it shall be rejected.*

2. **Termination And Renewal Of The FPA:** This FPA shall terminate on or before December 31, 2006. At least 180 days prior to this termination date, ADEQ shall notify and coordinate a meeting between the Parties to negotiate a renewal of the FPA and ensure that the process receives appropriate public input. If any permit also is being reviewed at this time, the Agency which has the authority to renew the permit must ensure that the permit renewal process, including public input on the permit, is consistent with applicable requirements.

   The following procedure shall apply if a Party decides to seek withdrawal from the FPA before December 31, 2006:

   - *The Party seeking withdrawal must provide written notice to all other Parties at least one hundred and twenty (120) days before the proposed date of withdrawal. The notice must explicitly state the basis for the Party's request to withdraw from the FPA;*

   - *The Parties shall attempt to resolve any issues giving rise to the withdrawal request on an expedited basis;*

   - *If, at the end of thirty (30) days from the date that notice was given, the issues underlying the withdrawal request have not been resolved by the Parties, a non-binding Alternate Dispute Resolution ("ADR") mechanism shall be implemented by the Parties;*

   - *The non-binding ADR mechanism shall be selected by Intel and the coordinating Agency (ADEQ) in consultation with other interested Parties and it shall entail, at a minimum, the use of a mediation expert to assist the Parties in resolving the issues raised by the proposed withdrawal. A period of no more than ninety (90) days shall be set aside for the ADR process, unless the Parties agree to extend such period;*

- *If, after the use of the non-binding ADR process for the 90 day period, the issues giving rise to the request to withdraw have not been resolved, the withdrawal request shall be granted at that time; but*

- *Withdrawal from the FPA by any Party shall not affect the legal status of any permit attached to the FPA. Such permits shall expire according to their own predetermined termination dates. Nevertheless, premature termination of the FPA shall be effectuated with minimal disruption on Intel's operations at the Ocotillo Site. At a minimum, adequate lead time of not less than 90 days shall be granted to Intel to make any necessary modifications to its operations affected by the withdrawal.*

As the coordinating Agency, ADEQ will ensure that the Parties follow all of the above procedures in dealing with a request for premature termination. Upon the withdrawal of any Party, those parts of the FPA that fall within the legal authority and jurisdiction of the withdrawing Party shall become inoperative. The remaining parts of the FPA that can be implemented independently of the provision(s) that have been withdrawn, shall remain in full force and effect after the Party's withdrawal.

K. **ENFORCEABILITY OF THE FPA AND PUBLIC ACCOUNTABILITY:** Certain requirements referenced in some of the attachments of this FPA are enforceable under the appropriate implementing statutes and regulations. Such requirements shall continue to be fully enforceable in accordance with the terms of relevant statutory and regulatory authorities.

The commitments set forth in Subsections II(A)(3)(a), II(B), II(C), II(D), II(E) and II(H) of the text of this FPA are not legal requirements[5]. Therefore, Intel is not legally obligated to implement these commitments and they are not enforceable under any environmental statute or regulation. Nonetheless, Intel agrees to make every effort to attain the five year commitments in Subsections II(A)(3)(a), II(B), II(C), II(D), II(E) and II(H). However, the Parties and the public stakeholders who assisted in developing this FPA renewal recognize that the five year commitments are aggressive in nature, that it is not always possible for Intel to predict performance of new operations at the Ocotillo Site, and that potential events outside of Intel's control might impair the Company's ability to meet those commitments. In order to monitor Intel's progress in meeting its five-year commitments, the Company has established an "Action Plan." Under this plan, Intel will proceed as follows:

- *Pursuant to Subsection II(G), Intel will provide quarterly reports and an annual summary report on the progress the Company makes in attaining its five year commitments for the Ocotillo Site. If applicable, these reports shall provide the reasons for Intel's potential inability to attain one or more of these commitments.*

- *Intel will continue its close association with the public by holding, with the assistance of ADEQ, semi-annual public meetings on the FPA. These meetings will provide an open forum for discussion on the quarterly reports, and will provide opportunity for public input and suggestions on how to improve Intel's environmental performance at the Ocotillo Site.*

- *The Project XL Stakeholder team will hold a mid-course meeting to review the progress of the Project XL Renewal combined with the routine Annual Public meeting in April 2004. If, after taking into account public input, and the majority of the Project XL Stakeholder team determine that the progress on one or more of the commitments is insufficient to create an expectation that such commitment(s) will be attained, then the commitment(s) shall be renegotiated in good faith by the Project XL Stakeholder team.*

[5]Section II(A)(3)(a) summarizes certain enforceable permit requirements related to screen modeling of chemical substances that have AAAQGs. This section also discusses, however, Intel's voluntary commitment to undertake additional screen model analysis at the property line of emissions from new chemical substances introduced to the Ocotillo Site, which have not already been evaluated under the air permit. In addition, this section refers to Intel's voluntary commitment to evaluate maximum on-site modeled ambient air concentrations of certain chemicals, which generate emissions to ensure the safety of employees and site visitors.

In addition to the above measures that are designed to foster public accountability, Intel is committed to assisting regulatory agencies in implementing projects similar to the Ocotillo Site Project XL. In particular:

- *Building upon the expected success from implementation of the Ocotillo Site Project XL, Intel anticipates working with the community to apply, where appropriate, the innovative environmental approaches in this FPA to additional manufacturing and semiconductor facilities in the Chandler area.*

One of Project XL's criteria is transferability of a site-specific project to other similarly situated facilities. Intel operates another semiconductor wafer fabrication facility in the Chandler area, along with several additional facilities. Intel commits to work with EPA, state and local authorities to apply the innovative environmental approaches in this FPA to these other Intel facilities, as appropriate, after the Ocotillo Site Project XL has been implemented. Moreover, the results of the Ocotillo Site Project XL may be transferable to other semiconductor operations in the United States. Intel commits to work with EPA and electronics trade associations to implement environmental strategies that build on the success of the Ocotillo Site Project XL.

INSERT Signature pages

ATTACHMENT 1

MAP OF INTEL OCOTILLO SITE

To Be Inserted

ATTACHMENT 2

DRAFT AIR PERMIT CONDITIONS

PERMIT No. 010091

The numerical section references in this Permit are based on Maricopa County Air Pollution Control Rules and Regulations (Rules) in effect on the date of issuance of these Permit Conditions. In the event that these Rules are revised to change the content and numerical references during the term of this Permit, the revised Rules and numbering system will apply to this permit.

GENERAL CONDITIONS:

1. **Certification:**
Any document which is required to be submitted by this Permit or the Rules shall contain certification by a responsible official of truth, accuracy and completeness. 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.
[Rule 100, §200.95; Rule 220, §301.5 and §302.14]

2. **Confidentiality Claims:**
Except as provided for in Rule 100, any records, reports, or information obtained from the Permittee pursuant to the County Rules or this Permit shall be available to the public unless the Control Officer has notified the Permittee in writing and unless a person:

   a. Precisely identifies the information in the permit(s), records, or reports which is considered confidential.

   b. Provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets.

   A claim of confidentiality shall not excuse a person from providing any and all information required or requested by the Control Officer and shall not be a defense for failure to provide such information.
   [Rule 100, §200.107, §402 and Rule 200, §411]

3. **Controls:**
The Permittee shall comply with all applicable requirements of Federal air quality law, Arizona air quality law, and all applicable air quality Rules and other conditions of this Permit. In particular, the Permittee shall keep all equipment regulated under this Permit and applicable Rules in good working order through an active maintenance program. Except as provided by the applicable Rules or these Permit Conditions, the Permittee shall not operate

any equipment or process unless air pollution controls required by either this Permit or the Rules are in place, are operating within their design parameters and in accordance with any other conditions specified in this Permit. This requirement to operate any required air pollution control equipment within the approved operating parameters may be temporarily waived based on the following conditions:

a. For preventative maintenance of the control device, if the operation in a reduced processing mode on a temporary basis is allowed in the control's Operation and Maintenance (O&M) Plan, which has been approved in writing by the Control Officer.

b. In the event that control equipment is not operated as covered by paragraph (a) of this Permit Condition, the Permittee shall provide additional monitoring data and, if requested, additional modeling data to MCESD in accordance with the O&M plan.

This condition shall not be construed as an authorization to shutdown or bypass the control device during operation.

4. **Duty to Supplement or Correct Application:**

The Permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.
[Rule 200, §301.5]

5. **Duty to Comply:**

The Permittee shall comply with all conditions of this Permit including all applicable requirements of Federal laws, Arizona laws, and Maricopa County Air Pollution Control Rules and Regulations unless otherwise specified in this Permit.
[Rule 200, §308]

The Permittee shall halt or reduce activities if necessary in order to maintain compliance with these Permit Conditions, all approved operations and maintenance plans, and all applicable requirements of Federal laws, Arizona laws, and Maricopa County Air Pollution Control Rules and Regulation unless otherwise specified in this Permit.
[Rule 220, §302.10]

6. **Fees:**

The Permittee shall pay, in a timely manner, an annual fee for this Permit as determined by the Control Officer in accordance with Rule 280.
[Rule 280, §302]

7. **Fugitive Dust:**

The Permittee shall take all reasonable precautions to minimize the emissions of fugitive dust in accordance with §300 of Rule 310 and Rule 310.01.

[Rule 310, §300]

8. **Leased/Rented/Borrowed Equipment:**

If the Permittee leases, rents or lends any equipment covered by this Permit to a second party, the Permittee shall provide the second party with a copy of this Permit. It is the responsibility of the person using the equipment to make sure that the equipment is properly permitted and operated. If the Permittee does not provide the second party with a copy of this Permit, both the Permittee and the second party shall be responsible for operating the source in compliance with the Permit and for any violation thereof.

[Rule200, §300]

9. **Malfunctions (Emergency Upsets) and Excess Emissions:**

A malfunction that causes emissions in excess of those allowed by either the Rules or these Permit Conditions shall constitute a violation. For all situations that constitute a malfunction as defined in Section 200.62 of Rule100 or an emergency as defined in Section 201 of Rule 130, it shall be an affirmative defense to an action brought for noncompliance if the Permittee has complied with the requirements of Rule 130 Section 400 and Rule 140 Sections 400 and 500.

[Rule 130, §400; Rule 140, §400 and §500]

10. **Material Containment:**

Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution.

[Rule 320, §302]

11. **Modifications:**

The Permittee is approved to make physical changes or changes in operations, including but not limited to, routine changes in equipment and processes as well as the addition of new operations, processes and equipment to the facility. However, no more than 10 boilers with an input rating of between 10 and 100 MMBtu/hr each may be installed and any control equipment replacement will be handled in accordance with Rule 220.

Preapproved changes include, but are not limited to, changes in operations and routine changes in equipment and processes that do not create increases in emission above the PSELs set forth herein, and more significant changes, including the addition of new operations at the facility which include semiconductor manufacturing, semiconductor test and assembly, and semiconductor mask production, so long as (i) the PSELs in Permit Condition 23 are not exceeded; (ii) any new operations, processes or equipment added to the facility are covered by this Permit; and (iii) no new applicable requirements are triggered. Preapproved changes that are preapproved in accordance with this provision are identified in the Permit

within the meaning of Section 302 of Rule 220. Accordingly, no additional notices or approvals are required for such changes. Facility changes that do not meet the requirements of this Permit Condition shall be processed in accordance with Rule 220 Section 400.
[Rule 200, §312.3 and Rule 220, §400]

12. **Odors:**

The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.
[Rule 320, §300]

13. **Permit Term, Permit Transfer, and Permit Renewal:**

a. This Permit shall remain in effect for no more than 5 years.
[Rule 220, §402]

b. Except as provided in Rule 200, this Permit may be transferred to another person if the person who holds the permit gives notice to the Control Officer in writing at least 30 days before the proposed transfer and complies with the permit transfer requirements of Rule 200 and the administrative permit amendment procedures pursuant to Rule 220.
[Rule 200, §400 and Rule 220, §405.1]

c. The Permittee shall file an application for a permit renewal at least six months, but not more than 18 months, before the expiration date of this Permit. If a source submits a timely and complete application for permit issuance, revision, or renewal, the source's failure to have a permit is not a violation of these rules until the Control Officer takes final action on the application

[Rule 220, §301.3a and §301.7]

14. **Record Keeping:**

The Permittee shall maintain accurate records as required by these Permit Conditions and by Section 500 of all applicable Rules. These records shall be kept in a form, which allows easy verification of compliance with these Permit Conditions and any applicable Rules.

