



Apple Supplier Responsibility Standards

The following standards (each a “Standard”; collectively, “Standards”) supplement the Apple Supplier Code of Conduct (“Code”) by providing additional clarity regarding Apple’s requirements, as applicable. Apple Suppliers and their subsidiaries, affiliates and subcontractors (each a “Supplier”) must meet these Standards to be in compliance with the Code. The principles and requirements of the Code are incorporated into these Standards and these Standards shall govern and be deemed to modify the Code if there are any conflicting provisions. These Standards apply to Apple suppliers and their subsidiaries, affiliates, and subcontractors (each a “Supplier”) providing goods or services to Apple, or for use in or with Apple products.

The Apple Code and Standards draw from international human rights standards and instruments, including: the United Nations (UN) International Bill of Human Rights; the International Labor Organization 1998 Declaration on Fundamental Principles and Rights at Work; the UN Guiding Principles on Business and Human Rights; and the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-risk Areas; as well as additional relevant national and international business and human rights standards¹. Apple is a member of the Responsible Business Alliance (RBA); Apple’s Code and Standards meet or exceed requirements outlined in the RBA Code of Conduct.

¹ Additional resources [that inform Apple’s Code and Standards include]:
Dodd-Frank Wall Street Reform and Consumer Protection Act <http://www.sec.gov/about/laws/wallstreetreform-cpa.pdf>
Ethical Trading Initiative www.ethicaltrade.org/
ILO Code of Practice in Safety and Health
www.ilo.org/public/english/protection/safework/cops/english/download/e000013.pdf
ISO 14001 www.iso.org
National Fire Protection Association www.nfpa.org/catalog/home/AboutNFPA/index.asp
OECD Guidelines for Multinational Enterprises <http://www.oecd.org/investment/mne/1903291.pdf>
OHSAS 18001 <http://www.bsigroup.com/en-GB/ohsas-18001-occupational-health-and-safety/>
United Nations Convention Against Corruption <https://www.unodc.org/unodc/en/treaties/CAC/>
United States Federal Acquisition Regulation www.acquisition.gov/far/
SA 8000 <http://www.sa-intl.org/index.cfm?fuseaction=Page.ViewPage&PageID=937>



Supplier Responsibility Standard

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Supplier Responsibility Standard

Anti-Discrimination

Supplier Code of Conduct Requirements

Supplier shall not Discriminate against any Worker based on age, disability, ethnicity, gender, marital status, national origin, political affiliation, race, religion, sexual orientation, gender identity, union membership, or any other status protected by applicable national or local law, in hiring and other employment practices. Supplier shall not require pregnancy or Medical Tests, except where required by Applicable Laws and Regulations or Prudent for Workplace Safety, and shall not improperly Discriminate based on test results.

Supplier Responsibility Standards

1. Policy & Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy against **Discrimination** that complies with this Standard, Applicable Laws and Regulations, the Code and all other relevant applicable standards. The policy must clearly state that:

- Supplier shall not Discriminate against any **Worker** based on race, color, age, gender, sexual orientation, ethnicity, disability, religion, political affiliation, union membership, national origin, marital status, or gender identity in hiring and employment practices such as applications for employment, promotions, rewards, access to training, job assignments, wages, benefits, discipline, and termination, unless prohibited by law.
- Supplier shall not require pregnancy or **Medical Tests**, except where required by **Applicable Laws and Regulations** or **Prudent for Workplace Safety**, and shall not improperly discriminate based on test results.
- No Worker will be punished or retaliated against for reporting Discriminatory practices.

Supplier shall have written procedures and systems to implement its anti-Discrimination policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the anti-Discrimination policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with anti-Discrimination requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall identify, assess, minimize, and eliminate Discrimination.

2. Operational Practice

2.1. Anti-Discrimination

Unless prohibited by law, Supplier shall not Discriminate against any Worker based on race, color, age, gender, sexual orientation, ethnicity, disability, religion, political affiliation, union membership, national origin, marital status, or gender identity in hiring and employment

Definitions

Discrimination

The unjust, prejudicial, and/or unwarranted distinguishing treatment of an individual based on their actual or perceived membership in a certain group or category.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Medical Test

A medical procedure performed to detect, diagnose, or evaluate disease, disease processes, and disease susceptibility, and/or to determine a course of treatment. Mandatory health checks performed in conjunction with hiring are considered to be Medical Tests.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Prudent for Workplace Safety

Necessary to protect the Worker's health, safety, or ability to perform his or her job or for the protection of other Workers at the facility.

practices such as applications for employment, promotions, rewards, access to training, job assignments, wages, benefits, discipline, and termination.

Workers shall be provided with reasonable accommodation for religious practices.

Supplier shall ensure that there is no Discrimination in compensation based on the characteristics listed above.

Recruitment and employment policies and practices, including job advertisements, job descriptions, and job performance/evaluation policies and practices, shall be free from any type of Discriminatory bias.

2.2. Pregnancy and Nursing Mothers Anti-Discrimination

Supplier shall comply with all Applicable Laws and Regulations regarding pregnancy and postnatal employment protections, benefits, and pay. Supplier shall make reasonable accommodations for nursing mothers unless prohibited by Applicable Laws and Regulations.

Supplier shall not (i) refuse to hire an applicant for a non-**Hazardous** position or (ii) terminate a Worker's employment solely based on the Worker's pregnancy or nursing status.

Supplier shall not prohibit female Workers from becoming pregnant nor threaten female Workers with adverse employment consequences, including dismissal, loss of seniority, or deduction of wages, in order to discourage them from becoming pregnant.

2.3. Medical Anti-Discrimination

Supplier shall not, on the basis of a person's **Medical Status**, make any employment decisions that negatively affect the person's employment status unless such decision is dictated by the inherent requirements of the job or is Prudent for Workplace Safety.

Supplier shall not Discriminate against a Worker in eligibility for another position based on the Worker's refusal to take a Medical Test where there is no **Required Medical Test** for such position.

Supplier shall make reasonable efforts to accommodate Workers with chronic illnesses, which may include rearranging working time, providing special equipment, opportunities for rest breaks, time for medical appointments, flexible sick leave, part-time work, and return-to-work arrangements.

2.4. Pregnancy and Medical Testing

Supplier shall not require pregnancy tests or Medical Tests, including but not limited to Hepatitis B or HIV, either as a condition for employment or as a requirement for continued employment.

Pregnancy tests or Medical Tests are allowed only if each of the following conditions are met:

- Applicable Laws and Regulations require the pregnancy test or the Medical Test is determined (in writing) by a **Qualified Health Professional** to be required as a safety measure prior to working in a particular environment and the Worker is specifically assigned to work in that particular environment.
- The cost of the Medical Test is paid by the Supplier.
- The Worker receives clear communication regarding the purpose of the test and the specifics of what will be tested.
- The Worker provides affirmative written consent to the test.
- The original report of results should be provided to and allowed to be retained by the worker. Suppliers should not retain copies of the report, unless required by law.

2.5. Worker Protections

Supplier shall identify (in writing) the jobs for which applicable law or workplace safety requires Workers to take a pregnancy test or Medical Test. Workers refusing to take a required Medical Test or pregnancy test will not be eligible for these jobs.

Definitions

Hazardous

A situation or condition having the potential to cause injury or death.

Medical Status

Past or current medical condition of a Worker.

Required Medical Test

A medical test that is required by law or that a Qualified Health Professional determines in writing is Prudent for Workplace Safety.

Qualified Health Professional

Licensed or certified individual (either on- or off-site) with the knowledge, training, and experience necessary to review and assess a facility's operating environment and any associated risks to the Worker.

Supplier shall provide documentary evidence that any Medical Test or other test it requires Workers to take is otherwise required by law or has been properly determined by a Qualified Health Professional to be Prudent for Workplace Safety.

Supplier shall identify positions deemed Hazardous for pregnant Workers, nursing Workers, or Workers with a medical condition. At a minimum, these must be communicated to persons responsible for recruitment, allocation of tasks, and the Worker before the Worker begins to work at that position.

Supplier shall take reasonable measures to ensure the safety and health of pregnant Workers, nursing Workers, and Workers with a medical condition, including elimination of workplace health and safety risks to such Workers and accommodating such Workers in a non-Hazardous position.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to any person involved in activities that may be associated with Discrimination risks.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its anti-Discrimination policy to all Workers, supervisors, and managers. This communication shall include information about Hazardous jobs, workplace accommodations for non-Hazardous conditions, and voluntary Medical Testing. The communication or training shall be provided during the initial orientation period and reinforced via refresher training on a regular basis.

4. Documentation

Confidentiality of all pregnancy and medical records shall be maintained in accordance with Applicable Laws and Regulations.

Supplier shall retain documentation related to anti-Discrimination.

All documentation shall be made available to Apple for review upon its request.



Supplier Responsibility Standard

Anti-Harassment and Abuse

Supplier Code of Conduct Requirements

Supplier shall commit to a Workplace free of **Harassment** and abuse. Supplier shall not threaten Workers with, or subject them to, harsh or inhumane treatment, including but not limited to Verbal Abuse and Harassment, Psychological Harassment, mental and physical coercion, and Sexual Harassment.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy against Harassment and abuse that complies with this Standard, **Applicable Laws and Regulations**, the Code and all other relevant applicable standards. The policy shall at a minimum include each of the following:

- A clear definition of what constitutes Sexual Harassment
- A statement prohibiting Harassment and abuse consistent with this Standard and Applicable Laws and Regulations
- Description of method(s) for reporting internal grievances/complaints regarding Harassment and abusive behavior
- Disciplinary rules and penalties against the harasser/abuser and against those who make false accusations
- A statement regarding the policy of non-retaliation for persons reporting cases of Harassment in good faith.

Supplier shall have written procedures and systems to implement its anti-Harassment and abuse policy.

Supplier shall comply with its written policy at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the anti-Harassment and abuse policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with anti-Harassment and abuse requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall identify, assess, and minimize risks related to anti-Harassment and abuse.

2. Operational Practices

Supplier shall ensure that all **Workers** are treated with respect and dignity. No form of Harassment or abuse shall be tolerated at the **Workplace**, including but not limited to physical Harassment, **Psychological Harassment**, Sexual Harassment, or Verbal Harassment.

2.1. Workplace Discipline

Supplier shall have written disciplinary rules, procedures and practices that embody a system of **Progressive Discipline**.

Definitions

Harassment

Unwanted behavior of a repeat or singular instance that can take place between a manager/ supervisor and a Worker (vertical relationship), between a Worker and another Worker (horizontal relationship), between a manager and a contract or outsourced Worker, and between Workers and service providers, clients, or other third parties.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at Supplier's facility.

Workplace

A physical place in which any of the following occur:

- Workers conduct work or frequently enter for business. Employment-related business is conducted as a result of employment responsibilities or employment relationship.
- Work-related social functions, conferences and training sessions, official business travel and lunches, dinner, or promotional campaigns organized for client or partners, telephone conversations and communications through electronic media.

Psychological Harassment

Humiliating or intimidating verbal or non-verbal behavior, including the throwing of objects.

Progressive Discipline

A system of maintaining discipline through the application of escalating disciplinary action moving from verbal warnings to written warnings to suspension and finally to termination.

The disciplinary system shall be applied in a fair and nondiscriminatory manner and include a management review by an objective party senior to the manager who imposed the disciplinary action.

Supplier shall have a system to discipline supervisors, managers, or Workers who engage in any **Physical Abuse**, **Sexual Harassment** or sexual abuse, Psychological Harassment, or **Verbal Harassment** or Verbal Abuse, through measures such as compulsory counseling, warnings, demotions, and terminations or any combination thereof, regardless of whether such action was intended as a means to maintain labor discipline. Practices such as public humiliation of workers are not permitted.

Supplier shall not use monetary fines or penalties as a means to maintain labor discipline, including for poor performance or for violating company rules, regulations, or policies.