All records shall be kept for the time as specified. All records required to demonstrate that each required air pollution control device is being operated properly shall be retained for five years.

All records required by this Permit should be made available for inspection upon request by a representative of the Control Officer.

Upon request, the Permittee shall furnish to the Control Officer copies of records required to be kept by this Permit.
[Rule 100, §504; Rule 220, §302.7; and §500 of All Applicable Rules]

Reopening For Cause:

This Permit shall be reopened or revised prior to expiration under any of the following conditions:

a. Either the Control Officer or the Administrator of the United States Environmental Protection Agency (Administrator) determines that this Permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of this Permit Revision, or

b. Either the Control Officer or Administrator determines that this Permit must be revised or revoked to assure compliance with the applicable requirements. [Rule 200, §402]

Public Accountability:

a. The Permittee shall submit FPA quarterly reports and an annual summary report to MCESD or as provided pursuant to Condition 21. The annual report shall be submitted by April 30 Th of each year.
   i. Theses reports shall discuss the progress the Permittee makes in attaining the five-year voluntary goals identified in the FPA
   ii. If applicable, these reports shall provide the reasons for the Permittee's potential inability to attain one or more of the voluntary goals.

b. The Permittee shall hold semi-annual public meetings as part of the meetings prescribed in the FPA. These semi-annual meetings shall provide (a) an open forum for discussion on the quarterly and annual summary reports the Permittee is required to submit pursuant to Condition 16(a), and (b) an opportunity for public input on the Permittee's performance on the voluntary five-year goals identified in the FPA.

Right to Entry:

The authorized representative of the Control Officer, upon presentation of credentials, shall be permitted:

a. To enter upon the premises where the source is located or emission-related activity is conducted, or where records are required to be kept under the conditions of this Permit and,

b. To have access to and copy, at reasonable times, any records that are required to be kept under the conditions of this Permit, and

c. To inspect, at reasonable times, any source(s), equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the Permit, and

d. To sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the Permit or other applicable requirements, and

e. To record any inspection by use of written, electronic, magnetic, and photographic media.

No claim of confidentiality for trade secrets or commercial information available to the Permittee under Arizona Revised Statutes (ARS) 49-487 or Rule 200 §400 can limit the scope of or otherwise interfere with an on-site inspection by a representative of the Control Officer. However, a claim of confidentiality may be made on any information gathered during the inspection to the extent identified in ARS 49-487 or Rule 200 §400.
[Rule 100, §200.107 and §402; Rule 200, §411; Rule 220, §302.17-21]

Rights and Privileges:

This Permit does not convey any property rights nor exclusive privileges of any sort.
[Rule 220, §302.12]

Severability: The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.
[Rule 220, §302.9]

Start-up Notification: If a performance test is required, the Permittee shall give written notification to the Department, Attention Source Test Compliance Section Manager, at least 7 days but no more than 30 days before the initial start-up of any new pollution abatement equipment or process that requires a test. Start-up of the subject equipment or process, shall be defined as the earliest occurrence of one of the following dates:

a. The date that achieved maximum (or permitted) capacity occurs; or
b. The date that a marketable product has been produced; or
c. The date that achieved sustained product manufacturing occurs; or
d. The date that the production line(s) or processes, exhausted to the air pollution abatement equipment that require the test, have been qualified to produce product that meets customer requirements.

This startup notification does not apply to processes or equipment recognized by the Control Officer as being trivial or insignificant activities.
[Rule 270, §400]

FPA Elections:

As long as the FPA is in effect and MCESD is a party thereto, the Permittee may elect to submit the information required under Permit Condition 1 (Certification), 16 (Public Accountability), and 33 (Reporting) of this Permit in the form and manner prescribed in the FPA. The Control Officer has duly approved this manner of complying with the reporting requirements of the Permit.

Opacity:

No person shall discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20% opacity.

SPECIFIC CONDITIONS:

Plant Site Emission Limits (PSELs):

The Permittee shall not allow emissions into the atmosphere to exceed any of the following limits:

Pollutant	12-Month Rolling Average
Total Volatile Organic Compounds (VOCs)	49 tons
Oxides of Nitrogen (NO_x)	49 tons
Carbon Monoxide (CO)	49 tons
Particulate of 10 Microns or Smaller (PM_{10})	10 tons
Oxides of Sulfur (SO_x)	5 tons
Total Inorganic Hazardous Air Pollutants(1)	10 tons
Total Organic Hazardous Air Pollutants(1)	10 tons
Single HAP(1)	9.9 tons
Arsine	14 lbs
Sulfuric Acid	1 ton
Phosphine	1 ton

(1) The hazardous air pollutants (HAPs) covered by this permit are the HAPs that are listed in Section 112(b) of the Federal Clean Air Act as amended.

[Rule 201]

The PSELs identified in Conditions 23(a) of this Permit are below the thresholds for major sources under the Clean Air Act, as amended, and under the Maricopa County Air Pollution Control Regulations. This Permit Condition is issued in accordance with Rule 220 Section 304.

The Permittee shall not allow the property line concentration of the chemicals emitted from the facility to exceed the relevant AAAQGs as compiled by the Arizona Department of Health Services (ADHS). For the purposes of these Permit Conditions, relevant

AAAQGs shall be defined as the annual (if available), 24-hour, and one-hour guideline numbers in effect on the date of issuance of this Permit for chemicals that were on the AAAQGs dated May 11, 1999. The Permittee has applied an EPA approved air dispersion model as a screening analysis to verify that the estimated property line ambient air concentrations of the chemicals substances listed in Appendix A do not exceed their AAAQGs. If ADHS revises the AAAQG numbers during the term of this Permit, MCESD reserves the right to reopen this Permit to assure that they are protective of the public Health.

Modeling:

a. The Permittee shall undertake an air quality analysis before a new chemical is introduced which generates regulated air pollutants during the permit term for which a relevant AAAQG has been established,. That is, the Permittee will apply the assumption that the chemical and its byproducts will each be emitted at the rate of 10 tons per year, or at a higher rate that corresponds to the expected emissions level for the chemical. The Permittee will analyze the resulting property line ambient air concentrations using an EPA approved air dispersion screening model. The Permittee will then evaluate whether the relevant AAAQG would be exceeded under such circumstances. If application of the screen modeling analysis indicates a potential for exceeding the relevant AAAQG, the Permittee can use a more refined, EPA-approved analysis to evaluate the accuracy of the screen modeling. If the Permittee declines to perform this additional analysis, or if such analysis confirms the results of the screen modeling, a special emissions limit will be established for such chemical so that its emissions will not result in an exceedance of the applicable AAAQG. The Permittee shall notify the MCESD of the requirement for a lower emission limit to meet the AAAQG so that an Allowable Emission Limit for that chemical may be added to these Permit Conditions. Any additional modeling or analysis shall be undertaken in consultation with, and with the approval of MCESD and, if requested by the MCESD, in consultation with ADEQ.

b. The modeling conducted pursuant to Condition 24(a) for new chemical substances for which relevant AAAQGs have been established, shall be repeated by the Permittee if due to future changes at the facility:

1. one or more of the emission source input parameters used in the previously approved modeling will change as a result of facility construction or different operational conditions and
2. the use of the revised emission source input parameters that take into account such changed conditions would result in an increase in the property line concentration for those chemicals. If reapplication of the modeling analysis indicates a potential for exceeding the relevant AAAQG for one or more such chemical(s), the Permittee shall follow the procedures outlined in Permit Condition 24(a) for performing a more refined air quality analysis and/or for establishing a special emissions limit for the chemical(s).

25. Emissions Calculations:

Demonstration of compliance with the PSELs contained in this Permit shall be based on the total actual emissions from the facility which shall be calculated in accordance with the formulas and techniques set forth in Appendix B of this Permit and emission factors specific to this Permit that have been approved in writing by the Control Officer.

a. The 12-month rolling averages shall be calculated by summing the total emissions over the most recent twelve calendar months in accordance with the formulas set forth in Appendix B of this Permit within 15 days following the end of each calendar month. The Permittee shall prepare a monthly NOx/VOC emission report to be kept on- site for inspection and available to the Department upon request. This requirement will apply to any single HAP whose emission exceeds 0.5 ton per month or 5 tons per year or has an individual PSEL. As required by Condition 33 of this Permit, reports of actual emissions shall be prepared on a quarterly basis and shall be available within two months after the close of the quarter.

b. The Permittee shall provide MCESD with access to confidential business information if the MCESD determines that the information is needed to evaluate air emission associated with specific processes and equipment (e.g., demonstrate compliance with PSELs). MCESD officials agree to maintain the confidentiality of any such information provided to them provided that the confidentiality claim requirements of Condition 2 of this Permit are met.

26. Control Requirements:

Because NOx, SOx and VOC emission from the facility may exceed 25 tons per year, Rule 241 states that emission of these pollutants from the facility are subject to Best Available Control Technology (BACT) controls.

a. BACT for the boilers shall be the installation, operation and maintenance of low NOx burners having overall average NOx emission less than or equal to 50 ppmv (parts per million by volume), with an average overall emission level of no more than 100 ppmv of CO, corrected to 3% O_2 when fired by natural gas.

b. BACT for VOC emission shall be the installation, operation and maintenance of Emission Control System (ECS) that will achieve VOC removal efficiencies of, or equivalent to, at least 90% by volume of isopropanol gases when the isopropanol inlet concentration is 100 ppmv or higher (based on volume). In addition, the ECS shall achieve an hourly stack concentration not exceeding 20 milligram per cubic meter. Compliance with these efficiency requirements shall be demonstrated in accordance with the testing requirements of Condition 32 of this Permit.

c. VOC from the manufacturing operations shall be vented to the VOC control device unless the Permittee demonstrates to the satisfaction of the Control Officer that connecting the source to the control device would result in dilution of the stream to the extent that overall VOC emissions would not be reduced.

d. BACT for SOx shall be the use of:
    i. Natural gas or liquefied petroleum gas as the primary boiler fuel, and
    ii. Fuel oil with sulfur content of 0.055 weight percent or less in the generators and as the backup fuel for the boilers.

e. BACT for air emission units that are installed during the life of the Permit may evolve over time due to technological advances and thus may differ from BACT for such equipment installed at the time this Permit is issued. The Permittee, in consultation with, and with the agreement of, MCESD, shall determine BACT for affected equipment installed during the permit term in a manner that is consistent with evolving technologies.

The Permittee shall install, operate and maintain scrubbers to control inorganic HAPs that are emitted from the facility. Such units shall achieve removal efficiencies of, or equivalent to, at least 90% by volume of hydrogen chloride gasses when the hydrogen chloride gas inlet concentration is 10 ppmv or an outlet concentration of 1 ppmv or less. Inorganic HAP emissions from the manufacturing operations shall be vented to the scrubbers unless the Permittee demonstrates to the satisfaction of the Control Officer that connecting the source to the control would result in dilution of the stream to the extent that overall HAPs emissions would not be reduced.

As an incentive for the development of equipment and processes that minimize the generation of air pollutants, MCESD may waive the requirement to vent a specific piece or pieces of equipment to scrubbers or equivalent approved control devices based on a consideration of the Permittee's efforts under its Design for the Environment program and its continued compliance with applicable PSELs and other Permit Conditions. This waive will apply only to equipment installed during the term of this Permit. Additionally, any waiver must result in the same or less emission than would be emitted from a state of the art piece of equipment or process vented to the control device.