Access to food, water, toilets, medical care, health clinics, and other basic necessities shall not be used as reward or as a means to maintain labor discipline.

Workers shall be requested but not compelled to sign all written records of disciplinary action against them.

2.2. Security Practices

All security practices shall be gender appropriate and nonintrusive.

Search of bags and other personal items for the purpose of theft prevention is acceptable provided searches are applied equally across all employees regardless of position or other factors.

Body searches and physical pat-downs shall only be undertaken following appropriate procedures and subject to Applicable Laws and Regulations. Any physical search shall be conducted in the open, or as culturally accepted, and shall be conducted by security personnel of the same gender as the person being searched.

Supplier shall not impose unreasonable restrictions on movement within the Workplace nor on entry or exit of company-provided facilities.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all responsible staff on anti-Harassment and abuse. The training shall at a minimum include:

- All personnel that receive or process complaints regarding Harassment and abuse shall be formally trained to address such complaints.
- Security personnel shall receive training on Harassment and abuse prevention and their roles and responsibilities.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its anti-Harassment and abuse policy to all Workers, supervisors, and managers at the Workplace.

Training on Harassment and abuse prevention shall be mandatory for all Workers, supervisors, and managers during the initial orientation period and reinforced via refresher training on a regular basis.

Disciplinary rules, procedures and practices shall be clearly communicated to all Workers.

4. Documentation

Supplier shall retain any documentation related to anti-Harassment, including but not limited to:

- Records of all disciplinary actions taken. Records of disciplinary action must be maintained in the Worker's personnel file.
- Records of completed training.

Supplier shall maintain and make available immediately to Apple upon its request all documentation regarding allegations of Harassment and abuse.

Definitions

Physical Abuse

Includes any physical contact with the intent to injure or intimidate (including the throwing of objects) and disciplinary measures that cause physical discomfort.

Sexual Harassment

- Unwelcome sexual advances, requests for sexual favors, and all other verbal or physical conduct of a sexual nature, when (a) submission to such conduct is made either explicitly or implicitly a term or a condition of an individual's employment; (b) an employment decision is based on an individual's submission to or rejection of such conduct; or (c) such conduct has the purpose or effect of unreasonably interfering with an individual's work performance by creating an intimidating, hostile, or sexually offensive environment.
- Offensive sexual comments, jokes, innuendoes, and other sexually oriented statements.
- Display of pornographic materials or sexually explicit images.

The following shall not be construed as Sexual Harassment:

- Interaction based on mutual consent.
- Occasional compliments that are socially and culturally acceptable and appropriate unless they make an individual uncomfortable.

Verbal Harassment

Chronic use of implied or direct threats.



Supplier Responsibility Standard

Prevention of Involuntary Labor

Supplier Code of Conduct Requirements

Supplier shall ensure that all work is voluntary. Supplier shall not traffic persons or use any form of slave, forced, bonded, indentured, or prison labor. This includes the transportation, harboring, recruitment, transfer, or receipt of persons by means of threat, force, coercion, abduction, fraud, or payments to any person having control over another person for the purpose of exploitation.

Supplier shall not withhold Workers' original government-issued identification and travel documents. Supplier shall ensure that Workers' contracts clearly convey the conditions of employment in a language understood by the Workers. Supplier shall not impose unreasonable movement restrictions within the workplace or upon entering or exiting company-provided facilities.

Workers shall not be required to pay employers' or their agents' fees for their recruiting and/or ongoing employment. This includes recruitment, application, recommendation, hiring, placement, processing, renewals and/or recurring fees of any kind. If such fees are found to have been paid by Workers, such fees shall be repaid to the Worker.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy against involuntary labor that complies with the Code, this Standard, and **Applicable Laws and Regulations**.

Supplier shall have written procedures and systems to implement its prevention of involuntary labor policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of prevention of involuntary labor policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with prevention of involuntary labor requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall identify, assess, and minimize risks related to involuntary labor.

2. Operational Practices

2.1. Identity Documents

Workers shall retain possession or control of all identity documents, such as passports, identity papers, travel documents, and other personal legal documents.

Supplier shall not require surrender of Workers' original identity documents, withhold Workers' original identity documents, or restrict Workers' access to original identity documents for any reason. Supplier may obtain and retain copies of Workers' original identity documents.

Supplier may request (but may not demand or require) Workers' original identity documents for the purposes of obtaining visa renewals or satisfying other work permit related

Definitions

TPEA or a Third-Party Employment Agency

A private service enterprise, including subagents, carrying out, under contract and in exchange for financial compensation, operations on behalf of individuals or enterprises, whose role is to provide access to employment or career progression by filling employment vacancies.

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

requirements for such Workers. Supplier shall work with related parties including a **TPEA** to ensure timely return of all original identity documents to Workers.

2.2. Recruitment Fees

Workers shall not be required to pay employers' or their agents' fees for their recruiting and/or ongoing employment. This includes recruitment, application, recommendation, hiring, placement, processing, renewals and/or recurring fees of any kind. If such fees are found to have been paid by Workers, such fees shall be repaid to the Worker

2.3. Deposits

Deposits from Workers are prohibited unless required by Applicable Laws and Regulations. If a deposit is legally required, Supplier shall ensure that an accurate receipt is provided for any deposits made by Workers and that such deposits shall be returned in full to the Worker as expeditiously as practicable, but no later than one month after the Worker's employment has terminated or reason for such deposit has ended, whichever is earlier.

2.4. Loans

Personal loans to Workers or job seekers under circumstances where repayment terms could be construed as debt bondage or forced labor are prohibited.

2.5. Freedom of Movement

All Workers shall have the right to freely enter into and to terminate their employment.

Supplier shall not confine or restrict Worker's freedom of movement inside the place of production or Supplier-provided facilities, including access to drinking water and the Worker's Dormitory room, except where necessary for Worker safety and permitted by Applicable Laws and Regulations.

Supplier shall not restrict Workers' access to bathrooms in terms of time or frequency of bathroom breaks or non-payment of wages during bathroom breaks.

2.6. Forced Overtime

All overtime shall be voluntary. Supplier shall ensure that all Workers have the right to refuse to work Overtime Hours.

Supplier shall not impose overtime where Workers are unable to leave the work premises. Under no conditions shall a Supplier impose punitive measures such as salary deductions, apply coercion of any kind, denial of future opportunities for overtime, or take disciplinary action against Workers for refusing overtime.

2.7. Production Quota

Supplier shall not set production quotas or piecework rates at such a level that Workers need to work beyond regular working hours (excluding overtime) to earn the legal Minimum Wage or the prevailing industry wage.

2.8. Bank Accounts

Suppliers shall not have direct control of, or access to, Worker bank accounts other than to make direct deposits of compensation.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all staff responsible for the prevention of involuntary labor.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its prevention of involuntary labor policy to all Workers, supervisors, and managers during the initial orientation period and reinforced via refresher training on a regular basis.

4. Documentation

Supplier shall retain documentation related to the prevention of involuntary labor.

All documentation shall be made available to Apple for review upon request.



Supplier Responsibility Standard

Third-Party Employment Agencies

Supplier Code of Conduct Requirements

Supplier shall ensure that the Third-Party recruitment agencies it uses are compliant with the provisions of this Code and the law.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses **Third-Party Employment Agency** management requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its Third-Party Employment Agency management policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the Third-Party Employment Agency management policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with Third-Party Employment Agency management requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall identify, assess, and minimize risks related to Third-Party Employment Agency management.

1.4. Pre-selection Due Diligence

Supplier shall conduct pre-selection due diligence to ensure Third-Party Employment Agency compliance with **Applicable Laws and Regulations**, and the applicable requirements of the Code and related Supplier Responsibility Standards.

1.5. Recruitment Due Diligence

Supplier shall conduct due diligence, including but not limited to onboarding interviews with a sample of **Workers** recruited or hired through Third-Party Employment Agencies to ensure that:

- Student workers need to be clearly identified as students during the recruitment process.
- Workers were provided accurate details of the nature and place of work, living conditions, the term of the employment contract (if applicable), working hours, Base Wages for Regular Hours, rates for overtime and holiday wages, and applicable deductions and benefits.

1.6. Regular Audits

Supplier shall conduct regular audits of Third-Party Employment Agencies from which it obtains Workers to ensure compliance with **Applicable Laws and Regulations**, the Code, and related Supplier Responsibility Standards.

Definitions

TPEA or a Third-Party Employment Agency

A private service enterprise, including subagents, carrying out, under contract and in exchange for financial compensation, operations on behalf of individuals or enterprises, whose role is to provide access to employment or career progression by filling employment vacancies.

Private service enterprise, including subagents, carrying out, under contract and in exchange for financial compensation, operations on behalf of individuals or enterprises, whose role is to provide access to employment or career progression by filling employment vacancies.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Suppliers shall audit Third-Party Employment Agencies to ensure Workers are provided proper employment contracts, working hours, Base Wages for Regular Hours, rates for overtime and holiday wages, deductions and benefits, including social insurance and living conditions where applicable.

1.7. Third-Party Employment Agency Compliance

Supplier shall have a documented procedure in place to manage violations of Applicable Laws and Regulations and this Standard by a Third-Party Employment Agency.

This procedure shall define appropriate sanctions and establish a corrective action process pursuant to which the Third-Party Employment Agency's violation is remedied.

Supplier shall terminate its relationship with any Third-Party Employment Agency that is unwilling to correct a violation.

2. Operational Practices

2.1. Licenses

Supplier shall ensure that Third-Party Employment Agencies have valid and appropriate licenses, certifications, and permits for all of their operations.

2.2. Identity Documents

Third-Party Employment Agencies shall not require surrender of Workers' original identity documents, withhold Workers' original identity documents, or restrict Workers' access to original identity documents for any reason.

Supplier may request (but may not demand or require) Workers' original identity documents for the purposes of obtaining visa renewals or satisfying other work permit related requirements for such Workers. Supplier shall work with related parties including a TPEA to ensure timely return of all original identity documents to Workers.

Third-Party Employment Agencies may obtain and retain copies of Workers' original identity documents.

2.3. Wage Payment

Supplier shall establish a due diligence process to ensure that Third-Party Employment Agencies pay Workers and provide legally required benefits accurately and on a timely basis.

For any signing bonuses committed by TPEAs, Supplier shall also establish a reliable process to ensure payment terms, amount and timeline is clearly communicated to workers and payment is made accordingly.

2.4. Bank Accounts

Third-Party Employment Agencies shall not have direct control of, or access to, Worker bank accounts other than to make direct deposits of compensation.

2.5. Monitoring of Fees

Supplier shall implement a comprehensive management system to check that workers are not charged any fees to obtain a job from a Third-Party Employment Agency.

2.6. Supplier Contracts with Third-Party Employment Agencies

Supplier's contracts with Third-Party Employment Agencies shall comply with Applicable Laws and Regulations and the applicable terms of the Code and related Supplier Responsibility Standards.

2.7. Third-Party Employment Agency Contracts with Workers

Third-Party Employment Agencies' contracts with Workers shall meet the same requirements as contracts signed directly between the Supplier and Workers. Suppliers shall obtain and verify the terms of the contracts between the Third-Party Employment Agency and Workers prior to receiving the Workers onsite.

3. Training and Communication

3.1. Responsible Staff and TPEA

Supplier shall provide comprehensive training to all staff responsible for Third-Party Employment Agency management.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its Third-Party Employment Agency management policy to all Workers, supervisors, and managers during the initial orientation period and reinforced via refresher training on a regular basis.

4. Documentation

Supplier shall retain documentation and records relating to Third-Party Employment Agency management, including but not limited to pre-selection due diligence, business licenses, and audit reports.

All documentation shall be made available to Apple for review upon request.



Supplier Responsibility Standard

Foreign Contract Worker Protections

Supplier Code of Conduct Requirements

Supplier shall ensure that all work is voluntary. Supplier shall not traffic persons or use any form of slave, forced, bonded, indentured, or prison labor.

Supplier shall ensure that Workers' contracts clearly convey the conditions of employment in a language understood by the workers.

Workers shall not be required to pay employers' or their agents' recruitment fees or other similar fees to obtain their employment. If such fees are found to have been paid by workers, such fees shall be repaid to the Worker.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses **Foreign Contract Worker** ("FCW") requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its FCW management policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the FCW protections policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with FCW requirements specified in **Applicable Laws and Regulations** and this Standard in both the **Receiving Countries** and **Sending Countries**.

Supplier shall identify, assess, and minimize risks related to FCW management.

2. Operational Practices

2.1. Legal Work Permits

Supplier shall ensure that all FCWs have valid legal work permits.

2.2. Signed Employment Contract

Supplier shall ensure that all FCWs who are hired to work in Supplier's facility while living in another country receive, understand, sign a written employment contract in their own language and receive a copy of the employment contract prior to departing from the sending country.

In addition to the requirements specified in the Wages, Benefits, and Contracts Standard, contracts for FCWs shall additionally include the following terms:

- Terms and conditions regarding possession of identity documents during the employment contract term
- Estimates of the minimum and maximum net pay the FCW could expect to receive each month. Maximum net pay shall be based on maximum of 60 hours of work per week.

Definitions

Foreign Contract Worker

Worker whose nationality/country of origin and permanent residence is different from the country in which the Supplier's facility is located.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of workers.

Receiving Country

The country in which Supplier's facility is located and in which the Foreign Contract Worker will be employed.

Sending Country

The country of origin (place of permanent residence) of the Foreign Contract Worker.

2.3. Early Termination of Contract with Reasonable Notice

Supplier shall not penalize FCWs for voluntarily terminating their employment contracts with Reasonable Notice as defined by local laws.

2.4. Early Termination of Contract Without Reasonable Notice

Supplier shall not penalize FCWs for voluntarily terminating their employment contract early without **Reasonable Notice** by deduction of base or overtime wages due. Supplier may deduct the cost of such FCW's repatriation to the sending country up to the legal limit of repatriation or 60% of the FCW's **1-month net wage**, whichever is lower.

2.5. Fees, Expenses, and Deposits

Supplier shall use its best efforts to ensure FCWs are not charged any Fees and Expenses or deposits related to their employment in accordance with Apple's definition of Fees and Expenses.

Suppliers shall pay the costs of recruitment directly to the extent possible.

Supplier shall implement a process to determine the specific amount of any Fees and Expenses paid by each individual FCW prior to commencement of work.

Fees & Expenses

Suppliers are responsible for paying all fees and expenses associated with recruitment, placement, processing, transportation, or ongoing management of workers in both the Sending Country and the Receiving Country, and any Third-Party expenses and fees, including, but not limited to:

Recruitment fees

- Reservation or commitment fees
- Informal broker and sub-agent fees and expenses for assistance in recruitment (fees paid by workers to middlemen, recruiters, or persons who referred the worker to the employment agency, whether formal or informal)
- Recruitment service fees in the Sending Country (such as application or recommendation fees)
- Recruitment service fees in the Receiving Country (both one-time and recurring fees)
- Deposits
- Relocation costs if asked to move once employment has begun

Transportation and lodging costs

- Air or ground transportation from Sending Country to Receiving Country
- Returning air or ground transportation from Receiving Country to Sending Country

Documentation, medical, training, and other government fees

- Third-Party Employment Agency service fees
- Passport and visa fees
- Medical exams/screening in the Sending Country and Receiving Country
- Temporary work or residence permits and renewals
- Documentation fees in Sending Country (such as notarization, translation services, and attorney's fees)
- Insurance
- Government-required fees
- Background and reference checks
- Photos (including new passport or visa and renewals)

Training fees

- Third-Party Employment Agency or supplier mandated training

Exemptions

Unless required by Applicable Laws and Regulations, the following shall be exempted:

- Direct transportation expenses incurred from worker's home to local or central recruitment processing centers in the Sending Country prior to the offer of employment and signed acceptance in writing.

Definitions

Reasonable Notice

Maximum of one month prior notice, or less if required by Applicable Laws and Regulations, for a Foreign Contract Worker to voluntarily terminate contract with employer.

1-month net wage

The amount equivalent to one month's expected wages for the Foreign Contract Worker including anticipated overtime hours. This monthly amount shall not exceed the amount of wages based on a 60-hour workweek, including regular and overtime hours after government-required deductions. Bonuses may only be included in the calculation where bonuses are guaranteed in the original contract terms.

Third-Party Employment Agency

A private service enterprise, including subagents, carrying out, under contract and in exchange for financial compensation, operations on behalf of individuals or enterprises, whose role is to provide access to employment or career progression by filling employment vacancies.

Fees and Expenses related to the recruitment of FCWs should be clearly stated in the contracts between **Third-Party Employment Agencies** and Supplier to ensure compliance with zero fee policies.

Supplier shall require Third-Party Employment Agencies to provide accurate receipts to each FCW detailing actual Fees and Expenses paid by the FCW before departure from the sending country.

Supplier shall implement a non-reprisal policy that prohibits the punishment of and/or retaliation against FCW for any information provided during the job-seeking or employment process. This policy shall be communicated to all FCWs during the interview process.

2.6. Remedy

In the event that the Supplier finds that a FCW has paid Fees and Expenses related to their employment, Supplier shall reimburse such Fees and Expenses to that FCW within 30 days of the later of (i) the start of the FCW's employment with Supplier or (ii) the date Supplier discovers the fee payment(s).

2.7. Identity Document Storage

Supplier shall provide each FCW with individual secure storage for their identity documents, such as passports, identity papers, travel documents, and other personal legal documents.

Storage shall be:

- Freely and immediately accessible to FCWs at any time
- Accessible to FCWs without assistance and there shall be no barriers to access
- Lockable and secured against unauthorized access

2.8. Pregnancy Protections

Supplier shall take affirmative steps to protect the rights of FCWs who become pregnant. In cases where receiving country law requires that pregnant FCWs return to their home country (or the sending country) to give birth, Supplier shall provide such protections to pregnant FCWs as per Applicable Laws and Regulations.

2.9. Diplomatic Access

Supplier shall not prevent any FCW from contacting his or her embassy.

2.10. Repatriation

Suppliers shall be responsible for the payment of repatriation for each FCW in all circumstances including but not limited to the following:

- Upon completion of the employment contract.
- On termination of the contract due to employee illness or incapacity.
- The FCW has been subject to harassment or abuse or other violation of his or her rights.

This requirement does not apply when the FCW:

- Is terminated for misconduct or illegality that result in repatriation as per Applicable Laws and Regulations.
- Obtains other employment within the country and leaving the country is not required per Applicable Laws and Regulations.
- Terminates employment contract early without Reasonable Notice.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all staff responsible for FCW management.

3.2. Foreign Contract Workers

Supplier shall establish clear pre-departure education and training to FCWs, to ensure they understand at the minimum the following:

- The terms of employment contracts

- Legal rights
- Fees and Expenses related to recruitment
- Expected living expenses needed
- Living conditions
- Expected first salary, any deductions, taxable income, and their payment terms including expected amount and schedule
- Laws and regulations to follow
- Any other protections under the Code and related Standards prior to signing employment contracts in the sending country

3.3. Third-Party Employment Agencies

Supplier shall effectively communicate its FCW protections policy to all Third-Party Employment Agencies involved in such management.

4. Documentation

Supplier shall retain documentation and records related to management of FCWs.

All documentation shall be made available to Apple for review upon request.



Supplier Responsibility Standard

Prevention of Underage Labor

Supplier Code of Conduct Requirements

Supplier shall employ only Workers who are at least 15 years of age, or the applicable minimum legal age for employment, or the applicable age for completion of compulsory education, whichever is highest. Supplier may provide legitimate workplace apprenticeship programs for educational benefit that are consistent with Article 6 of ILO Minimum Age Convention No. 138 or light work consistent with Article 7 of ILO Minimum Age Convention No. 138.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses the requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its prevention of underage labor policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the prevention of underage labor policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with prevention of underage labor requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall identify, assess, and minimize risks related to underage labor.

1.4. Age Documentation and Verification Systems

Supplier shall establish and implement appropriate age documentation and verification management systems to ensure that **Underage Workers** are not working on site. The systems shall cover Supplier's operations, **Third-Party Employment Agencies**, and **Qualified Educational Programs**.

The systems shall at a minimum include:

- Minimum requirements for age verification documentation for employment as required by applicable local law and regulations (that is, government-recognized photographic ID). Where the law does not dictate the official documentation required, Supplier must inspect and cross-reference at least one of the following to verify validity: birth certificate, government-issued personal identification card, driver's license, voting registration card, "official stamped" copy of a school certificate, affidavit from local government representative, foreign national work permit.
- Robust age-verification measures, including at minimum:
 - o Matching photographic ID to Workers' faces
 - o Verification through Third-Party resources where available, such as Internet resources or local government offices

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Minimum Legal Age

Under 15 years of age, the legal minimum age for employment, or the age for completing compulsory education in that country, whichever is higher.

Underage Worker

Any Worker under the Minimum Age.

Third-Party Employment Agency

Private service enterprise, including sub-agents, carrying out, under contract and in exchange for financial compensation, operations on behalf of individuals or enterprises, whose role is to provide access to employment or career progression by filling employment vacancies.

Qualified Educational Program

A course of instruction that is at least one academic term long and leads to a certification, degree, or diploma in a career field.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

- o Periodic visual inspection of facility for potential Underage Workers

2. Operational Practices

Suppliers shall not employ any Workers who are less than 15 years old, the legal minimum age for employment, or the age for completing compulsory education in that country, whichever is highest.

3. Training and Communication

3.1. Recruitment Staff

Supplier must provide comprehensive training to all recruitment staff including Third-Party Employment Agencies and qualified educational providers on appropriate age documentation and verification systems.

3.2. Workers, Supervisors, and Managers

Supplier shall communicate the prevention of underage labor policy to all Workers, supervisors, and managers of the facility during the initial orientation period and via refresher training on an annual basis.

4. Remedy

If any **Active Underage Worker**, **Historical Underage Worker**, or **Terminated Underage Worker** is found either through an external audit or self-review, Supplier shall notify Apple immediately and shall implement a remediation program as directed by Apple.

4.1. Immediate Steps

When an Active Underage Worker has been identified, Supplier shall immediately ensure that the Worker is:

- Physically safe
- Free from threat of retaliation
- Removed from the workplace, although the Supplier shall not expel the Worker from the facility.

4.2. Case Management

The remediation program shall last for six months or until the Worker reaches the Minimum Age, whichever is longer. Supplier shall provide funds and work with relevant governmental and civil society actors in order to provide for the welfare of the Worker, including provision of:

- Tuition expenses and reasonable additional requisite expenses, for such items as books, and supplies, and for general living, to enable the Worker to return to school
- Forgone wages the Worker would have earned at the Supplier's facility
- Administrative costs for case management

4.3. Offer of Reemployment

When the Worker reaches the Minimum Age, Supplier shall offer the Worker a job at the facility that is equivalent to or more favorable than the job previously held by the Worker.

5. Documentation

Supplier shall retain documentation related to prevention of underage labor, including but not limited to:

- Each Worker's biographical and employment-related information, a copy of valid and appropriate age-verification documentation, and a means of visual identification
- Records of completed training

All documentation shall be made available to Apple for review upon its request.

Definitions

Active Underage Worker

An Underage Worker working at the facility at the time of the audit.

Historical Underage Worker

A Worker above the Minimum Age at the time of the audit started work when he or she was below the Minimum Age.