27. Operational Limitations:

a. Boilers: The Permittee may only use natural gas, butane and propane as fuels for boilers, heaters and thermal oxidizers.

In the event of a temporary suspension of the delivery of natural gas, diesel may be used as an alternative fuel for boilers.

The Permittee shall limit the natural gas usage for the boilers to no more than 1075 million cubic feet per year, and the diesel usage to no more than 8,000 gallons per year.

b. Emergency Generators: Except for routine maintenance, testing and construction activities, emergency power generators (including temporary rental and/or leased

generators) shall be used only when normal power line service fails or when normal power line service must be turned off for preventive maintenance. Emergency generators shall not be used for peak shaving or if the power interruption is due to a voluntary usage reduction by the Permittee.

The temporary rental or leased engines described in the Application for Non-Title V Air Quality Permit shall be considered covered by this Permit and not require additional permitting nor additional notice to the Control Officer. Temporary or leased engines rated at less than 250 horsepower shall not require permitting nor notification to the Control Officer.

The Permittee shall limit the fuel usage for the generators to no more than 30,000 gallons per year.

The diesel fuel for the emergency generators and boilers shall contain a maximum of 0.05% by weight of sulfur.

28. Solvent Cleaning Applicable Requirements:

The Permittee shall comply with the requirements of Maricopa County Environmental Services Department (MCESD) Rule 331 for solvent cleaning of equipment or parts that is performed for purposes other than semiconductor manufacturing processes and shall otherwise comply with applicable provisions of MCESD Rule 338. The Permittee shall operate solvent cleaning stations which contain more than 10% VOC materials in accordance with all of the applicable requirements of Rule 331 or Rule 338.

29. **Material Containment and Disposal:**

The Permittee shall take all reasonable measures to keep VOCs from evaporating into the atmosphere including, but not limited to:

a. All storage of VOC-containing materials subject to evaporation, including the storage of waste solvent and waste solvent residues, shall at all times be in closed containers, except when contents are added or removed.

b. Containers shall be legibly labeled with their contents.

c. Disposal of waste or surplus VOC-containing materials shall be done in a manner that does not promote VOC evaporation, such as, but not limited to, via sewage treatment works or having the waste hauled off-site in sealed containers.

30. Monitoring/Record Keeping:

The Permittee shall maintain a current list of VOC containing materials, including their formulations as applied, make-up solvents, and any other VOC containing materials used for all operations at the facility, stating the VOC content of each in either pounds per gallon or

grams per liter. The VOC content of cleaning solvents shall be documented by a manufacturer's technical data sheet, manufacturer's safety data sheet or actual test results.

The Permittee shall keep monthly usage records of VOC containing materials used on site and usage records for all materials which generate HAP emissions.

c. The Permittee shall record and maintain accurate diesel fuel usage and sulfur content records for the emergency generators or emergency water pumps showing the date and duration of operations.

d. Additional Record Keeping for an Emergency: Per Rule 140, for any exceedance of the monthly allowable emission limit due to emergency operation of emergency generators or water pumps, The Permittee shall report to the Department by telephone or facsimile within 24 hours of the time when the source first learned of the occurrence of the excess emissions. Documentation shall include witness to the emergency in the form of either a letter signed by the Permittee (an authorized person of this facility), or an official letter from the power company to the Permittee. This document shall describe the cause and duration of the loss of power or water pumping emergency. This document shall be provided to the Department within 72 hours of the occurrence.

e. The Permittee shall maintain records for boilers as specified in 40 C.F.R. Part 60 Subpart Dc.

f. The Permittee shall record and maintain records of the amounts of distillate fuel combusted in the boiler during each day the boiler is operational with distillate fuel.

g. The Permittee shall maintain records detailing all control device operating parameters needed to demonstrate proper operation of a required control device as specified in O&M Plans required and approved by MCESD.

h. The Permittee shall maintain a log which shall record changes as described in Rule 220 Section 500. The log will be maintained on site and will comply with Section 503 of Rule 220.

i. The Permittee shall insure that all records required under this permit condition shall be maintained by the Permittee for a period of five years following the creation of such record.

31. Operations and Maintenance (O&M) Plan:

The Permittee shall submit to the Department Air Quality Compliance Manager for approval an Operations and Maintenance (O&M) Plan within 45 days after the date of permit issuance for equipment that does not have an O&M Plan that was approved within 24 months from the issuance of this permit. For purposes of this permit condition, "equipment" shall only include equipment subject to performance test requirements in

this Permit and any control devices that are installed exclusively for the control of regulated air pollutants. Each plan shall be prepared in accordance with the Department's guidelines and shall specify key system operating parameters such as temperatures, pressures, and/or transfer and flow rates necessary to determine compliance along with key maintenance parameters and performance frequency. The Permittee shall operate and maintain emission control devices in accordance with the O&M Plan(s). Updated O&M Plans shall be submitted at the request of the Department or when Permittee requests to modify control and maintenance parameters are granted by the Department

For Point of Use (POU) devices or exhaust conditioner (EC) units, the Permittee shall follow the procedures outlined in the MCESD guidance document "Optional Compliance Demonstrations – Part II, Procedure to Determine Requirement for Operation and Maintenance Plan for Point of Use/Exhaust Conditioner Units" dated June 4, 2001 or the most current version at the time of the issuance of this permit.

For any control devices installed after the effective date of this permit, the Permittee shall submit O&M Plans to the Department within 45 days of the letter of notification of start-up.

32. Performance Testing:

The Permittee shall conduct a performance testing of the following control equipment

a. A representative sample of each type of Wet Scrubber other than the scrubbers tested in the previous permit:

Testing shall be performed on each scrubber in order to demonstrate a 90% HCl removal efficiency by weight within 60 days after the issuance date of this permit or within 60 days after the new applicable equipment has achieved the capacity to operate at its maximum production rate on a sustained basis, whichever occurs last.

b. All Thermal Oxidizers:

Testing shall be performed on each thermal oxidizer in order to determine stack emission rates of VOC, NOx and CO. Testing shall also be performed in order to demonstrate a minimum of 90% VOC destruction efficiency by weight. Testing shall be performed within 60 days after the issuance date of this permit or within 60 days after the new applicable equipment has achieved the capacity to operate at its maximum production rate on a sustained basis, whichever occurs last.

c. A representative sample of each type of boiler other than the boilers tested in the previous permit:

The boilers shall have low NOx burners having overall average emission level of no more than 100 ppmv of CO, corrected to 3% O2 when fired by natural gas. Testing shall be performed on each type of boiler in order to determine stack emission rates of NOx and CO within 60 days after the issuance date of this permit or within 60 days after the new applicable equipment has achieved the capacity to operate at its maximum production rate on a sustained basis, whichever occurs last.

d. Generators: If the Permittee decides not to use the worst case of either the manufacturer's emission data or AP-42 emission factors, then the Permittee shall test each generator for mass emission rates for NOx, carbon monoxide and PM_{10} within 60 days after the issuance date of this permit or within 60 days after the new applicable equipment has achieved the capacity to operate at tis maximum production rate on a sustained basis, whichever occurs last. MCESD may accept one or more tests as being representative for other substantially similar generators.

e. Carbon Concentrator: The Permittee shall test each unit for the mass emission rate for VOCs as well as for VOC removal efficiency. MCESD may accept one or more tests as being representative for other substantially similar VOC ECS. The Permittee may, with advance written approval of the MCESD, use a surrogate material in the gas stream if the Permittee can demonstrate to the satisfaction of the MCESD that the measured removal efficiency demonstrated for the surrogate is equivalent to the removal efficiency required by Permit Condition 26 b.

The testing deadline may be extended by the Control Officer for good cause, but in no case shall the testing period extend for more than 180 days after the above applicable date.

Per Rule 270, Section 400, the testing shall be performed with the process equipment operating at the maximum sustained production rate or under such conditions as approved by the control officer, based on representative performance of the source or facility.

The testing shall be conducted in accordance with USEPA approved test procedures.

The Permittee shall submit test protocols for the scrubbers, thermal oxidizers and selected boilers to the Department Source Test Compliance Section for review and approval at least 30 days prior to the emissions test. A fee for each stack to be tested, as required by Rule 280, shall be submitted with the test protocol.

The Permittee shall notify the Department in writing at least two weeks in advance of the actual time and date of the emissions test so that the Department may have a representative attend.

The Permittee shall complete and submit a report to the Department within 30 days after completion of the emissions test. The report shall summarize the results of the testing in sufficient detail to allow a compliance determination to be made.

After the completion of the performance test, should the Permittee find the required performance test inadequate to demonstrate compliance, the Permittee may demonstrate compliance by meeting emission reduction requirements as stipulated in the MCESD guidance documents "Optional Compliance Demonstration Procedure - Part I, Acid/Base Emissions and Wet Scrubber Performance Test" dated May 4, 2001 and "Optional Compliance Demonstration Procedure - Part III, Volatile Organic Compounds (VOC) Emissions Performance Test" dated July 23, 2001, or the most current approved version at the time of testing.

If the Permittee installs a new piece of air pollution control equipment, which MCESD believes is not adequately represented by previous performance tests, MCESD may require emissions testing to be performed on the new equipment.

33. Reporting:

The Permittee shall submit an "Emissions Inventory Report" every third year starting on 2002 when Maricopa County is required to submit the "Periodic Emission Inventory Report". All other years the Permittee will submit a copy of the annual Project XL Report. The both reports shall summarize the activities and air pollution emissions from the facility during the previous calendar year in accordance with Section 501 and 505 of Rule 100 and Rule 220 Section 302.8. The Emission Inventory Report shall be filed on a form supplied by the Control Officer and shall be due by April 30 or 90 days after the Control Officer makes the forms available, whichever is later. In the event that the FPA lapses or is otherwise no longer effective, the emission inventory reports shall be handled in a manner specified by the Control Officer.

The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising or revoking and reissuing this Permit or to determine compliance with this Permit.

Upon request, the Permittee shall furnish to the Control Officer copies of records required to be kept by this Permit.

The Permittee shall file any additional reports required by the Control Officer in a complete and timely manner.

34. NSPS Requirement:

The boilers covered under this permit are subject to NSPS Subpart Dc. The Permittee shall not emit exhaust gases into the atmosphere containing more than 0.5 pound SOx/MMBTU (Oxides of Sulfur per million British Thermal Units) heat input, or combust oil that contains greater than 0.5 weight percent sulfur. This limit applies at all times, including periods of start-up, shut down and malfunction.

The Permittee shall submit fuel suppliers certification regarding the fuels specification and sulfur content as provided in 40 CFR §60.44c(a) and (h), to demonstrate compliance with the SOx standards.

The Permittee shall demonstrate continuous compliance with the SOX standards based on certification from the fuel supplier, as required under 40 CFR §60.48c(f)(1).

APPENDIX A

HAPs

Chlorine
Phosphine
Hydrogen Chloride
Hydrogen Fluoride
Xylenes (O, M & P)
Ethylene Glycol
Methanol
Arsine
Acetonitrile

NON - HAPs

Acetone
n-Butyl Acetate
Isopropyl Alcohol
Ammonia
Sulfuric Acid
Phosphoric Acid
Boron Trifluoride
Nitric Acid
Acetic Acid
n-Methyl Pyrilidone
Hexamethyldisiloxane
Ethyl Lactate
Polyamic Acid
Propylene Glycol
Potassium Hydroxide
Tetramethyl Ammonium Hydroxide
Ammonium Hydroxide
Hydrogen Peroxide
Tetraethyloethosilicate
Trimethyl Borate
Boron Trichloride
Hydrogen Bromide
Dichlorosilane
Sodium Hydroxide
Tungsten Hexafluoride
Sulfur Hexafluoride

APPENDIX B
Sample Calculations

I. Boilers or Thermal Oxidizers
Air pollution emission for the boilers and thermal oxidizers were calculated using a combination of the US EPA's published emission factors (as found in EPA AP-42) and South Coast Air Quality Management District's (SCAQMD's) emission factors. Natural gas fired boilers and thermal oxidizer emissions were calculated as shown below.