Terminated Underage Worker

An Active Underage Worker or Historical Underage Worker is no longer working at the facility at the time of the audit.



Supplier Responsibility Standard

Juvenile Worker Protections

Supplier Code of Conduct Requirements

Supplier may employ juveniles who are older than the applicable legal minimum age but are younger than 18 years of age, provided they do not perform work that might jeopardize their health, safety, or morals, consistent with ILO Minimum Age Convention No. 138. Supplier shall not require Juvenile Workers to work overtime or perform Nighttime Work.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses **Juvenile Worker** protections requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its Juvenile Worker protections policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the Juvenile Worker protections policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with Juvenile Worker protection requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall identify, assess, and minimize risks related to Juvenile Workers.

1.4. Tracking Mechanisms

Supplier shall introduce mechanisms that can track Juvenile Workers to ensure compliance to this Standard and Applicable Laws and Regulations. The mechanisms shall include, but not be limited to:

- Identification of the job positions (including the creation of new job positions) that Juvenile Workers are allowed to perform or are prohibited from performing and incorporation of such restrictions into job descriptions
- Tracking mechanisms to ensure that Juvenile Workers are not placed into restricted job positions
- Working hours tracking mechanisms
- Health exam tracking mechanisms

2. Operation Practices

2.1. Working Hours

Supplier shall comply with all Applicable Laws and Regulations governing working hours or regulating or limiting the nature, frequency, and volume of work performed by Juvenile Workers under the age of 18.

Juvenile Workers shall not work overtime.

Definitions

Juvenile Worker

A Worker older than the applicable legal minimum age for employment or 15 years of age, whichever is greater, but younger than 18 years of age who is employed directly or via a third party, to work at a Supplier's facility.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Juvenile Workers shall not perform **Nighttime Work**.

2.2. Juvenile Worker Health and Safety

To protect the health and safety of Juvenile Workers, Supplier shall ensure that Juvenile Workers do not engage in hazardous work. Supplier shall follow Applicable Laws and Regulations related to Juvenile Workers but, where the law is silent, Juvenile Workers shall not engage in work involving any of the following:

- Exposure to hazardous environments, substances, agents, or processes potentially damaging to their health, including but not limited to: Environments/conditions likely to cause heat or cold stress or injury
 - Noisy environments requiring ear protection
 - Explosives or articles containing explosive components
 - Any exposure to radioactive substances including radium, self-luminous compounds, thorium salts, and ionizing radiation in excess of 0.5 rem per year as per **United States Department of Labor Guidance**
- Operations in inherently dangerous locations, including:
 - Underground
 - Underwater
 - Heights in excess of 2 meters
 - Hazardous **Confined Spaces**
- Work with or near chemical processes above the applicable legal limits for Juvenile Workers. If no such legal limits or industry regulations exist, Juvenile Workers shall be exposed to no more than 50 percent of the applicable exposure limit for adults (for example, if the applicable adult standard limits exposure to 100 ppm per 8 hours, the Juvenile Worker standard shall be 50 ppm per 8 hours).
- Operations involving the following equipment:
 - Power-driven hoisting apparatus
 - Any mobile power-driven apparatus without legal operator's license
 - Stamping, cutting, and laser equipment or any equipment with pinch points
- Other hazards determined to be unsafe for Juvenile Workers by Supplier's environment health and safety department or a **Qualified Health Professional**.
- Operations restricted by Applicable Laws and Regulations including but not limited to environmental and transportation-related restrictions.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all staff responsible for the protection of Juvenile Workers.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its Juvenile Worker protections policy to all Workers, supervisors, and managers during the initial orientation period and via refresher training on a regular basis.

4. Documentation

Supplier shall retain documentation related to protection of Juvenile Workers.

All documentation shall be made available to Apple for review upon its request

Definitions

Nighttime Work

Any work carried out at night, in whole or in part, between 10:00 p.m. and 5:00 a.m. or the hours regulated as night work by Applicable Laws and Regulations, whichever period is longer.

United States Department of Labor Guidance

US Department of Labor, Employment Standards Administration, CFR, Title 29, Chapter 5, Part 570: "Occupations Particularly Hazardous for the Employment of Minors between 16 and 18 Years of Age or Detrimental to Their Health or Well-Being."

Confined Space

A space large enough that a Worker can enter to perform assigned work, with limited or restricted means for entry or exit, that is not designed for continuous Worker occupancy.

Qualified Health Professional

Licensed or certified individual (either on- or offsite) with the knowledge, training, and experience necessary to review and assess a factory's production environment and any associated risks to Workers.



Supplier Responsibility Standard

Student Worker Protections

Supplier Code of Conduct Requirements

Supplier shall ensure proper management of Student Workers through proper maintenance of student records, rigorous due diligence of educational partners, and protection of students' rights in accordance with Applicable Laws and Regulations. Supplier shall provide appropriate support and training to all Student Workers.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses **Student Worker** protection requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its Student Worker protections policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the Student Worker protections policy and procedures. The designated staff shall be in addition to any onsite teacher(s) from the Student Workers' school(s).

1.3. Risk Management

Supplier shall identify and comply with Student Worker protection requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall identify, assess, and minimize risks related to Student Workers.

1.4. Pre-selection and Ongoing Due Diligence

Supplier shall conduct pre-selection due diligence and ongoing audits of each school to ensure that it complies with Applicable Laws and Regulations, the Code, and this Standard.

1.5. School Licenses

Supplier shall ensure that schools have appropriate and current licenses, certifications, and permits for all locations of operation.

1.6. School Compliance

Supplier shall have documented procedures for corrective actions to address any violations of this Standard by a school and establish sanctions as appropriate, including termination of the relationship.

2. Operational Practices

2.1. Use of Third-Party Employment Agencies

Supplier shall not use **Third-Party Employment Agencies** in connection with the recruitment, hiring, arrangement, management or employment of Student Workers.

Definitions

Student Worker

A Worker, regardless of age, who is enrolled at an Educational Institution and employed by a Supplier for an internship, work study or any other program ("program") that is arranged by the educational institution.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Third-Party Employment Agency

Service enterprises, including sub-agents, carrying out, under contract and in exchange for financial compensation, operations on behalf of individuals or enterprises, whose role is to provide access to employment or career progression by filling employment vacancies.

2.2. Qualifications of Student Workers

Supplier shall ensure that the Student Worker is eligible for employment as a Student Worker under Applicable Laws and Regulations.

Supplier shall ensure that the Student Worker is actively enrolled in a program of study at an **Educational Institution**.

2.3. Voluntary Employment

Supplier shall ensure that all work performed by a Student Worker is voluntary.

2.4. Educational Contribution

For any education related Student Worker program, Supplier shall ensure that the Student Worker's field of study is relevant to the Supplier's industry or work position.

2.5. Student Worker Agreements

Supplier shall have a written agreement with the Student Worker. This agreement must adhere to Applicable Laws and Regulations.

Where required by law or regulation, the Student Worker's Educational Institution shall be a party to the agreement between Supplier and the Student Worker.

2.6. Signed Student Worker Agreement

The Student Worker shall sign this agreement prior to performing work at the Supplier's facility.

2.7. Receipt of Student Worker Agreement

Supplier shall ensure that the Student Worker understands the agreement and receives a copy of it prior to performing work at the Supplier's facility.

2.8. Student Worker Contract Terms

In addition to the requirements specified in the Wages, Benefits, and Contracts Standard, the agreement between the Student Worker and the Supplier, and if required by law, the Student Worker's Educational Institution, shall additionally include the following terms:

- The name and address of the Student Worker's Educational Institution
- The name and address of the Supplier
- Individual at the Educational Institution who is responsible for the Student Worker
- Individual at the Supplier who is responsible for the Student Worker
- Insurance coverage
- Education and training to be provided by the Educational Institution
- Education and training to be provided by the Supplier

2.9. Student Worker Program Length

The program length (total accumulated time of work at Supplier facility) shall not exceed the limit regulated by Applicable Laws and Regulations. In the absence of an applicable legal requirement, the maximum length is 1 year.

The program cannot be extended beyond the agreed end date as written in the original Student Worker agreement.

2.10. Agreement Termination

Supplier shall ensure that the Student Worker is free to terminate his or her agreement with **Reasonable Notice**.

The Student Worker shall not be required to pay any fee or fine or receive any other penalty for early termination of the Student Worker agreement with Reasonable Notice.

2.11. Working Hours

Working hours shall not conflict with the Student Worker's Educational Institution attendance.

Definitions

Educational Institution

An institution that offers programs of at least one academic term in length that lead to a certification, degree, or diploma in a career field. (In the People's Republic of China, this includes secondary vocational school, technical school, vocational high school, full-time university, independent college, college, or vocational and technical college.)

Reasonable Notice

Maximum of one-month prior notice, or less if required by applicable laws and regulations, for a Worker to voluntarily terminate the employment contract or agreement with a Supplier.

For any education related-student program, no overtime work and nighttime work should be arranged.

Supplier shall adhere to restrictions on working hours as required by Applicable Laws and Regulations for any other student worker programs (e.g. work-study program).

The Student Worker shall receive at least the same wage rate as other entry-level Workers performing equivalent or similar tasks. In the absence of equivalent or similar tasks, the wage rate of the Student Workers shall not be less than the local Minimum Wage.

All wages shall be paid directly to the Student Worker or to an account under the sole control of the Student Worker.

Supplier shall not delay the payment of wages to the Student Worker.

In areas where legal requirements differ from above, Supplier shall notify Apple and provide proof of legal compliance for review. Deviations will only be granted after assessment by Apple.

2.12. Deductions and Fees

Supplier shall not deduct educational fees from the Student Worker's wages.

Supplier shall not deduct placement fees from the Student Worker's wages.

2.13. Insurance Coverage

Supplier shall ensure that the Student Worker is insured against accident or liability.

Supplier shall ensure that the Student Worker is fully covered by any other forms of insurance required by law or regulation.

2.14. Student Worker Limit

No more than 10 percent of labor supporting the manufacturing of Apple products, packaging, parts, components, subassemblies, and materials at any given facility shall be composed of Student Workers at any time.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all staff responsible for Student Worker management.

3.2. Educational Institutions

Supplier shall effectively communicate its Student Worker management policy to all Educational Institutions involved in Student Worker management.

3.3. Student Workers

Supplier shall provide student specific onboarding to Student Workers.

4. Documentation

Supplier shall retain documentation related to the protection of Student Workers.

All documentation shall be made available to Apple for review upon request.



Supplier Responsibility Standard

Working Hours Management

Supplier Code of Conduct Requirements

A Workweek shall be restricted to 60 hours, including overtime, and Workers shall have at least one day off every seven days except in Emergencies or Unusual Situations. Regular Workweeks shall not exceed 48 hours. Supplier shall follow all Applicable Laws and Regulations with respect to working hours and Days of Rest, and all overtime must be voluntary.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses working hours requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its working hours policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the working hours policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with working hours requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall identify, assess, and minimize risks related to working hours.

1.4. Production Planning

Supplier shall plan production schedules to meet committed production capacity, committed lead-time, and the 60 hours per **Workweek** and one **Day of Rest** per 7 days requirements.

1.5. Official Working Hours Record Mechanism

Supplier shall have an official working hours record system to track working hours and days of rest for each **Worker**. The official working hours record system shall ensure that the facility has reliable systems in place to measure and record actual hours of work. Supplier shall ensure that records of working hours can clearly measure and record each Workers' time in and out of the facility, in addition to actual hours worked.

1.6. Excessive Hours Control Mechanism

The **Official Working Hours Records** system shall be capable of identifying Workers who are scheduled to exceed the 60-hour and Day of Rest requirements, as well as track the total work hours per week and days of rest for each Worker. The system shall provide summary reports and warnings to management prior to exceeding these requirements.

1.7. Dispute Mechanism

Supplier shall ensure that Workers have a mechanism to understand, dispute, and correct the actual hours worked as recorded in the Official Working Hours Records.

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Workweek

A period of 7 consecutive days that is held consistent from week to week, for example, Sunday 12:01 a.m. to Saturday midnight.

Day(s) of Rest

Period of 24 consecutive hours during which Workers do not work.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Official Working Hours Records

System of record keeping that most accurately reflects workers' actual hours of work that may consist of multiple records including but not limited to:

- Time cards
- Overtime approval/confirmation records
- Shift schedule and production records

2. Operational Practice

2.1. Weekly Working Hours

Except in **Emergency or Unusual Situations**, Supplier shall limit the actual hours worked by each Worker to no more than 60 hours per Workweek.

2.2. Day of Rest

Except in Emergency or Unusual Situations, Workers shall have a Day of Rest at least once every 7 days. Days of work must be restricted to 6 consecutive days.

2.3. Ergonomic Breaks

Supplier shall compensate Workers for breaks and include breaks as regular working hours as per all Applicable Laws and Regulations.

2.4. Bathroom Breaks

Bathroom breaks shall contribute to working hours and shall be compensated.

2.5. Exceptions

Workers may exceed the 60-hour Workweek and/or the Day of Rest every 7 days requirements during Emergency or Unusual Situations.

Supplier shall document that the emergency or unusual situation criteria has been met and make these documents available to Apple immediately upon its request.

After the emergency or unusual situation ceases, Supplier shall immediately return to compliance with the 60-hour and Day of Rest requirements. At the end of the emergency or unusual situation, Supplier shall immediately provide Workers with a Day of Rest if the Day of Rest requirement had not been met during the emergency or unusual situation.

2.6. Work Activities

Supplier shall include the following activities in preparing official working hour records:

- Time on the production line, regardless of whether the line is running ("production time") or not ("down time").
- Mandatory meetings and trainings, including but not limited to orientation training, trainings on company policies and procedures, production planning meetings, assembly meetings, and daily wrap-up meetings. All meetings must be arranged within the regular working shift.
- Supplier shall not require Workers to arrive prior to the scheduled start of a shift, even by a few minutes to prepare for work, unless this time is counted as paid working time.
- Mandatory administrative processes including the following, cumulating in greater than 15 minutes total:
 - o Excessive waiting in line to punch out
 - o Excessive waiting in line to clear security into/out of the production line or facility
 - o Waiting for supervisor approval, for example, time card approval
- Any other process managed by Supplier that requires Workers to be present at the factory or perform any production-related work regardless of location.

2.7. Shift Arrangement

Prior to requiring Workers to perform **Nighttime Work**, Supplier shall inform impacted Workers of Nighttime Work requirements and schedules. If Nighttime Work requirements and schedules change, Supplier shall immediately inform the impacted Workers. Supplier shall make reasonable accommodations to ensure the health and safety of its Workers, including assigning a Worker away from Nighttime Work from time to time.

A reasonable break shall be provided to workers between any shift change and in accordance with Applicable Laws and Regulations, where applicable.

Definitions

Emergency or Unusual Situations

Events or circumstances that substantially disrupt production and are out of the ordinary and out of the control of the Supplier, including earthquakes, floods, fires, national emergencies, unpredictable and prolonged loss of electrical power, and periods of prolonged political instability. Situations that can be reasonably predicted and thus planned for will not be considered either unusual or emergency situations, including peak production periods, machinery breakdowns, holidays, and seasonal fluctuations.

Nighttime Work

Any work carried out at night, in whole or in part, between 10:00 p.m. and 5:00 a.m. or the hours regulated as night work by Applicable Laws and Regulations, whichever period is longer.

2.8. Worker Notification

When possible, Supplier is encouraged to notify Workers at least 12 hours prior to work cancellations or reschedules from planned shift schedules.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all staff responsible for working hours management.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its working hours policy to all Workers, supervisors, and managers during the initial orientation period and via refresher training on a regular basis.

4. Documentation

Supplier shall retain documentation related to working hours.

All documentation shall be made available to Apple for review upon request.



Supplier Responsibility Standard

Wages, Benefits, and Contracts

Supplier Code of Conduct Requirements

Supplier shall pay at least the Minimum Wage and provide any Benefits required by law and/or contract. Supplier shall compensate Workers for Overtime Hours at the legal premium rate. Supplier shall communicate pay structure and pay periods to all Workers. Supplier shall meet all legal requirements relating to wages and Benefits, pay accurate wages in a timely manner, and wage deductions shall not be used as a disciplinary measure. All use of temporary and outsourced labor shall be within the limits of the local law.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses wages, benefits, and contracts requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its wages, benefits, and contracts policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the wages, benefits, and contracts policy and procedures.

1.3. Risk Management

Supplier shall identify and comply with wages, benefits, and contracts requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall identify, assess, and minimize risks related to wages, benefits, and contracts.

2. Operational Practice

2.1. Minimum Pay

All Workers shall be paid no less than the **Minimum Wage** for all Regular Hours as per **Applicable Laws and Regulations**. A Worker's **Base Wage** shall always be set at or above Minimum Wage for the **Classification of Worker**.

The pay structure shall not require Workers to work more than the legally mandated Regular Hours (whether calculated on an hourly, daily, weekly, or monthly basis) in order to earn the Base Wage.

2.2. Overtime Pay

All **Overtime Hours** shall be paid at the appropriate overtime rate applied to appropriate Base Wage as per **Applicable Laws and Regulations** or employment contract, whichever is higher, for the relevant Classification of Worker.

In countries where there are no legally established overtime rates as per **Applicable Laws and Regulations**, the minimum overtime rate shall be 125% of the Base Wage.

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Minimum Wage

Legally mandated minimum pay per hour/week/month. Excludes allowances, overtime pay, discretionary pay, and bonuses.

Regular Hours

Normal hours worked as determined by **Applicable Laws and Regulations**, or in the absence of such laws, as defined by contractual agreement between Supplier (or its agent(s)) and workers or their representatives.

Base Wage

The minimum amount of wages per hour/week/month the worker is entitled to receive for Regular Hours worked per **Applicable Laws and Regulations** or contract agreement, whichever is higher. May include allowances such as for food and housing, unless prohibited by law. These exclude overtime pay, discretionary pay, and bonuses. Base wage may be higher than Minimum Wage, but cannot be lower.

Classification of Worker

Status of Worker including full time, part time, student, probationary, temporary, or other, based on **Applicable Laws and Regulations**.

Overtime Hours

Amount of time worked beyond Regular Hours.

2.3. Benefits

Supplier shall provide **Mandatory Benefits** to the Classification of Worker as per Applicable Laws and Regulations. Where permitted under law, Supplier shall provide Workers with paid and unpaid leave, and public holidays.

2.4. Working Hour Calculations for Overtime

For the purposes of pay and benefits, Overtime Hours calculations shall be based on the exact hours and minutes worked.

If supplier is unable to calculate the exact minutes, Overtime Hours shall be rounded up to the nearest 15 minutes in the Workers' favor as follows:

Time in Minutes	$0 \leq x < 15$	$15 \leq x < 30$	$30 \leq x < 45$	$45 \leq x < 60$
Rounded Allotment in Minutes for Overtime	15	30	45	60

2.5. Working Hour Calculations for Tardiness

For the purposes of pay and benefits, deductions for tardiness shall be based on the exact hours and minutes by which a Worker is tardy.

If supplier is unable to calculate the exact minutes, deductions for tardiness shall be rounded down to the nearest 15 minutes in the Workers' favor as follows:

Time in Minutes	$0 \leq x < 15$	$15 \leq x < 30$	$30 \leq x < 45$	$45 \leq x < 60$
Rounded Allotment in Minutes for Tardiness	0	15	30	45

2.6. Waivers

Waivers affecting working hours or Worker wages and benefits, even those promulgated by local authorities or government agencies, will not be accepted (for example, the Comprehensive Working Hours System in China).

2.7. Deductions

Supplier or its agents shall not deduct earnings from Workers' paychecks except where required by Applicable Laws and Regulations, for example, taxes and social insurance, or where Supplier or its agent is providing a service. If deductions are made as part of a service provided to Workers, Workers shall have the choice to opt out of any such service.

Monetary Penalties deducted from wages or reductions in Mandatory Benefits as disciplinary measures are prohibited.

2.8. Deposits

Deposits from Workers are prohibited unless required by Applicable Laws and Regulations. If a deposit is legally required, Supplier shall ensure that a receipt is provided for any deposits made by Workers and that such deposits shall be returned in full to the Worker as expeditiously as practicable, but no later than one month after the Worker's employment has terminated or reason for such deposit has ended, whichever is earlier.

2.9. Charges

Supplier shall not charge Workers for anything required by the supplier for the employee to effectively carry out their job duties, including but not limited to:

- Required personal protective equipment
- Uniforms, except for unreturned uniforms
- Headset and replaceable foam pad covers

Definitions

Benefits

Compensation in addition to Base Wages and overtime pay, including but not limited to holiday leave, vacation leave, contingency leave (such as maternity and sick leave), retirement and social security/ insurance benefits, and so forth.

Mandatory Benefits

Benefits that Supplier is required to provide to Workers as per Applicable Laws and Regulations and/or employment contract.

Monetary Penalties

Includes cash fines, pay deductions or account withdrawals. Does not include non-payment for actual time not worked due to late arrival or missed work time.

Deposits shall not be charged upon the issue of such equipment. Suppliers may charge a prorated fee for unreturned items. The Supplier must communicate these requirements at time items are supplied.

2.10. Payment

Supplier shall be required to make monetary payments under all circumstances where Workers have not been paid their due. This includes but is not limited to:

- Underpayment: If Supplier becomes aware of any underpayment, Supplier shall repay the amount due to Worker(s).
- Exit payment: Irrespective of the conditions under which the employment relationship has ended, all Workers shall receive their wages due. Supplier shall effectively communicate the resignation process to all Workers at the start of the employment relationship and at the time of any material change in such process. Supplier shall ensure that the resignation process is easily accessible to all Workers, including those who do not provide **Reasonable Notice** of termination. Supplier shall not require payment of wages for Workers who do not provide Reasonable Notice of termination unless required by Applicable Laws and Regulations. Supplier shall provide to each Worker a record of the final wages earned and an explanation for any deductions.
- Deductions not specified by law: deductions made for deposits, fees, uniform charges, disciplinary fines, tools, background checks, etc.
- Non-payment of statutory benefits such as overtime wages, annual leave, and paid public holidays.

2.11. Pay Schedule

Supplier shall pay Workers within the deadline defined by Applicable Laws and Regulations; in the absence of such guidance, Supplier shall pay Workers within 30 days of the end of the **Working Period**. Pay adjustments in the case of discrepancies in records must be paid on or before the next payday.

2.12. Signed Contract

Workers shall sign a written employment contract prior to performing any work at a Supplier's facility.

Supplier shall ensure that the employment contract is written in a language that the Worker understands.

This contract shall conform to Applicable Laws and Regulations and all relevant terms outlined in the Apple Code of Conduct and Supplier Responsibility Standards.

Supplier shall ensure that all Workers receive and understand a copy of this contract, signed by the Supplier, at the time of the Worker's signature.

At a minimum, this contract shall contain:

- All employment terms required by Applicable Laws and Regulations
- Worker's full name and date of birth
- Worker's passport number, ID card, or equivalent identification
- Emergency contact information
- The nature of work and place where it will be performed
- Living conditions
- Costs (if any) for meals and accommodation
- Descriptions and quantitative estimates of each line item to be deducted from wages
- The term of contract (if applicable)
- Expected regular working hours, Overtime Hours, frequency of rest days, and holidays

Definitions

Reasonable Notice

Maximum of one month prior notice, or less if required by Applicable Laws and Regulations, for Worker to voluntarily terminate contract with the employer.