Assume a boiler rated at 52 MMBTU/hr combusts 152 MMscf of natural gas during the year.

Equation 1 used for these processes is:

$E_i = UF_i$

Where:

E_i = Emission of Species i, lb/yr
U = Usage of Fuel, MMscf/yr (MMscf = million standard cubic feet)
F_i = Emission Factor for Species i, lb/MMscf

Estimated Emissions:

$\mathbf{E_{CO}}$ = 152 mmscf/yr * 84 lb/mmscf

$\mathbf{E_{CO}}$ = 12,768 lb/yr = 6.4 tons/year

Table B-1

Emission Factors for External Natural Gas Combustion

Pollutant	Emission Factor (lb/MMscf)
PM10	7.6
SO2	0.6
NOX	100
CO	84
VOC	5.5
(Low NOx burners)	50

APPENDIX B
Sample Calculations

II. Facilities Operations Support Equipment (including emergency generators)

Air pollution emission from the use of facilities operations support equipment is calculated using a combination of the US EPA's published emission factors (as found in EPA AP-42) and South Coast Air Quality Management District's (SCAQMD's) emission factors. Diesel #2 fired emergency generators and fire pumps emissions are calculated as shown below.

- *Assume* an emergency internal combustion engine driving an electrical generator uses 1000 gallons of #2 diesel fuel oil during the year.

Using Equation 1 for this process is:

$E_i = UF_i$

Where:

E_i = Emission of Species i, lb/yr
U = Usage of Fuel, (gals/yr)
F_i = Emission Factor for Species i, lb/1000 gal

$\mathbf{E_{CO}}$ = (1000 gal/yr) * 130 lb/1000 gal
$\mathbf{E_{CO}}$ = 130 lb/yr

Table B-2
Emission Factors for Internal Diesel Fuel Oil #2 Combustion

Pollutant	Emission Factor (lbs./1000 gal)
PM_{10}	42.5
SO_X	39.7
NO_X	604
CO	130
VOC	49.3

APPENDIX B
Sample Calculations

III. Etch, Thermal Process (Furnaces and Reactors), Lithography, and Implanter

Etch processes selectively remove material from a substrate via a chemical reaction or by physical removal (sputter etching). Etching processes include polysilicon, nitride, oxide and metal etch. The etching processes fall into two main categories: wet etching and dry etching. Wet etching uses liquid chemicals (acids, bases, and solvents) that react chemically with the material to be removed. Dry etching uses gases to remove unwanted material. Wet Etch, wafer cleans and parts cleans are typically grouped together since all three operations use wet bath processes. Calculations for wet operations are included in the Evaporation Calculation section.

Deposition is the process in which layers are formed as a result of a chemical reaction in which the desired layer material is formed and coats the surface of the wafer. Diffusion is a process that introduces minute amounts of impurities (dopants) into a substrate material and permits the impurity to spread into the substrate. Deposition and diffusion processes are usually carried out in furnaces or reactors.

In Lithography, patterns to be used as templates for further processes are laid down on top of the wafer. The process starts typically with an organic material called a “photoresist” that is applied to the substrate. This film is then baked to remove the organic solvents that allow the films to be applied in a uniform layer. Selected areas of the films are “exposed” to change the nature of the film and allow certain areas to be removed with a “developer”. In addition, organic material also may be applied to “smooth" the three-dimensional structure to allow subsequent process steps to be completed. The remaining solvent, which may be water or some other suitable solvent depending upon the nature of the film, is then removed using some type of bake.

Ion implantation processes use an electrical field and magnetically induced acceleration to place dopant elements (such as arsenic, boron, and phosphorous) into the surface of the wafer. These processes alter the electrical properties of the wafer. Unreacted chemicals and chemical by-products produced by these processes are exhausted to appropriate air pollution abatement equipment.

Unreacted chemicals and chemical by-products produced by these processes are exhausted to appropriate air pollution abatement equipment.

Intel Corporation has developed the Emission Factors through analytical testing of process tools. The emission factor for a given constituent incorporates the overall result of all the places within the manufacturing process that the chemical is used. For example, in lithography, Ethyl Lactate is used in three different process steps, the overall emission factor will be the ratio of the mass of Ethyl Lactate emission created to the mass of the
chemical used in all three of those steps combined. In this way, the total amount of the chemical used throughout the process can be converted to the emissions generated by that chemical. These emission factors can change if the manufacturing process changes.

- Assume That 1,500 pounds of Ethyl Lactate were used during the year.

Equation 3 used for these processes is:

$E_i = UEF_i$

Where:

E_i = Emission of Species i, lb/yr
U = Chemical Usage, lbs/yr
EF = Emission Factor, dimensionless

Emission = (0.18)*(1500 lbs.) = 270 lbs.

VI. Wet Bench Process

In general, wafers are cleaned before and after each process. Cleanliness is absolutely critical to the successful construction of semiconductor devices. Parts-per-million levels of contaminants can be "fatal" to these devices. Various cleaning chemicals and processes are used, depending upon the exact nature of the contaminants being removed. Acid, caustics, physical cleaning methods, and many other techniques are used to remove contaminants.

> Equipment is cleaned routinely to remove unreacted chemical reagents and process by-products. These processes involve organic solvent, acid or caustic cleans. Emissions resulting from these processes are exhausted to appropriate pollution abatement equipment. The unreacted cleaning chemicals and waste products are either disposed into solvent reclaim tanks or are disposed into and treated by the acid waste neutralization system. The emission estimating technique used for most of the wet cleaning processes is an adaptation of the US EPA Diffusion Equation.

Equation 4 used for these processes is:

$$E_i = W = 3600F \frac{MKAP}{RT} t$$

Where:

APPENDIX B
Sample Calculations

E_i = Emissions of Species i, lb/yr
W = Vapor Generation Rate, lb/yr
M = Molecular Weight of Species i, lb/lbmol
A = Bath Surface Area, ft^2

P = Partial Pressure of the Volatile Chemical (Species i) in the Mixture, psia
R = Universal Gas Constant, psia-ft^3/ °R-lbmol
= 10.73 psia-ft^3/ °R-lbmol
T = Temperature, °R
K = Gas-phase Mass Transfer Coefficient, ft/s
= $0.00438(U)^{0.78}(18/M)^{0.333}$
U = Speed of Air Across Liquid Surface, miles/hr
= 1.7 miles/hr (EPA suggested data)
3600 = Conversion Factor from lb/s to lb/hr
t = Annual Hours of Operation, hrs/yr
F = Emission Factor, dimensionless = 0.2 (covered tank)

Assume a bath of 49% hydrofluoric acid is kept at a constant 68 °F for a total of 168 hours per week, 52 weeks per year. Assume the bath has an area of 1.72 ft^2 and is covered.

M = Molecular Weight of Hydrochloric Acid = 20 lb/mol
T = Temperature, °R, (68 °F + 460 = 528 °R)
t = Annual Hours of Operation, hrs/yr, (168 hr/wk)(52 wk/yr) = 8736 hrs/yr

According to the MSDS the partial pressure is 25 mmHg:

25 mmHg * 1 atm/ 760 mmHg * 14.7 psia/ 1 atm = 0.48 psia

The bath surface area: 1.72 ft^2

The gas-phase mass transfer coefficient is:

$K = 0.00438 * (U)^{0.78} * (18/M)^{0.333}$
$K = 0.00438 * (1.7)^{0.78} * (18/20)^{0.333} = 0.0064$

Estimated emissions:

$\mathbf{E_{HF} = W}$ = 3600 *0.2* 8736 * (20*0.0064*1.72*0.48/ 10.73*528)

$\mathbf{E_{HCl} = W}$ = 117 lbs/ yr

ATTACHMENT 3

Screening Analysis

For Air Emissions At the Ocotillo Site

In cooperation with Maricopa County Environmental Services Department ("MCESD") and the stakeholders involved in Project XL, Intel agreed to analyze the potential effects associated with the scenario of any single hazardous air pollutant ("HAP")[1] being emitted during routine operations from the Ocotillo Site to the full limit of the relevant plant site emission limit ("PSEL"). This is accomplished utilizing a SCREEN3 dispersion model to determine the property line and maximum onsite air concentration of the chemical which is compared to the Arizona Ambient Air Quality Guidance (AAAQG) level[2]. In addition, as set out in the Final Project Agreement ("FPA"), Intel and MCESD conducted this screening analysis for a number of non-HAP chemicals which have been assigned an AAAQG. Any new chemicals introduced at the Ocotillo Site which produce air emissions will also undergo this screening analysis. This analysis provides additional evidence that the PSELs set out in this FPA are protective of human health within the limitations and uncertainties associated with the analytical techniques employed. This attachment to the FPA describes, in general terms, the screening analysis for air emissions at the Ocotillo Site. The specific model protocols and their site-based parameters are maintained by MCESD and Intel.

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[1] The term Hazardous Air Pollutant refers to the list of 189 chemicals and chemical categories set out in Section 112(b) of the Clean Air Act, as amended.

[2] The Arizona Ambient Air Quality Guidelines (AAAQG) referred to herein, and in the air permit, are the guidelines dated May 11. 1999.

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1. Dispersion Modeling

Intel, in cooperation with MCESD, the United States Environmental Protection Agency ("EPA") and the Arizona Department of Environmental Quality ("ADEQ"), has performed dispersion modeling as a screening analysis for the Ocotillo Site. The screening analysis was conducted using EPA's approved SCREEN3 dispersion model (1991-1996, Trinity Consultants Inc. Version 1.0). The parameters used in the screening analysis are listed at the end of this attachment.

The screening analysis assumed an emission rate of 10 tons per year for any HAP. This emission rate was based on the maximum PSELs for aggregate organic and aggregate inorganic HAPs set out in the FPA and on the assumption that any single HAP could be emitted to the full extent of the relevant PSEL.

Under the screening analysis the dispersion model predicted that the emissions rate of 10 tons per year would result in maximum properly line concentrations of 14.9 micrograms per cubic meter (ug/m3) averaged over a 1 hour. period, and 5.96 ug/m3 averaged over a 24 hour period.

2. The AAAQGs

The Arizona Department of Health Services (ADHS) has developed a list of AAAQG levels. These levels were derived by making an adjustment for the differences in the averaging times for exposure and applying a safety factor to limits originally established to protect individuals exposed in occupational settings. For example, occupational exposure levels are intended to be safe for individuals exposed to those levels for 8 hours per day, 7 days per week for a working lifetime. They generally assume an 8-hour average exposure time; however, longer average times (e.g., 24 hours) are more appropriate for establishing community health guidelines. In addition, a safety factor is applied to provide adequate

protection for the general public, which includes people who may be more sensitive than workers (e.g., children and the elderly).

The AAAQGs established by ADHS are for guidance purposes only and are not intended for use in deriving regulatory limits. Notwithstanding the non-binding nature of the AAAQGs, Intel, in cooperation with the stakeholders involved in the XL Project, employed these levels to provide additional assurance that the PSELs in the FPA and air permit are protective of public health. In addition, to address concerns raised by stakeholders regarding non-HAP chemicals, Intel also analyzed chemicals emitted from the Ocotillo Site that, while not HAPs, have established AAAQGs. Intel also has agreed in the FPA to work cooperatively with the ADHS and MCESD to evaluate the public health implications and establish limits if necessary for any chemicals it may introduce to the air in the future that are associated with potential health concerns, regardless of whether such chemicals are HAPs or have an established AAAQG. Finally, Intel has agreed under the FPA to apply the screening analysis to maximum onsite ambient air concentrations of chemicals modeled under the FPA.