Working Period

The period of work upon which the standard paycheck is based.

- Base Wages for Regular Hours
- Clearly defined regular, overtime, and holiday wage rates, including maximum allowable Overtime Hours
- Deductions (if any)
- Benefits
- All applicable bonuses and allowance
- Date of eligibility for reimbursement of deposit (if any)
- Contract termination/resignation procedures and terms
- Terms and conditions for contract renewal
- No terms that deny a Worker the right to organize or engage in collective bargaining

2.13. Revised/Supplemental Contracts

Supplier shall ensure that any revisions to employment contracts shall include all the terms outlined in this Standard and that any revisions or subsequent contracts guarantee terms at least as favorable to the Worker as outlined in original employment contract or as negotiated through collective bargaining.

2.14. Contract Termination

Supplier shall ensure that Workers are free to terminate their employment contract with Reasonable Notice.

2.15. Probation

Where probationary or training employment is legally allowed, Supplier shall ensure that Workers are paid at least Minimum Wages. No Workers shall work more than 3 months cumulatively in their employment categories, or the maximum period allowed by applicable laws and regulations, whichever is shorter.

3. Training and Communication

3.1. Responsible Staff

Supplier shall provide comprehensive training to all staff responsible for wages, benefits, and contract management.

3.2. Workers, Supervisors, and Managers

Supplier shall effectively communicate its wages, benefits, and contract policy to all Workers, supervisors, and managers during the initial orientation period and via refresher training on a regular basis.

3.3. Communication of Wages

Supplier shall ensure that each payment to a Worker is accompanied by a clear statement communicating:

- The amount of Regular Hours and Overtime Hours worked
- The appropriate rate of pay for Regular Hours, Overtime Hours, and holiday hours
- An account and definition of each deduction made
- An account and definition of each benefit payment made

4. Documentation

Supplier shall retain documentation related to wages, benefits and contracts.

Supplier shall ensure that all legally required payroll documents, journals, and reports are available, complete, accurate, and up to date.

All documentation shall be made available to Apple for review upon its request.



Supplier Responsibility Standard

Freedom of Association and Collective Bargaining

Supplier Code of Conduct Requirements

Supplier shall freely allow Workers' lawful rights to associate with others, form, and join (or refrain from joining) organizations of their choice, and bargain collectively, without interference, discrimination, retaliation, or harassment.

Supplier Responsibility Standards

1. Freedom of Association

1.1. Policy and Procedures

Supplier shall have a written policy on freedom of association. In addition, Supplier shall have procedures and systems to implement its freedom of association policy in a manner that satisfies the requirements of **Applicable Laws and Regulations**, Apple's Supplier Code of Conduct, and Supplier Responsibility Standards.

Supplier shall respect **Workers'** lawful rights to form or participate (or refrain from forming or participating) in organizations of their choosing, including but not limited to unions, Worker committees, or other Worker associations, and bargain collectively without interference, discrimination, retaliation, or harassment. Supplier shall accommodate Workers should they express a desire for a **Grievance** mechanism in addition to formal representation.

Where country law substantially restricts freedom of association, Supplier shall allow alternative means for Workers to individually and collectively engage with Supplier, including processes for Workers to express their Grievances and protect their rights regarding working conditions and terms of employment.

1.2. Neutrality

Supplier is not required to take an active role in supporting Workers' efforts to associate or organize, but Supplier must ensure that Workers can exercise their right to organize in a climate free of violence, pressure, fear, intimidation, and threats.

1.3. Deductions

Supplier shall not deduct union membership fees or any other union fees from Workers' wages without the express and written consent of individual Workers, unless specified otherwise in freely negotiated and valid collective bargaining agreements.

2. Worker Representation

Subject to Applicable Laws and Regulations, Supplier shall not interfere with the formation or operations of Workers organizations, including acts that are designed to establish or promote the domination, financing, or control of such organizations.

Supplier shall not interfere with the right of Workers to draw up their constitutions and rules, to freely select their representatives, to organize their administration and activities, and to formulate their programs.

Worker Representatives shall have access to their members under conditions established by Applicable Laws and Regulations or mutual agreement between the Supplier and the **Worker Organization**. Worker Representatives shall have the facilities necessary for the proper exercise of their functions.

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Grievance

Grievances and communication may include but are not and should not be limited to instances of harassment and abuse, discrimination, retaliation, non-payment of wages, requests for discussions regarding hours and wages, food preferences, living conditions requests, and so forth.

Worker Representative

A worker-representative shall not include Management, or low-level supervisors. Some exceptions may apply if specifically agreed to by Workers and Management.

Worker Organization

Any organization of any kind in which Workers participate and which exists for the purpose, in whole or in part, for furthering and defending the interests of Workers.

Workers are free to meet and discuss workplace issues in the factory during their breaks and before and after work.

3. Non-Harassment and Non-Retaliation

No Worker or prospective Worker shall be subject to dismissal, discrimination, harassment, **Blacklisting**, intimidation, retaliation, or other **Employment Decision** for reason of:

- Membership and/or participation in a union, Worker association, or other freedom of association activities
- Exercising lawful right to form a union or participating in collective bargaining efforts
- Organizing or participating in a legal strike or demonstration
- Raising issues to **Management** concerning compliance with a collective bargaining agreement or any other legal requirements.

Supplier shall not threaten or use violence or the presence of police or military to intimidate employees or to prevent, disrupt, or break up any activities that constitute a lawful and peaceful exercise of the right of freedom of association, including union meetings, organizing activities, assemblies, and lawful strikes.

Supplier shall not transfer, demote, promote, outsource, or reassign Workers as a means to discourage unionization or participation in Worker-Management communication activities.

Supplier Management shall not impede Workers' right to peaceful organization by outsourcing work performed by union members. Shifting production from one site to another for the purpose of retaliating against Workers who have formed or are attempting to form a union is prohibited by the Code and this Standard.

4. Collective Bargaining Agreements

Where a collective bargaining agreement exists, Supplier shall bargain in Good Faith.

Supplier shall honor, in **Good Faith**, the terms of any signed collective bargaining agreement for the duration of that agreement.

Where a collective bargaining agreement exists, Workers covered by the agreement shall receive copies of the signed agreement.

Where the right to freedom of association and collective bargaining is restricted under law, Supplier shall not obstruct alternative legal means of Workers to associate and bargain collectively.

5. Training and Communication

Supplier shall have a process to communicate the requirements with respect to this Standard to Workers, supervisors, and Management.

Supplier shall have documented processes by which to have a dialogue with Workers about concerns and address collective actions by Workers.

Definitions

Blacklisting

Creating, maintaining, using, and/or communicating lists of employees or potential employees for the purpose of denying employment or other penalty based on legally protected status or non job-related criteria, such as political affiliation or trade union status.

Employment Decision

Hiring, termination, job security, job assignment, compensation, promotion, downgrading, transfer, (vocational) training, discipline, assignment of Worker, and conditions of worker including hours of work, rest periods, and occupational and safety and health measures.

Management

Any individual having authority, in the interest of Supplier, to hire, transfer, suspend, lay off, promote, discharge, assign, reward, discipline or direct employees, or recommend such action.

Good Faith

Collective bargaining in Good Faith implies recognizing representative organizations, endeavoring to reach an agreement, engaging in genuine and constructive negotiations, avoiding unjustified delays in negotiation, and mutually respecting the commitments entered into, taking into account the results of negotiations in good faith. This includes the overall desire to achieve mutually beneficial results and the obligation of all parties to act reasonably and lawfully.



Supplier Responsibility Standard

Grievance System

Supplier Code of Conduct Requirements

Supplier shall ensure that Workers have an effective mechanism to report Grievances and that facilitates open communication between management and Workers.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses **Grievance** system requirements specified in **Applicable Laws and Regulations** and this Standard.

Supplier shall have written procedures and systems to implement its Grievance system policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the Grievance system policy and procedures.

2. Non-Harassment and Non-Retaliation

No **Worker** or prospective Worker shall be subject to dismissal, discrimination, harassment, **Blacklisting**, intimidation, retaliation, or other **Employment Decision** for raising in Good Faith any issue, suggestion, complaint, or Grievance to a supervisor, management, or participating in any way in the investigation or processing of one.

3. Grievance Systems

3.1. Grievance Process

Supplier shall implement effective and accessible Grievance processes for all Workers. Grievance processes shall be documented and, at a minimum, comprise:

- Step-by-step processes by which complaints are reported, processed, and investigated.
- An appeal procedure by which any party that is not satisfied with the resolution may appeal the result of the investigation to a party not involved in the decision being appealed.
- Multiple channels for Workers to raise concerns and provide input to management, including the ability, subject to Applicable Laws and Regulations, to raise concerns confidentially and anonymously without fear of retaliation.
- Identification, development, and implementation of plans to respond to broader/systemic issues raised by Workers through the Grievance process coupled with metrics-based evaluation of the effectiveness of improvements undertaken.

3.2. Grievance Tracking

Supplier shall maintain a Grievance record system including but not limited to:

- Tracking the types and number of Grievances

Definitions

Grievance

Grievances and communication may include but are not and should not be limited to instances of harassment and abuse, discrimination, retaliation, non-payment of wages, requests for discussions regarding hours and wages, food preferences, living conditions requests, and so forth.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Blacklisting

Creating, maintaining, using, and/or communicating lists of employees or potential employees for the purpose of denying employment or other penalty based on legally protected status or non job-related criteria, such as political affiliation or trade union status.

Employment Decision

Hiring, termination, job security, job assignment, compensation, promotion, downgrading, transfer, (vocational) training, discipline, assignment of worker, and conditions of worker including hours of work, rest periods, and occupational and safety and health measures.

- Channels through which a Grievance was reported
- Investigation reports including names and titles of persons involved in the investigation process
- Associated resolutions and appeals
- Improvements undertaken
- Feedback provided to Workers regarding resolutions
- Time taken to resolve Grievances
- Worker satisfaction with resolutions
- Efforts to make information about the Grievance and its resolution available to all Workers and their representatives in a manner consistent with the policy on confidentiality.

3.3. Topical Grievance Handling

Grievance systems shall (as applicable) at a minimum include, but not be limited to, specific channels for resolving issues related to:

- Anti-discrimination
- Anti-harassment and Abuse
- Prevention of Involuntary Labor
- Third-Party Employment Agency Management
- Foreign Contract Worker Protections
- Prevention of Underage Labor
- Juvenile Worker Protections
- Student Worker Protections
- Working Hours
- Wages, Benefits, and Contracts
- Freedom of Association and Collective Bargaining
- Occupational Health and Safety Management
- Incident Management
- Emergency Preparedness and Response
- Dormitories and Dining
- Hazardous Waste Management
- Wastewater Management
- Stormwater Management
- Air Emissions Management
- Boundary Noise Management

4. Training and Communication

Supplier shall have a process to communicate the requirements with respect to this Standard to Workers, supervisors, and management.

Supplier shall have documented processes by which to have a dialogue with Workers about concerns, including the design and functioning of the Grievance mechanism and specific Grievances raised by Workers.

5. Documentation

Supplier shall retain documentation related to Grievance management.

All documentation shall be made available to Apple for review upon its request.



Occupational Health and Safety Management

Supplier Code of Conduct Requirement

Supplier shall identify, evaluate, and manage occupational health and safety hazards through a prioritized process of hazard elimination, substitution, engineering controls, administrative controls, and/or personal protective equipment.

Supplier Responsibility Standards

1. Regulatory Permits

Supplier shall obtain, retain, and manage valid or current copies of all necessary occupational health and safety related permits, licenses, registrations, and regulatory approvals as required by applicable regulatory requirements.

2. Occupational Health and Safety Risk Assessment

2.1. Risk Assessment

Supplier shall establish a process to identify and document foreseeable occupational health and safety hazards. Foreseeable hazards include but are not limited to: physical, **Chemical**, and biological hazards. Sources or tools for hazard recognition include: process diagram, material inventory, equipment list, task list, employee reporting, inspection findings, past incident record, etc.