The AAAQGs are well suited for the screening analysis described herein because they are likely to be conservative (i.e., err on the side of public health by setting levels well below what would be likely to cause adverse effects in the general population). This conservative approach, combined with the conservative assumption that screened chemicals will be emitted at 10 tons per year in the case of HAPs (or at the predicted emissions rate for any non-HAP if such rate is greater than 10 tons per year), make this screening analysis a useful tool in providing an additional assurance that air emissions do not pose a special risk to employees, onsite visitors or the community.

3. Comparison of Concentration Estimates to AAAQGs

The concentrations of chemicals listed in Table 1 at the end of this attachment predicted by the dispersion analysis described above were compared to the AAAQGs. The conservatively modeled concentrations did not exceed the applicable AAAQG for any chemical listed in the table that is emitted to the air from the Ocotillo site, with the exception of phosphine. Pursuant to the FPA, Intel elected to waive the right to conduct more sophisticated dispersion analysis and requested that an individual emission limit for phosphine be established based on the screening analysis. The screening analysis predicted that an emissions rate of 5 tons per year would limit the maximum properly line concentration to a level below the AAAQG established for phosphine. Such a limit is set forth in the FPA.

In cooperation with the stakeholders and the MCESD, Intel also has conducted a screening analysis (using the procedure described herein) for other chemicals emitted to the air from the Ocotillo site which are not HAPs but for which there are established AAAQGs. For each of these non-HAP chemicals, the screening analyses predicted that the maximum property line concentrations would be well below (in most cases more than an order of magnitude) their respective AAAQGs.

4. Introduction of Additional HAPs or Non-HAP Chemicals with AAAQGs

The FPA sets out the conditions that apply in the case where Intel introduces new chemicals to the Ocotillo Site, which produce air emissions, are not listed in Table 1 of this attachment, and thus have not been analyzed under the screening analysis described herein. In general, Intel will evaluate new chemicals, which are emitted to the air through the screening analysis in cooperation with MCESD using either the SCREEN model or a similar dispersion model approved by EPA. In the case where the screening analysis indicates that the predicted maximum concentration of a new chemical exceeds the relevant AAAQG, the FPA sets out options for conducting more sophisticated dispersion modeling analyses (using EPA-approved dispersion models) to confirm or refute the results of the initial screening analysis. If more sophisticated modeling confirms that the relevant AAAQG is exceeded by anticipated emissions of a new chemical, MCESD shall establish an air emissions limit for such a chemical at a level that corresponds to the relevant AAAQG. Intel also may waive the right to conduct more sophisticated dispersion analysis and elect to accept an emissions limit for such a chemical established by MCESD at a level that corresponds to the relevant AAAQG based on the initial screening analysis.

5. Introduction of Additional Non-HAP Chemicals Without Established AAAQGs

Section II(A)(3) of the FPA provides a special procedure that Intel has committed to follow in the event that the Company introduces new chemicals to the Site in the future which generate air emissions and have not already been evaluated under the FPA, or under the AAAQG screen modeling procedure set forth above, and which present potential concerns to human health or the environment. In such a case, Intel agrees to consult with MCESD and ADHS to determine if emissions from such a chemical may pose a health risk based on screen modeling of potential property line concentrations. As stated in the FPA, if it is determined that an emissions limit for the chemical is necessary to protect human health, Intel will limit its annual emissions below the limit which is identified.

6. Inside-the-Property Line Screening Analysis

Under the FPA, Intel also commits to evaluate maximum onsite (i.e., inside-the-property line) modeled ambient air concentrations of chemicals that have been modeled under the permit which generate air emissions, to ensure employee safety and the safety of individuals that may visit the site. If the screen model analysis indicates a potential for exceeding the relevant 1-hour AAAQG exposure level for a particular chemical used on site, Intel may either commit to limit its emissions of that chemical below the level that would exceed the 1-hour AAAQG at the point of maximum concentration within the property line or demonstrate though a more refined EPA-approved analysis that the 1-hour AAAQG will not be exceeded.

7. Strengths and Uncertainties of the Screening Analysis

The primary strength of the analysis described above is its conservative approach and assumption that screened chemicals will be emitted at the full limit of the relevant PSEL or higher in the case of non-HAPs if the predicted emission rate is greater than 10 tons per year. The likely over-prediction of concentrations from the SCREEN3 model and likely under-prediction of safe health risk levels by the AAAQG methodology make the screening analysis a valuable tool in providing additional assurance that air emissions at the Ocotillo Site do not pose a special risk to employees, visitors or the community.

The precautionary principle states that in the face of uncertainty, additional safety factors should be applied to the analysis. In the analysis described above, several safety factors have been applied but, as with all simulations of the real world, not every scenario can be anticipated. For example, synergistic effects (i.e., when exposure to a combination of chemicals is more hazardous than exposure to any single chemical) or antagonistic effects (i.e., when chemical combinations are less hazardous than the individual chemicals) are not understood by today's science. In addition, unanticipated dispersion events cannot be adequately predicted by simulation models. Finally, the potential reaction of some sensitive subgroups within the population may not always be fully accounted for by the additional layers of safety factors.

INTEL

AIR EMISSIONS SCREENING MODEL

Model Used: U.S. EPA SCREEN 3 (1991-1996, Trinity Consultants Inc. Version 1.0)

AZ Agency: Maricopa County Environmental Services Department

Duration used by MCESD: MCESD has used this model since 1990

Model Type: Gaussian model

Model Application: Continuous emissions vs. episodic event

Model Purpose: Conservative model to help compare emissions to AZ Ambient Air Quality Guidelines to ensure public health is protected

Intel Assumptions in Running the SCREEN 3 Model:

- SCREEN 3 model with the following conditions;

SITE: Rural terrain

SOURCE: - Point Source

- Distance to property line, 479 m

- Emission rate, 0.288 g/s

- Stack height, 31.2 m

- Stack I.D., 1.56 m

- Stack Velocity 15 m/s

- Temperature 273º K

DOWNDRAFT: Bldg. dimensions; L/W/H, 700'/425'/80' or 219m/133m/25m

FUMIGATION: Inversion Break-up (Rural only)

METEOROLOGY: Full meteorology

- Operation 24 hours/day - 365 days/year
- Emission point at one scrubber vs. seven scrubbers (one is more conservative)
- Model @ 10 Tons per year routine release from a single release point as referenced above;

(20klbs HAP/yr)(yr/365 days)(day/24hrs)(hrs/60min)(min./60sec)(lbs/453.6 g) = 0.288 g/sec

- Volumetric flow rate is 60,000 cfm or (60,000 ft^3/min.) (m^3/35.32 ft^3) (min./60sec.) = 28.33 m^3/sec

where Q = VA w/ A = r2 , A = (0.6m2) , A = 1.9 m2

V = Q/A or (28.33 m3 /sec) / (1.9 m2) = 14.9/m sec

Table 1

Intel Ocotillo Site, Chandler, Arizona

COMPARISON OF ROUTINE EMISSIONS TO 1999 ARIZONA AMBIENT AIR QUALITY GUIDELINES

	Intel Emissions,* Maximum Onsite Concentration ($\mu g/m^3$)	AAAQG[1] ($\mu g/m^3$)	Percent of AAAQG (%)	Intel Emissions,* Concentration at Property Line ($\mu g/m^3$)	AAAQG ($\mu g/m^3$)	Percent of AAAQG (%)	Intel Emissions,* Concentration at Property Line ($\mu g/m^3$)	AAAQG ($\mu g/m^3$)	Percent of AAAQG (%)
CHEMICAL	1-Hour			24-Hour			ANNUAL		
Acetone	14.91	20,000	0.07%	5.964	14,000	0.04%	1.193	No AAAQG	NA
Acetonitrile	17.1	880	1.94%	5.96	560	1.06%	1.193	No AAAQG	NA
Aluminum Oxide	12.62	180	7.01%	5.05	480	1.05%	1.0	No AAAQG	NA
Arsine	0.0074	0.06	12.3%	0.0027	0.016	16.9%	1.99E-4	2.3E-4	86.5%
n-Butyl Acetate	14.91	7,900	0.19%	5.964	5,600	0.11%	1.193	No AAAQG	NA
Carbonyl Fluoride	12.62	130	9.7%	5.05	40	13%	1.0	No AAAQG	NA
Ethanol	17.17	57,000	0.03%	5.96	15,000	0.04%	1.19	No AAAQG	NA
Glycerol	17.17	150	11%	5.96	40	15%	1.19	No AAAQG	NA
Isopropyl Alcohol	14.91	10,000	0.15%	5.964	7,800	0.08%	1.193	No AAAQG	NA
Xylene (Mixed)	14.91	5,400	0.27%	5.964	3,500	0.17%	1.193	No AAAQG	NA
Chlorine	14.91	25	60%	5.964	12	49.7%	1.193	No AAAQG	NA
Phosphine[g]	5.96	11.0	54%	2.386	3.2	75%	0.477	No AAAQG	NA
Hydrochloric Acid[d]	14.91	210	7.10%	5.964	56	10.65%	1.193	No AAAQG	NA
Hydrofluoric Acid[e]	14.91	42	35.50%	5.964	20	29.82%	1.193	No AAAQG	NA
Ammonia	14.91	230	6.5%	5.964	140	4.26%	1.193	No AAAQG	NA
Sulfuric Acid	13.42	25	54%	5.368	7.9	68%	1.074	No AAAQG	NA
Phosphoric Acid	14.91	25[c]	59.64%	5.964	7.9	75.5%	1.193	No AAAQG	NA
Boron Trifluoride	14.91	87.4[c]	17.06%	5.964	24	25	1.193	No AAAQG	NA
Nitric Acid	14.91	83	18%	5.964	40	14.90%	1.193	No AAAQG	NA
Acetic Acid	14.91	310	5%	5.964	200	2.98%	1.193	No AAAQG	NA

Methanol	14.91	2,600	0.57%	5.964	2,100	0.28%	1.193	No AAAQG	NA	

* Values provided by Intel Corporation (US EPA SCREEN3 dispersion model 1991-1996, Trinity Consultants, Inc. Version 1.0)
a 1-hour average = 1 hour average modeled air emission
b 24 hour = 1 hour average x 0.4; annual = 1 hour average x 0.008
c Calculated AAAQGs = lesser of 3.8 x 24 hour AAQG or 15 minute STEL + 120
d & e Concentrations are from manufacturing and support sources
f AAAQGs = Arizona Ambient Air Quality Guidelines (05/11/99)
g Modeled at 5 tons per year routine release

ATTACHMENT 4

INDUSTRIAL USER PERMIT NO. 9

Business Name: Intel Corporation

Premises Address: 4500 S. Dobson Road
Chandler, AZ 85248

Mailing Address: Same as above

Based upon the permit application submitted on March 16, 2001, and in accordance with the provisions of the Clean Water Act, (33 U.S.C. 1251, et. seq.), the General Pretreatment Regulations (40 CFR Part 403) and the City of Chandler Wastewater Pretreatment Program as revised and adopted on April 22, 1999, by Ordinance No. 2938 (Pretreatment Program), and any amendments or supplements thereto, Intel Corporation is authorized to discharge Wastewater into the City of Chandler sanitary sewer system in accordance with the discharge limitations, monitoring requirements, and other conditions set forth in this Permit.

It is understood by the Permittee that any violation of the Clean Water Act, Federal Pretreatment Standards, applicable state and/or local laws or regulations shall be cause for revocation of this Permit and suspension of sanitary sewer service as well as subjecting the Permittee to the remedies available to the City of Chandler under it's Pretreatment Program and the Clean Water Act. **Copies of the Pretreatment Program and other applicable laws, ordinances, and regulations are available from the City for the convenience of Permittee. It is the Permittee's responsibility, however, to ensure compliance with applicable laws.**

This Permit replaces all previously issued Permits and shall become effective at 12:01 a.m. on July 1, 2001, and expires at midnight on June 30, 2006.

Issued on June 5, 2001.

Ray Figueroa
Industrial Pretreatment Supervisor

A petition for review of the conditions and limitations contained in the Permit may be filed with the City of Chandler Industrial Pretreatment Supervisor within twenty (20) days of the receipt of this Permit as provided by Section 00-03 (c) 1-9 of the Chandler Pretreatment Program (see Part IV.A. of this Permit).

I acknowledge that I am a duly authorized representative of Intel Corporation as defined in this Permit under Part IV.N. Signatory Requirements. I further acknowledge that either myself or a delegated representative has read all the terms and provisions of this Industrial User Permit and agree to abide by the conditions and limitations contained herein.

Name _____ Title _____ Date _____

PART I - DISCHARGE LIMITS AND MONITORING (SAMPLING) REQUIREMENTS

A. The following process operations are conducted at the facility and result in the discharge of wastewater through the compliance sampling point(s) as described in Part I.B.:

Semiconductor Manufacturing (New Source 40 CFR 469.18).

B. Wastewater discharges resulting from operations identified in Part I.A. of this Permit shall be discharged into the City of Chandler POTW [1] through the compliance sampling point(s) described as follows:

IWD-1: 6" Parshall Flume directly following the AWN, discharging to the Chandler R.O. Facility.

IWD-2: 6" Parshall Flume directly following the SLW treatment system, discharging to the Chandler Ocotillo Water Reclamation Facility.

IWD-5: Sampling port on 12" discharge pipe located in the northwest corner of the AWN Pit floor, discharging to the Chandler R.O. Facility.

IWD-6: Sampling port on 12" discharge pipe following the third stage of the AWN treatment system and located along mezzanine level, discharging to the Chandler Ocotillo Water Reclamation Facility.

C. Permittee shall provide the City adequate access to the compliance sampling points.

D. Wastewater discharged through the compliance sampling point(s) referenced in (Part I.B.) above, must be sampled at the indicated minimum sampling frequency and analyzed for the constituents noted in the following charts. Wastewater discharges shall not exceed the discharge limitations that are derived from the most stringent discharge limitation for the particular parameter contained in 40 CFR 469.18 and Section 00-02 (a) (10) of the Pretreatment Program.

[1] Unless otherwise noted all terms used in this permit are as defined in Section 00-01(c) of the Pretreatment Program.

IWD-1 Discharge Limitations [2] and Sampling Requirements [3]

Parameter	Daily Average	Minimum Sampling Frequency [4, 8]	Sampling Method [7]
TTO [5]	1.37	2/year	grab or composite
pH	3.0 [6]	continuous	on-line continuous pH meter
Arsenic	0.30	2/year	grab or composite
Boron	2.40	2/year	grab or composite
Cadmium	0.40	2/year	grab or composite
Chromium	4.40	2/year	grab or composite
Copper	3.30	2/year	grab or composite
Cyanide (T)	0.40	2/year	grab
Lead	0.50	2/year	grab or composite
Manganese	48.0	2/year	grab or composite
Mercury	0.30	2/year	grab or composite
Nickel	3.70	2/year	grab or composite
Selenium	1.20	2/year	grab or composite
Silver	0.90	2/year	grab or composite
Zinc	17.00	2/year	grab or composite
Oil & Grease	100.0	2/year	grab
Dissolved Sulfides	0.50	2/year	grab
BOD	300.0	2/year	grab or composite
TSS	350.0	2/year	grab or composite

[2] Unless otherwise noted, all limitations are in concentration units of milligrams per liter (mg/L).

[3] All sampling of the discharge to evaluate compliance must be conducted at the compliance sampling point described in Part I.B. and depicted in Attachment A.

[4] A sample must be taken during the first six (6) months of the calendar year (January through June) and a sample must be taken in the second six (6) months of the calendar year (July through December). It is recommended that the samples be taken in January and July.

[5] Monitoring for Total Toxic Organics (TTO) shall be performed for all toxic organics listed in Attachment B. Permittee may request that the City allow a written certification in lieu of monitoring as allowed by the applicable federal categorical standard.

[6] This limit is instantaneous and shall in no case have a pH lower than 3.0.

[7] Some toxic organic compounds may not be sampled with automatic sampling equipment (40 CFR 136).

[8] Additional sampling requirements may be found in Part V- Special Conditions.

IWD-2 Discharge Limitations [2] and Sampling Requirements [3]

Parameter	Daily Average	Minimum Sampling Frequency [4, 8]	Sampling Method [7]
TTO [5]	1.37	2/year	grab or composite
pH	5.0 [6]	continuous	on-line continuous pH meter

[2] Unless otherwise noted, all limitations are in concentration units of milligrams per liter (mg/L).

[3] All sampling of the discharge to evaluate compliance must be conducted at the compliance sampling point described in Part I.B. and depicted in Attachment A.

[4] A sample must be taken during the first six (6) months of the calendar year (January through June) and a sample must be taken in the second six (6) months of the calendar year (July through December). It is recommended that the samples be taken in January and July.

[5] Monitoring for Total Toxic Organics (TTO) shall be performed for all toxic organics listed in Attachment B. Permittee may request that the City allow a written certification in lieu of monitoring as allowed by the applicable federal categorical standard.

[6] This limit is instantaneous and shall in no case have a pH lower than 5.0.

[7] Some toxic organic compounds may not be sampled with automatic sampling equipment (40 CFR 136).

[8] Additional sampling requirements may be found in Part V- Special Conditions.

IWD-5 Discharge Limitations [2] and Sampling Requirements [3]

Parameter	Daily Average	Minimum Sampling Frequency [4, 8]	Sampling Method [7]
TTO [5]	1.37	2/year	grab or composite
pH	3.0 [6]	continuous	on-line continuous pH meter
Arsenic	0.30	2/year	grab or composite
Boron	2.40	2/year	grab or composite
Cadmium	0.40	2/year	grab or composite
Chromium	4.40	2/year	grab or composite
Copper	3.30	2/year	grab or composite
Cyanide (T)	0.40	2/year	grab
Lead	0.50	2/year	grab or composite
Manganese	48.0	2/year	grab or composite
Mercury	0.30	2/year	grab or composite
Nickel	3.70	2/year	grab or composite
Selenium	1.20	2/year	grab or composite
Silver	0.90	2/year	grab or composite
Zinc	17.00	2/year	grab or composite
Oil & Grease	100.0	2/year	grab
Dissolved Sulfides	0.50	2/year	grab
BOD	300.0	2/year	grab or composite
TSS	350.0	2/year	grab or composite

[2] Unless otherwise noted, all limitations are in concentration units of milligrams per liter (mg/L).

[3] All sampling of the discharge to evaluate compliance must be conducted at the compliance sampling point described in Part I.B. and depicted in Attachment A.

[4] A sample must be taken during the first six (6) months of the calendar year (January through June) and a sample must be taken in the second six (6) months of the calendar year (July through December). It is recommended that the samples be taken in January and July.

[5] Monitoring for Total Toxic Organics (TTO) shall be performed for all toxic organics listed in Attachment B. Permittee may request that the City allow a written certification in lieu of monitoring as allowed by the applicable federal categorical standard.

[6] This limit is instantaneous and shall in no case have a pH lower than 3.0.

[7] Some toxic organic compounds may not be sampled with automatic sampling equipment (40 CFR 136).

[8] Additional sampling requirements may be found in Part V- Special Conditions.

IWD-6 Discharge Limitations [2] and Sampling Requirements [3]

Parameter	Daily Average	Minimum Sampling Frequency [4, 8]	Sampling Method [7]
TTO [5]	1.37	2/year	grab or composite
pH	5.0 [6]	continuous	on-line continuous pH meter

[2] Unless otherwise noted, all limitations are in concentration units of milligrams per liter (mg/L).

[3] All sampling of the discharge to evaluate compliance must be conducted at the compliance sampling point described in Part I.B. and depicted in Attachment A.

[4] A sample must be taken during the first six (6) months of the calendar year (January through June) and a sample must be taken in the second six (6) months of the calendar year (July through December). It is recommended that the samples be taken in January and July.

[5] Monitoring for Total Toxic Organics (TTO) shall be performed for all toxic organics listed in Attachment B. Permittee may request that the City allow a written certification in lieu of monitoring as allowed by the applicable federal categorical standard.

[6] This limit is instantaneous and shall in no case have a pH lower than 5.0.

[7] Some toxic organic compounds may not be sampled with automatic sampling equipment (40 CFR 136).

[8] Additional sampling requirements may be found in Part V- Special Conditions.

E. The monthly average flow volume of discharges from IWD-1 and IWD-5 shall not exceed 2.0 MGD.

The monthly average flow volume of discharges from IWD-2 and IWD-6 shall not exceed 2.1 MGD.

F. Definitions

1. **Composite** - A combination of individual samples obtained at regular intervals over a sampling day. A sampling day is any consecutive period of time that represents Permittee's discharge occurring during a normal operating day.

2. **Daily Average** - The maximum allowable concentration in the discharge as measured in a representative sample during a sampling day.

3. **Monthly Average** - The arithmetic average of the values of all representative samples collected over a calendar month for an individual pollutant.

4. **Grab** - An individual sample collected in less than fifteen (15) minutes without regard for flow or time of day.

5. **Compliance Sample** - Any sample for regulated parameters in this permit collected at the compliance sampling point(s) and analyzed by an EPA approved method per 40 CFR 136.

PART II - DISCHARGE PROHIBITIONS

A. No Permittee shall discharge or cause to be contributed to the POTW any pollutant or wastewater which will cause pass through or interference. Specific prohibitions include, but are not limited to, the discharge of any pollutants, including oxygen demanding pollutants (BOD, etc.) and SS, or wastewater, which:

1. Is released at a flow rate and/or pollutant concentration which will cause interference;

2. Contains any liquids, solids or gases which by reason of their nature or quantity will be sufficient**,** either alone or by interaction with other substances**,** to cause injury to the POTW from fire or explosion. At no time shall two successive readings on an explosion hazard meter at the point of discharge to the POTW be more than five (5) percent**,** nor any single reading over ten (10) percent**,** of the Lower Explosive Limit (LEL);

3. Contains any solid or viscous substances in amounts which will obstruct wastewater flow in any sewer line resulting in interference;

4. Will cause corrosive structural damage to the POTW, but in no case discharges to the POTW with a pH lower than 5.0, except that the Director has given approval for discharge points IWD-1 and IWD-5 to discharge at a pH of 3.0 or above to the R.O. facility;

5. Will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW exceeds 40 degrees C (104 degrees F) unless the Director, in his or her sole discretion, determines that alternate temperature limits are appropriate;

6. Contains any slug load;

7. Contains any noxious or malodorous liquids, gases or solids which either singly or by interaction with other substances, will create a public nuisance, a hazard to life, prevent entry into any POTW for maintenance and repair purposes, or otherwise cause acute worker health and safety problems;

8. Has in any way been diluted as a substitute for Pretreatment for the purpose of obtaining compliance with any Categorical Standard or Pretreatment Requirement imposed by this Program. However, dilution is allowed to the extent that it is expressly authorized by any applicable Categorical Standard;

9. Consists of unpolluted rainwater run-off or single pass cooling water unless no other disposal option is feasible and the discharge is expressly approved by the Director prior to discharge;

10. Any water or wastewater exceeding the following City instantaneous effluent discharge limitations [1]:

Parameter	Limitation (mg/l)	Sampling Method
Arsenic	0.30	grab or composite
Boron	2.40	grab or composite
Cadmium	0.40	grab or composite
Chromium (T)	4.40	grab or composite
Copper	3.30	grab or composite
Cyanide (T)	0.40	grab
Lead	0.50	grab or composite
Manganese	48.0	grab or composite
Mercury	0.30	grab or composite
Nickel	3.70	grab or composite
Total Phenolic	177.0	grab
Selenium	1.20	grab or composite
Silver	0.90	grab or composite
Zinc	17.0	grab or composite
Oil & Grease	100.0	grab
Dissolved Sulfides	0.50	grab
Fluoride [2]	10.0	grab or composite

[1] The permittee is not required to self-monitor for these parameters at their compliance sampling location(s) unless specifically listed on pages 3 to 6 of this

permit. However, the City will monitor quarterly for all these City parameters to determine compliance.