Examples of risk assessment methods include but are not limited to:

- **Process Hazard Analysis**
- **Job Hazards Analysis**
- **Exposure Assessment**

Risk assessments shall be conducted by personnel with expertise in the selected methodology.

Supplier shall conduct a risk evaluation of new or changed operations including new or changed equipment, workplace station, workplace location, or processes before being put into production or service.

The outcome of risk evaluations shall include actionable risk control solutions for any identified risks.

Risk evaluations shall additionally specify non-production activities such as but not limited to: maintenance tasks, storage and transportation of hazardous substances, waste management, and emergency response preparedness activities.

Risk assessment results shall be documented and action items shall be followed-up through closure.

Risk Assessment studies shall be periodically reviewed and revalidated. The period shall be at least annually or based on, for example, the nature of hazard, level of risk and operating experience, including environment, health and safety incidents and audits findings.

Definitions

Chemical

Hazardous and non-hazardous chemicals, aerosols, and particulates in solid, liquid, vapor, or gas form.

Process Hazard Analysis

An organized effort to identify and analyze the significance of hazardous situations associated with a process or activity in order to pinpoint deficiencies in the design and operation of facilities that could lead to accidental chemical releases, fires, or explosions. Example methodologies that can be used to conduct a PHA include but are not limited to: Checklist, What-If, What-If/Checklist, Hazard and Operability Study, and Failure Mode and Effects Analysis.

Job Hazards Analysis

Also known as job safety analysis (JSA), activity hazard analysis (AHA), or risk assessment (RA), job hazards analysis is a safety management tool in which the risks or hazards of a specific job in the workplace are identified, and then measures to eliminate or control those hazards are determined.

Exposure Assessment

The process by which employee exposure potential is evaluated and documented. It considers chemical, physical, and biological agents and addresses known exposures and low-level or no-exposure circumstances. The goals of exposure assessment, and monitoring (when triggered), are to:

- Assess the potential health risks/hazards faced by employees;
- Differentiate between acceptable and unacceptable exposure;
- Identify the unacceptable exposures so that satisfactory controls can be implemented;
- Establish and document a historical record of exposure levels; and
- Ensure and demonstrate compliance with appropriate exposure limits.

2.2. Hierarchy of Controls

Supplier shall eliminate or mitigate occupational health and safety hazards identified in the workplace using the hierarchy of controls, prioritized in the following order:

- Hazard elimination
- Substitution
- Engineering controls
- Administrative controls
- Personal Protective Equipment (PPE)

3. Machine Guarding

Machine guarding controls include but are not limited to detectors and alarms, interlock systems, machine guarding, and automated systems.

3.1. Detectors and Alarms

Supplier shall procure, install, and properly maintain automatic devices to detect the presence of hazardous substances in the workplace. Such detectors shall alert Workers by means of sound, light, or both.

Supplier shall maintain detector and alarm systems in good condition through:

- Developing and implementing maintenance procedures, including maintenance frequency, inspection items, maintenance personnel, and record-keeping.
- Detector calibration by following equipment manufacturer's instruction for calibration frequency and calibrating vendor and local legal requirements.

3.2. Interlock Systems

Interlock systems shall be installed in the work area to control equipment operations and guard against human error or misconduct and machine malfunction.

Supplier shall maintain interlock systems in good condition.

3.3. Machine Guards

Supplier shall procure, install, and properly maintain machine-guarding devices to guard against production equipment hazards in the workplace.

Supplier shall maintain the guarding devices in good condition.

3.4. Automated Systems

Installation of automated systems can be utilized in the work area to reduce the use of labor force as intrinsic safety considerations.

3.5. Machine and Equipment Hazard Communication

All machines and equipment in the workplace shall have hazard warning signs stating the potential safety hazards that could cause injuries to operators. The warning signs shall be provided in one or more languages so that all Workers understand all warnings.

4. Electrical Safety

Supplier shall procure, install, and properly maintain adequate devices to guard against electrical or electrostatic hazards.

Supplier shall maintain electrical safety devices in good condition.

5. Lockout/Tagout

Lockout / Tagout programs shall be followed during all work or maintenance requiring access to Chemical delivery and recirculation lines and pumps (drained or un-drained), electrical systems, moving equipment, and bypassing or defeat of guards and/or interlocks.

Barricades and warning signs shall be placed so as to prevent unauthorized access during maintenance and cleaning activities.

Definitions

Lockout

The placement of a Lockout Device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the Lockout Device is removed.

Lockout Device

Any device that uses positive means, such as a lock, to hold an energy-isolating device in a safe position, thereby preventing the energizing of machinery or equipment.

Tagout

The placement of a Tagout Device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the Tagout Device is removed.

Tagout Device

Any prominent warning device, such as a tag and a means of attachment, that can be securely fastened to an energy-isolating device to indicate that the machine or equipment to which it is attached may not be operated until the Tagout Device is removed.

6. High Risk Tasks

Required procedures and practices for high risk tasks shall apply to Workers and contractors performing on-site work at a Supplier facility.

6.1. Confined Spaces

Where the work involves maintenance or cleaning activity in a confined space, confined space entry procedures shall be set up and implemented and a work permitting process shall be implemented with special precautions where **Hazardous Chemicals** are used.

6.2. Hot Work

Appropriate hot work procedures including permitting and fire watches shall be implemented as per local regulations for any areas containing Hazardous Chemicals.

6.3. Work at Heights

Appropriate fall protection shall be worn and a work permitting process shall be implemented when working from heights in excess of 6 feet (2 meters).

6.4. Hoists and Cranes

All operations involving the use of hoists and/or cranes shall have documented and implemented operating procedures. Operators shall obtain all required qualifications and licenses before performing such operations as per **Applicable Laws and Regulations**.

7. Chemical Management

7.1. Chemical Identification and Evaluation

Supplier shall establish and implement a written program to track, review, and approve the use of all Hazardous Chemicals and shall obtain internal Environmental, Health, and Safety (EHS) approvals for all new purchases of Hazardous Chemicals prior to use. Supplier shall ensure that its selection processes for all new Hazardous Chemicals include a thorough evaluation of non-hazardous alternatives.

Supplier shall develop and maintain an up-to-date written Chemical inventory detailing all Hazardous Chemicals introduced to the facility. Supplier shall review the Hazardous Chemical inventory annually and update it to reflect process, formula, material, and product changes.

Chemical data shall be disclosed to Apple in accordance with the [Regulated Substances Specification 069-0135](#).

Supplier shall ensure that the Hazardous Chemical inventory includes but is not limited to:

- Chemical product information (commercial name, Chemical Abstract Service (CAS) number, chemical manufacturer)
- Purpose for use
- Location where used and stored
- Quantity of the Hazardous Chemical used annually
- Maximum legally allowable storage limits (where applicable)
- Exposure information (frequency, duration, and people exposed)
- Application and control information
- Test results for cleaners per the Regulated Substances Specification 069-0135

Chemical inventory data and supporting documents shall be disclosed to Apple for review upon request.

A Chemical compatibility chart shall be developed for the Hazardous Chemicals used and stored on the site.

Supplier shall comply with [Apple's Regulated Substances Specification, 069-0135](#), for all materials and goods it manufactures for, or provides to, Apple.

Definitions

Hazardous Chemical

Solids, liquids, or gases that can harm people, other living organisms, property, or the environment if not properly controlled during manufacture, use, storage, disposal, or transportation.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations.

7.2. Process Safety Management

Suppliers that formulate, store, consume or otherwise manage highly hazardous, flammable, explosive or toxic materials above the threshold quantities identified by Applicable Laws and Regulations must implement a documented process safety management system ("PSM System") designed to prevent or minimize the consequences of a catastrophic release or explosion. Locally specified threshold quantities and PSM System regulations shall be applied.

Where local PSM System regulations have not been established or are deemed insufficient by Apple, the threshold quantities in and requirements of the US Occupational Health and Safety Administration PSM System regulations [detailed within 29 CFR 1910.119](#) shall be deemed applicable.

7.3. Hazardous Chemical Handling

Hazardous Chemicals shall be handled in accordance with the requirements of the International Fire Code (IFC) as published by the International Code Council, or applicable standards, laws, and regulations.

The use or handling of Hazardous Chemicals shall not take place in any area where it may present an immediate danger to health or the environment due to spillage, fire, or reactivity.

Hazardous Chemical transportation devices shall be equipped with a means to secure the containers of Hazardous Chemicals to the device and shall include **Secondary Containment** equal to the volume of the materials transported unless there is no possibility of spillage due to the packaging (such as sealed metal containers).

7.4. Hazardous Chemical Storage

Chemicals shall be stored in compatible containers that are not damaged and have no leakage. Regular inspections shall be conducted to review container integrity.

Chemicals shall not be stored where they can be affected by weather.

Chemical storage shall follow manufacturer's storage instructions.

Chemicals shall be segregated from incompatible Chemicals in accordance with Supplier's Chemical compatibility matrix.

There shall be no stacking of Hazardous Chemical containers where there is a risk of spillage. In no case is the stacking of secured containers over three levels in height permitted. Metal drums containing liquids (such as 55-gallon drums) shall not be stacked unless each individual drum is secured to a stacking device (equipment or fixtures specifically designed for drum stacking).

Hazardous Chemical storage areas shall be equipped with, but not be limited to:

- Appropriate ventilation
- Appropriate fire prevention and control equipment
- Temperature- and humidity-measurement and control devices
- Detectors for any hazardous gases
- Secondary Containment
- A dike to prevent spillage from exiting the storage area
- Anti-static devices and explosion-proof electrical devices for flammable and combustible Chemical warehousing
- Appropriate personal protective equipment (PPE)
- Emergency equipment, including safety shower, eyewash, and spill kit

7.5. Bulk/Tank Storage:

Supplier shall install Secondary Containment for **Underground Storage Tanks** and perform tank integrity tests at least biennially to detect failures of the primary or Secondary Containment structures or leakage into the Secondary Containment system. Supplier shall

Definitions

Secondary Containment

The containment of hazardous liquids in order to limit the area of spillage and prevent the pollution of surrounding area and the environment. For a single container, capacity of Secondary Containment shall be sufficient to contain 110 percent of this container volume. For multiple containers, 110 percent of the largest container, or 10 percent of the aggregate capacity of all containers, whichever is greater.

Underground Storage Tank

A tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground, mounded with earth, or in a vault.

have a system to detect leakage at an early stage by visual inspection, meter monitoring, or other measures.

Supplier shall conduct regular visual inspections for all Secondary Containment areas and Above Ground Storage Tanks (including tankage).

Hazardous Chemicals shall be transported between work areas in the original shipping container except when transferred to smaller compatible containers for transport that are labeled appropriately. Workers are required to use an appropriate device when transporting large or multiple containers of Hazardous Chemicals.

A register of Underground Storage Tanks and **Above Ground Storage Tanks** shall include the following information for each:

- Construction date, type, and material
- Location, dimensions, and capacity
- Design pressure and operating temperature and pressure
- Current status (for example: in use, temporarily out of service, decommissioned)
- Appurtenances (for example: pumps, piping, valves, gauges, connections to other vessels, testing ports, instrumentation, controls)
- Spill/leakage prevention systems
- Spill/leakage detection systems
- Inspection, maintenance, and repair records

7.6. Chemical Hazard Communication

Supplier shall communicate the risks of Hazardous Chemicals and subsequent control mechanisms to mitigate those risks to Workers. Control mechanisms include but are not limited to engineering, administrative, and personal protective equipment (PPE) controls. PPE signage shall be provided at workstations where PPE is required to be used during operations.