[2] The permittee will be allowed to exceed this discharge standard as long as Best Management Practices (BMP's) relating to the discharge of fluoride are followed and included in their industrial user permit.

11. Will cause the violation of any applicable Categorical Standard;

12. Is transported to the POTW by any septic tank pumper, chemical waste hauler or similar transporter except at specified discharge points, if any, designated by the Director;

13. Is a toxic or poisonous substance in a sufficient amount to either cause interference or constitute an acute hazard to humans or animals in the receiving stream; or

14. Contains petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

15. The City of Chandler has adopted concentration limits of 300 mg/l for biochemical oxygen demand (BOD) and 350 mg/l for total suspended solids (TSS). In the absence of a contrary permit provision, and subject to the other provisions of this sub-section and the loading capacity of the POTW, the City shall have the discretionary authority to forgo formal enforcement for violations of these discharge prohibitions. Discharges that exceed these limits will be surcharged to recover the additional costs associated with their treatment by the POTW. Excess BOD will be surcharged at a rate of $ 0.207/lb. Excess TSS will be surcharged at a rate of $ 0.039/lb.

PART III - REPORTING REQUIREMENTS

A. Compliance Monitoring Report

1. All reporting (including written notifications and compliance monitoring reports) required by this Permit shall, unless otherwise specified, be addressed to:

City of Chandler
Mail Stop 803
P.O. Box 4008
Chandler, Arizona 85244-4008

During normal business hours (8:00 am - 5:00 pm) the City of Chandler, Water Quality Division should be notified by telephone at (480) 782-3660, or by facsimile (FAX) at (480) 782-3735.

2. Each submitted compliance monitoring report must be signed in accordance with the requirements set forth in Part IV.N. of this Permit.

3. Permittee shall submit a Significant Industrial User Self-Monitoring Report no less than twice annually pursuant to Section 00-02 (f) (7) (C) (D) of the Pretreatment Program. These reports must be submitted by January 15th and July 15th. Please note that all self- monitoring results from January through June must be submitted by July 15th and all self-monitoring results from July through December must be submitted by January 15th.

4. Each report should indicate, for the prior reporting period, the nature and concentration of all pollutants required to be analyzed by this Permit and the measured maximum and average daily flows. The results of all compliance samples taken during any reporting period shall be summarized and reported the following reporting period.

5. If Permittee monitors any pollutant more frequently than required by this Permit at the compliance sampling points, using test procedures approved under 40 CFR Part 136, then the results of such monitoring shall be included in the compliance monitoring report or at the frequency required pursuant to this Permit. A required increase in the frequency of reporting may be found in Part V - Special Conditions. These additional results shall be included in all calculations required for the report. Such increased monitoring frequency shall also be noted on the report.

B. Notification of Noncompliance

Permittee shall notify the Water Quality Division immediately upon becoming aware of a discharge that is known or suspected to be in violation with any discharge limitation or provision of this Permit. If such notice is given orally, Permittee shall provide written notice within five (5) calendar days of the oral notice provided. The notification shall provide the information required pursuant to Part III.C regarding this discharge.

C. Written Report on Noncompliance Resulting from a Slug Load

Within five (5) calendar days of becoming aware of a slug load that results in a violation of any limitation or prohibition specified in this Permit, Permittee shall submit a detailed written report to the Water Quality Division. For purposes of this section, a slug load is any pollutant discharged to the POTW in such volume or strength as to cause pass through or interference. In particular, any pollutant concentration, quantity, or flow rate, which during any period of fifteen (15) minutes or more is greater than five (5) times the average twenty-four (24) hour concentration, quantity, or flow rate for such pollutant during normal operations and exceeds the discharge prohibition limits established in this Permit. The detailed written report shall contain the:

1. Location of the discharge;

2. Known or estimated nature**,** concentration and volume of the discharged pollutant(s);

3. Causes of the accidental discharge; and

4. Corrective action(s) undertaken, being undertaken and/or to be undertaken by the User. Any User causing such a discharge shall also initiate all appropriate corrective action(s) required by the Director that are needed to:

   a. Prevent any further injury to human health or safety or to the environment, the POTW or any other property;

   b. Promptly assess, mitigate, repair or remediate all or part of any injury or damage caused by such discharge; and

   c. Ensure that such a discharge does not occur again.

D. Automatic Resampling

1. If the results of the Permittee's self-monitoring indicates a violation has occurred, Permittee must repeat the sampling and pollutant analysis and **SUBMIT**, in writing, the results of this second analysis within thirty (30) days of becoming aware of the violation.

2. Permittee is not required to resample if the City has obtained a sample at the same discharge point for the same pollutant between the time Permittee performed its sampling and the time Permittee receives the results of the sampling.

E. Monitoring and Records

1. Representative Sampling

   Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the compliance sampling point(s) specified in this Permit. All equipment used for sampling and analysis must be routinely calibrated and inspected and maintained to ensure their accuracy. The Permittee shall ensure that records of routine equipment calibrations, maintenance activities and inspections are maintained.

2. Flow Measurements

   a. Permittee shall measure the daily maximum and monthly average flows discharged through the compliance sampling point(s) described in Part I.B. of this Permit and include these results in Permittee's compliance monitoring reports (Part III.A.).

   b. Appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

c. Permittee may request that the City allow estimates of the daily maximum or average monthly flows.

3. Analytical Methods to Demonstrate Continued Compliance

The analysis of all samples required under Part I of this Permit shall be performed using approved laboratory procedures. Approved laboratory procedures are the measurements, tests and analyses of the characteristics of water and wastes in accordance with analytical procedures as established in Title 40, Code of Federal Regulations, Part 136 as revised. Alternative procedures may be approved by the Director in accordance with applicable federal regulations.

4. Retention of Records

a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for this Permit, for a period of at least three years from the date of the sample, measurement, report or application.

b. All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Chandler shall be retained and preserved by the Permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

5. Sampling Record Contents

Sampling Records information shall include:

a. The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;

b. Name of person who performed the sampling and measurements;

c. The date(s) analyses were performed;

d. Name of laboratory and/or person(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

PART IV - STANDARD CONDITIONS

A. Petitions for Reconsideration-Permits (Section 00-03 (c) 1-9 Chandler Pretreatment Program)

A User may request that the Director reconsider decisions relating to permit issuance and/or permit modification matters as follows:

1. Any permit applicant or permittee (aggrieved party) may petition the Director to reconsider the conditions and limitations of a permit issued or amended pursuant to this Program by filing a written petition for review with the Director within twenty (20) days of receipt of the permit or amended permit;

2. Failure to submit a timely petition for review shall be deemed a waiver of the aggrieved party's review rights under this sub-section;

3. In its petition, the aggrieved party must identify the permit provisions objected to, specify in detail the reasons for objection, and present the alternative condition(s), if any, it seeks to place in the permit.

4. The provisions of the permit that are not objected to shall not be stayed pending review;

5. If the Director fails to act within thirty (30) days from receipt of the petition, it shall be deemed to be denied. Decisions not to reconsider the issued or amended permit, not to issue a permit, or not to amend a permit shall be considered final administrative actions for purposes of judicial review;

6. The aggrieved party seeking judicial review of the final permit decision may file a complaint with the Superior Court for Maricopa County, Arizona. In the absence of a Court Order to the contrary, final permit decisions made by the Director shall not be stayed pending judicial review;

7. Subject to the provisions of Section 00-02 (f) (1) of this Program, a petition for review shall not be deemed to authorize a Significant Industrial User to discharge without first obtaining an Industrial User Permit;

8. This sub-section shall not be construed to in any way alter, modify or affect the Director's ability to pursue enforcement action pursuant to Sections 00-03 (b) (6) and (7) of this Program;

9. The Director is authorized to formalize procedures relating to the implementation of this sub-section as deemed necessary.

B. Severability

The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

C. Adverse Impact

The Permittee shall, at Permittee's sole cost and expense, take all reasonable steps to minimize or correct any adverse impact to the POTW and the environment resulting from noncompliance with this Permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance discharge.

D. Inspection and Entry

The Permittee shall provide free access to any representative of the Water Quality Division. "Free access" means the ability of City personnel to enter facilities under safe and nonhazardous conditions with a minimum of delay. The City shall be able to:

1. Enter at any time during normal hours of operation upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit;

4. Sample or monitor any substances or parameters at any location for the purposes of determining Permit compliance; and

5. Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the Permit, could originate or may be subject to regulation.

E. Permit Action

This Permit may be modified, revoked or terminated for good cause, including, but not limited to, the following:

1. Failure to notify the Water Quality Division of significant changes to the wastewater prior to the changed discharge;

2. Making any new or increased industrial discharge, or otherwise making any change in the nature of Permittee's industrial discharge(s) if such change creates any new or increased industrial discharge without having first obtained an amended Permit;

3. Failure to give written notice to the Water Quality Division of not less than ninety (90) days prior to any facility expansion, production increase, or process modifications which results or may result in new or increased discharges or a change in the nature of the discharge;

4. Failure to give advance written notice to the Water Quality Division of any planned changes in the Permitted facility or activity which may result in noncompliance with Permit requirements;

5. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge Permit application;

6. Falsifying self-monitoring reports;

7. Tampering with monitoring equipment;

8. Refusing to allow timely access to the facility premises and records;

9. Failure to meet effluent limitations;

10. Failure to pay fines and penalties;

11. Failure to pay sewer charges;

12. Failure to meet compliance schedules;

13. Failure to complete a wastewater survey or the Permit application;

14. Failure to provide advance written notice of the transfer of business ownership of a Permitted facility;

15. For violation of any pretreatment standard or requirement, or any terms of the Permit or requirement of the Pretreatment Program;

16. To incorporate any new or revised federal, state, or local pretreatment standards or requirements;

17. To include material or substantial alterations or additions to the Permittee's operation which were inadvertently omitted in the issued Permit;

18. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or

19. For any other reason deemed appropriate by the Director.

F. Property Right

The issuance of this Permit does not convey any property right of any sort, or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

G. Permit Not Transferable

Industrial User Permits are issued to a specific user for a specific operation and are not assignable to another user or transferable to any other location. In the event of sale or transfer of ownership, the Permittee must provide a copy of this Permit to the purchaser and give written notification to the Water Quality Division prior to the effective date of sale or ownership transfer. **THE PURCHASER MUST OBTAIN A PERMIT PRIOR TO THE DISCHARGE OF ANY INDUSTRIAL WASTEWATER TO THE POTW.**

H. Duty to Reapply; Automatic Extension of Existing Permit

1. If Permittee wishes to continue to discharge industrial wastewater that is regulated by this Permit after the expiration date of this Permit, Permittee **MUST APPLY FOR AND OBTAIN A NEW PERMIT**. The application must be submitted to the Water Quality Division at least sixty (60) calendar days **BEFORE** the expiration date of this Permit, unless written permission for an extension of time is timely requested and the Water Quality Division grants the request.

2. Subject to the Director's right to modify, revoke or terminate this Permit, it shall continue to remain in full force and effect after the date of expiration if the Permittee has applied for a new Permit in accordance with the time frame required by this section, and a new Permit is not issued prior to the expiration date of this Permit.

I. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes but is not limited to: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the Permit.

J. Duty to Halt or Reduce Activity

Upon reduction, loss or failure of the treatment facility, the Permittee shall, to the extent necessary to maintain compliance with its Permit, control production or all discharges or both until operation of the treatment facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It shall not be a defense to the Permittee in an enforcement action that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with the conditions of this Permit.

K. Bypass

1. Definitions:

   "Bypass" means the intentional diversion of wastestreams from any portion of a treatment facility.

   "Severe property damage" means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2. Permittee may allow any bypass to occur which **DOES NOT** result in any violation of this Permit, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the notice and prohibition sections of this subpart.

3. Notice

   a. If Permittee knows in advance of the need for a bypass, it shall submit prior written notice to the City, if possible at least ten days before the date of the bypass.

   b. Permittee shall submit oral notice to the Water Quality Division of an unanticipated bypass that results in violations of this Permit within twenty-four (24) hours from the time the Permittee becomes aware of the bypass. Permittee shall also provide a written notice of the bypass within five (5) days of the time the Permittee becomes aware of the bypass. The written notice shall contain a description of the bypass and its cause, the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent reoccurrence of the bypass. Permittee may submit a written request to the Water Quality Division for a waiver of this written notice requirement that may only be granted by the Water Quality Division if the oral report has been received within twenty-four (24) hours.

4. Prohibition of Bypass

   Bypass is prohibited unless:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

c. Permittee submitted notices as required under subparagraph K.3.

5. Civil and Criminal Liability

Any bypass under this section shall not relieve the Permittee from civil and criminal liability for noncompliance with the discharge limitations or prohibitions of this Permit.

L. Planned Changes

The Permittee shall give written notice to the Water Quality Division not less than ninety (90) days prior to any facility expansion, production increase, or process modifications which results or may result in new or increased discharges or a change in the nature of the discharge.

M. Duty to Provide Information

Any information that the Water Quality Division may request to determine whether cause exists for modifying, revoking, or terminating this Permit, or to determine compliance with this Permit shall be provided by the Permittee.

N. Signatory Requirements

Permit applications, baseline monitoring reports, ninety (90) day compliance reports, self-monitoring reports and any other reports addressing Permit noncompliance or required by any enforcement action taken by the City of Chandler must be signed by the appropriate signatory or duly authorized representative, as follows:

1. By a responsible corporate officer, if Permittee is a corporation. For purposes of this section, a responsible corporate officer means:

   a. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or

   b. The manager of one or more manufacturing, production, or operation facilities employing more than two-hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty five million dollars (25,000,000) (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. By a general partner or proprietor if Permittee is a partnership or sole proprietorship respectively.

3. By a duly authorized representative of the individual designated above if:

   a. The authorization is made in writing by the individual described in subparagraph N.1. or N.2.;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Permitted discharge originates, such as the position of plant manager, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the Permittee; and

c. The written authorization is submitted to the Water Quality Division.

4. Any change in signatures or positions shall be submitted to the Water Quality Division in writing prior to or together with any reports to be signed by an authorized representative, but in no case more than thirty (30) days after the change.

5. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

O. Annual Publication

Significant Noncompliance with the terms and conditions of this Permit by the Permittee shall result in newspaper publication to inform the public.

P. Civil Penalty

The Director may enforce this Program by imposing and recovering a civil penalty of not more than twenty-five thousand dollars ($25,000) for each violation of any applicable Categorical Standard, Pretreatment Requirement or Industrial User Permit condition. For continuing violations, each day may constitute a separate violation.

Q. Recovery of Costs Incurred

The Director may seek recovery of the civil penalties either by an action in Superior Court or by a negotiated settlement agreement.

R. Dilution

The Permittee shall not increase the use of potable or process water or, in any way, attempt to dilute as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this Permit.

S. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in accordance with Section 405 of the Clean Water Act, Subtitles C and D of the Resource Conservation and Recovery Act, and all applicable state and local statutes, rules or ordinances.

PART V - SPECIAL CONDITIONS

A. The U.S. Environmental Protection Agency ("EPA"), with the cooperation of State and local authorities, has initiated the XL Program to work with interested companies to develop innovative approaches for addressing environmental issues. See generally 60 Fed. Reg. 27282 (May 23, 1995). The XL Program encourages companies to come forward with new approaches that have the potential to advance environmental goals more effectively and efficiently than have been achieved using traditional regulatory tools.

Permittee was an early volunteer for the XL Program, and has worked with a variety of stakeholders, including the City, the Gila River Indian Community and Chandler citizen groups, to refine its site-specific program into a Final Project Agreement (FPA). This permit is contemplated to be an attachment to the FPA.

For as long as the FPA remains in effect with the City as a signatory thereto, certain permit provisions regarding notice, inspection, permit modifications and enforcement will be modified by certain provisions of the FPA. Specifically, while the City remains a signatory to the FPA:

1. The City shall accept an integrated, comprehensive report that includes all information otherwise included in the Compliance Monitoring Report under this permit in lieu of a separately prepared and submitted Compliance Monitoring Report. This provision does not apply to any exception or episodic reporting requirements.

2. The City shall coordinate with the Arizona Department of Environmental Quality (ADEQ), and evaluate any input from the other signatories to the FPA, where practicable, before modifying this permit or taking any enforcement or regulatory action against Permittee. This provision shall in no way reduce the City's regulatory authority with respect to this permit or Permittee's actions pursuant to this permit.

3. The City shall attempt to coordinate any routine inspections of Permittee with the inspections to be undertaken of Permittee by the other signatories to the FPA.

If the FPA is never approved, is terminated at some point after approval, or the City later withdraws from the FPA, the modifications and special conditions herein provided shall be of no effect.

Intel discharges manufacturing process related wastewater through the IWD-1 and IWD-5 compliance points and to the Chandler Reverse Osmosis Treatment Plant. Intel has the capability of bypassing the Chandler Reverse Osmosis Treatment Plant and discharging their wastewater from the IWD-1 and IWD-5 compliance points directly into the City sewer system. Intel must adhere to the City pH discharge limit when discharging from the IWD-1 and IWD-5 compliance points directly to the City sewer and shall in no case have a pH lower than 5.0.

Intel-Ocotillo has Ultrapure Water Systems that use incoming City water and treats it for use in the Intel semiconductor manufacturing operations. The Ultrapure Water Systems generate some wastestreams that are discharged through the IWD-1, IWD-2 and IWD-6 compliance points. These wastestreams include reverse osmosis cleaning, ion exchange regeneration rinses, cartridge filter flushes and multimedia backwash. These wastestreams are considered dilute when combined with regulated semiconductor process wastestreams during sampling under 40 CFR 403.6 (e). Under 40 CFR 403.6 (e), an alternative discharge standard for Total Toxic Organics (TTO) must be calculated using the combined wastestream formula to account for all the Intel dilute wastestreams when combined with the regulated semiconductor process wastestreams during sampling. However, Intel has indicated that they can schedule the discharge of their dilute wastestreams around all compliance monitoring (both Intel and City) performed and therefore, calculating an alternative discharge standard for TTO would not be necessary. The City will coordinate all future City sampling with Intel to avoid the discharge of their dilute wastestreams.

All self-monitoring and City sampling to demonstrate or evaluate compliance with categorical TTO standards at the IWD-1, IWD-2 and IWD-6 compliance points must be performed while no wastestreams that are considered dilute under 40 CFR 403.6 (e) are included.

In addition the following statement shall accompany all Intel TTO self-monitoring reports:

"The current sampling results for EPA methods #624 and #625 to demonstrate compliance with categorical TTO standards were obtained from treated industrial effluent that did not contain dilution water."

The City of Chandler has approved the Intel Best Management Practices (BMP's) for the control of fluoride in their industrial wastewater effluent from their Chandler-Ocotillo Campus facility. The purpose of implementing the BMP's was to reduce fluoride in the wastewater before it is discharged from their facility. The BMP's for controlling the fluoride discharge levels include segregation and in-plant treatment of concentrated fluoride wastestreams using calcium precipitation. The Intel BMP's are attached and are an enforceable part of this industrial user permit.

Under Section 00-02(d)(1) of the Chandler Pretreatment Program, Intel will be allowed to

exceed the City fluoride discharge limit of 10 mg/l and it will not be considered a violation. The
10 mg/l fluoride discharge limit will not be enforceable as long as enforceable fluoride BMP's
are included in the Intel industrial user permit and the procedures outlined in their BMP's are
followed.

ATTACHMENT B

The term "TTO" shall mean Total Toxic Organics that is the summation of all quantifiable values greater than .01 milligrams per liter (mg/L) for the following toxic organics: Source - 469.12 (a)

1. Carbon Tetrachloride
2. 1, 2, 4 - Trichlorobenzene
3. 1, 2 - Dichloroethane
4. 1, 1, 1 - Trichloroethane
5. 1, 1, 2 - Trichloroethane
6. 2, 4, 6 - Trichlorophenol
7. Chloroform (Trichloromethane)
8. 2 - Chlorophenol
9. 1, 2 Dichlorobenzene
10. 1, 3 Dichlorobenzene
11. 1, 4 - Dichlorobenzene
12. 1, 1 - Dichloroethylene
13. 2, 4 - Dichlorophenol
14. 1, 2 - Diphenylhydrazine
15. Ethylbenzene
16. Methylene Chloride (Dichloromethane)
17. Dichlorobromomethane
18. Isophorone
19. Naphthalene
20. 2 - Nitrophenol
21. 4 - Nitrophenol
22. Pentachlorophenol
23. Phenol
24. Bis(2-ethylhexyl)phthalate
25. Butyl benzyl phthalate
26. Di-n-butyl phthalate
27. Anthracene
28. Tetrachloroethylene
29. Toluene
30. Trichloroethylene

ATTACHMENT 5

Intel's Environmental, Health and Safety Policy

Intel Corporation and its subsidiaries are committed to achieving high standards of environmental quality and product safety, and to providing a safe and healthful workplace for our employees, contractors and communities.

We will comply with all applicable regulatory requirements as a minimum and implement programs and processes to achieve greater protection, where appropriate. We will work with stakeholders to develop responsible laws, regulations and innovative programs that provide safeguards for the community, the workplace and the environment while providing flexibility to meet the needs of our business.

We seek a healthful and safe workplace, free of occupational injury and illness. We emphasize individual responsibility for safety by all employees and at all levels of management. We expect employees to report potential safety hazards and issues and be involved in implementing solutions. We will not conduct any operations or market a product without adequate safeguards. To maintain a safe work environment, employees are prohibited from possessing or using illegal drugs on Intel premises or reporting to work under the influence of illegal drugs or alcohol.

Craig R. Barrett, President and Chief Executive Officer

We are committed to conserving natural resources and reducing the environmental burden of waste generation and emissions to the air, water and land. Through continuous improvement methodologies we will develop environmentally compatible products and processes. We will strive to be leaders in reducing, reusing and recycling and will ensure that any wastes remaining are properly disposed of in a safe and environmentally sound manner.

We will be a responsible member of the communities in which we live and work. We will continue to expand our knowledge and understanding of the effect of our operations on safety, health and the environment. We are committed both to continuous improvement in our operations and to sharing the knowledge that we gain with our employees, customers, suppliers, the communities in which we live and work, the scientific community, government and industry.

We will establish and maintain appropriate controls, including periodic review, to ensure that this policy is being followed.

Craig R. Barrett, President and Chief Executive Officer,
March 1998

Craig R Barrett

ATTACHMENT 6

CURRENT PROJECT XL STAKEHOLDER TEAM MEMBERS

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ATTACHMENT 7

Relevant Internet Web Site Addresses

The Quarterly Report and Annual Report specified in this FPA can be accessed through the Intel Project XL Home Page:

http://www.intel.com/intel/other/ehs/projectxl

Information about Project XL generally can be accessed through the EPA Project XL Home Page:

http://www.epa.gov/projectxl/