The **Material Safety Data Sheet** or the **Safety Data Sheet** of the Hazardous Chemicals used in the facility shall be written in one or more languages so that all Workers understand all such sheets and all such sheets shall be readily accessible to Workers in the areas where the Hazardous Chemicals are used.

All Chemical containers and Chemical process tanks in the workplace shall be labeled as per Applicable Laws and Regulations and must contain label(s) stating the name of the Chemical therein and any health, safety, and/or environmental warnings provided in the Material Safety Data Sheet or Safety Data Sheet. Codes and pictograms may be used but must comply with the Globally Harmonized System for Classification and Labeling of Chemicals, and Workers must have knowledge of the meaning of the codes and pictograms. The National Fire Protection Association (NFPA) Standard 704 Hazardous Identification System is recommended for labeling Hazardous Chemical containers.

All Chemical-transporting pipelines in the workplace must have labels stating the name and flow direction of any Hazardous Chemicals being transported. Pipelines shall use the proper color scheme as per applicable standards and regulations; however if no standard exists, in accordance with ANSI/ASME A13.1 Scheme for the Identification of Piping Systems.

8. Industrial Hygiene

8.1. Monitoring / Assessment

Supplier shall have qualified personnel or an external organization conduct industrial hygiene monitoring / assessment in the workplace at least annually or as per applicable regulations.

If the monitoring results exceed the most stringent applicable **Occupational Exposure Limit**, Supplier shall take immediate action to provide appropriate engineering controls or temporary PPE until there are three consecutive monitoring results below the Occupational Exposure Limit, each at least one day apart.

Definitions

Above Ground Storage Tank

Any tank or other container that is installed above ground, or with at least 90 percent of its volume above ground.

Material Safety Data Sheet (MSDS)

Formal document containing important information about the characteristics and actual or potential hazards of a substance. It identifies the manufacturer of the material and usually includes:

- Chemical identity
- Hazardous ingredients
- Physical and chemical properties
- Fire and explosion data
- Reactivity data
- Health hazards data
- Exposure limits data
- Precautions for safe storage and handling
- Need for protective gear
- Spill control, cleanup, and disposal procedures

Safety Data Sheet (SDS)

The European version of the MSDS that meets international requirements.

Occupational Exposure Limit

Limits for concentrations of hazardous compounds in workplace air.

When an existing production process is modified, a new production line is introduced, or new products are being manufactured, Supplier shall determine whether additional industrial hygiene monitoring is required by evaluating the MSDS (SDS) of the Hazardous Chemicals used or any physical / biological occupational hazard elements associated with the modified or new process.

8.2. Radiation Safety Management

Supplier shall ensure all ionizing (e.g. X-ray) radiation devices are operated in compliance with Applicable Laws and Regulations and requirements below without regard to ownership of the equipment.

Radiation equipment shall have proper warning signs, alarms, lights, labels as required by Applicable Laws and Regulations. Radiation equipment shall also have proper interlocks on operating doors and service panels as required by Applicable Laws and Regulations.

Suppliers shall operate radiation devices in a controlled-access area and any personnel entering the control area shall wear personal dosimeters.

Suppliers shall assign an individual directly responsible for radiation safety management. This individual must be trained on radiation safety management and, if applicable, hold radiation safety certifications as required by law.

Suppliers shall perform safety checks after tool installation or re-installation, which should include, but not limited to:

- Warning label
- Warning light
- Interlock
- Emergency machine off

Suppliers shall properly maintain radiation equipment. Radiation detections shall be done annually at a minimum frequency, and shall be done by qualified and certified resources. Radiation detections must also be done after any activity that involves the opening of the lead chamber.

Suppliers shall record keep and document demonstrating compliance to radiation worker's occupational health surveillance.

8.3. Ventilation

Exhaust ventilation shall be installed in the work area to effectively collect and remove air emissions of Hazardous Chemicals. Exhaust ventilation systems shall be monitored to employ adequate air speeds and airflow rates, and volumes and ventilation rates to ensure effective removal of the hazardous emissions.

Emission-collection devices shall be installed as close to the source of the emissions as possible to improve capture efficiencies. Ducts and pipes shall be made of materials that are compatible with their intended use and be maintained and inspected regularly. Incompatible Chemicals shall not be vented in same exhaust system. Processes using toxic or flammable gases or vapors or combustible dusts shall be conducted in rooms or chambers that have negative pressure relative to occupied areas.

8.4. Water Quality Monitoring / Assessment

Supplier shall have qualified personnel or an external organization conduct water quality monitoring / assessment in the workplace at least annually or as per applicable regulations. Drinking water samples from dispensers must be taken and analyzed at each building to ensure a full coverage of the entire facility. Secondary water supply samples from holding tanks must be taken and analyzed from each individual tank present at the facility.

9. Medical Surveillance

Supplier shall establish an occupational health surveillance system to identify Workers who are routinely exposed to occupational hazards, the workstations, the length of time which

Definitions

Medical Surveillance

Often referred to as occupational health examinations, it provides baseline and periodic assessments or measurements to detect abnormalities in workers exposed to work-related health hazards. If detected early enough, these examinations can prevent or limit disease progression by exposure modification or medical intervention.

they have worked at the stations, their pre-task, on-the-job, post-task, and post-emergency medical surveillance records. The system shall meet the requirements as per local regulations. **Medical surveillance** shall be conducted by a qualified clinic. Medical surveillance results shall be provided to the tested Workers upon request.

For any Workers routinely exposed to occupational hazards, supplier shall provide:

- **Pre-job medical surveillance** to new Workers before starting work
- **On-the-job medical surveillance** to Workers at least once every two years or per applicable laws or regulations, whichever is more stringent
- **Post-job medical surveillance** to Workers who leave the position
- Medical surveillance to Workers before the Supplier closes business, merges with another organization, or spins off
- Medical surveillance to Workers exposed to Hazardous Chemicals after emergency situations

If a Worker has abnormal medical surveillance results related to exposures received at the Supplier's facility:

- Worker shall be removed from the current job immediately and offered another position in the facility
- Supplier is prohibited from terminating the labor contract with the Worker due to the medical surveillance results
- Supplier shall provide medical treatment to the Worker
- Supplier shall provide re-examination to the Worker
- Supplier shall cover the medical treatment, re-examination, and rehabilitation cost for the Worker

10. Personal Protective Equipment (PPE)

Appropriate PPE shall be provided to all personnel at risk of exposure to occupational hazards within the worksite. PPE provided must be according to applicable regulations and/or based on recommendations in the MSDS / risk assessment results. All Workers must be trained on the correct use of PPE.

The minimum PPE requirements for entering or working in any production area with open surface tanks of Chemicals are masks or respirators, safety shoes, long sleeves, Chemically resistant gloves, and a full face shield (if a full face shield is not accessible, safety goggles are required at minimum).

PPE shall be properly maintained and stored, and inspected and replaced periodically based on the manufacturer's instructions.

11. Ergonomics

Supplier shall implement a documented process to identify, evaluate, and control workplace **Ergonomic Hazards**.

Ergonomic risk assessments shall include identification of jobs and tasks with potential Ergonomic Hazards. Inputs may include but are not limited to task observation, Worker/supervisor feedback, and Worker surveys. Ergonomic risk assessments shall be conducted on all new or modified production lines, equipment, tools, and workstations prior to being put into production. Potential risk factors may include but need not be limited to:

- Impact on muscles and joints (such as fingers/hand/wrist, arms/shoulder, neck, back, legs, feet) including dynamic movements, static postures, force, and twisting
- Contact pressure (such as fingers, palm, and forearms)
- Vibration (such as arms, full body)
- Control of operating speed
- Repetition

Definitions

Occupational Medical Examinations

Conducted to determine:

- If workers are medically and physically able to perform the assigned duties without substantial risk of harm to themselves, others, or the mission (fitness for duty examinations).
- Whether the workplace is causing workers injury or illness due to an occupational exposure (medical surveillance examinations).

Pre-Job Medical Surveillance

Baseline examinations performed before placement in a specific job to obtain baseline measurements for future comparison, these medical examinations should be done before the worker commences work. Baseline surveillance examinations can often be accomplished at the same time as pre-placement examinations, but the content of each of these examinations might not be the same.

On-The-Job Medical Surveillance

Periodic monitoring examinations conducted at scheduled intervals. Periodic examinations may include an interval history, a physical examination, and/or clinical and laboratory screening tests. Period need followed local requirement for different Hazardous factors.

Post-Job Medical Surveillance

Examinations performed when exposure to a specific hazard has ceased. Exposure may cease when a worker is reassigned, a process is changed, or the worker leaves employment. Post-job medical surveillance are most beneficial when the health effect being screened for is likely to be present at the time exposure ceases.

Ergonomic Hazard

A workplace condition or activity that poses a risk of biomechanical or cognitive / psychological injury to a worker. Sources of risk may include but are not limited to:

- Improper workstation layout, work methods, or tools.
- Excessive force required, improper lifting positions, excessive vibration, body posture, repetitiveness of tasks, workflow, line speed, and work/rest regimens.
- Highly demanding visual tasks, controls, and instruments that are difficult to read or understand, job demand or pace, job control, and social stressors.

- Illumination
- Lifting
- Noise
- Temperature
- Work duration

Supplier shall implement controls to reduce Ergonomic Hazards and shall document the process from implementation through elimination or reduction of the Ergonomic Hazard(s). These jobs and tasks shall be re-assessed prior to starting production with an ergonomic task analysis to ensure reduction or elimination of Ergonomic Hazards.

12. Combustible Dust

Any dust used or created by one of the following processes shall be considered a **Potential Combustible Dust Hazard**:

- A process where a dry or wet dust collector is being used to collect dust.
- Any grinding, sanding, cutting, milling, routing, or drilling process that creates dust.
- Any polishing or buffing process that creates dust.
- Any other process or manufacturing operation that generates or handles dust or media blasting or other powders.

Supplier shall conduct combustible dust assessments and mitigate risks as per regulatory requirements and the Combustible Dust Hazard Management Standard on all Potential Combustible Dust Hazards.

13. Training and Communication

Suppliers shall implement an occupational health and safety training management system with a strategy and execution plan that meets the demands of regulatory requirements, industry standards, and Apple's Standards. The occupational health and safety topics shall be based upon regulatory requirements and types of operations conducted.

Supplier shall provide Workers with appropriate workplace health and safety training in one or more languages such that all Workers understand such training.

Health and safety related information shall be clearly posted in the facility.

14. Documentation

Supplier shall retain all documentation related to occupational health and safety management. Supplier shall maintain written copies of all records for the following periods or as per Applicable Laws and Regulations, whichever is more stringent.

- Permits and regulatory approvals: Current versions and/or historic versions (where specified in regulatory requirements)
- Hazardous Chemical inventory records, UST/AST records, and current versions of MSDS/SDS sheets
- Historic Hazardous Chemical inventories, emergency response (Chemical spill) drill records, and spill/leakage incident investigation documents for 5 years
- All equipment, tank, tankage, and area inspection and maintenance records for 5 years
- Employee training records for the previous 5 years or such other period specified by applicable regulatory requirements, whichever is longer
- Worker medical surveillance records: Hazardous Chemical medical surveillance records shall be maintained for 30 years plus the duration of the employment, or such other period specified by applicable regulatory requirements, whichever is longer
- Written copies of all legally required training records.

All documentation shall be made available to Apple for review upon its request.

Definitions

Potential Combustible Dust Hazard

The presence of a particulate solid or a condition within the manufacturing process that has the likelihood of creating an explosion hazard.



Supplier Responsibility Standard

Emergency Preparedness and Response

Supplier Code of Conduct Requirements

Supplier shall identify and assess potential emergency situations. For each situation, Supplier shall develop and implement emergency plans and response procedures that will minimize harm to life, environment, and property.

Supplier Responsibility Standards

1. Emergency Planning

1.1. Emergency Scenario

Supplier shall identify and evaluate the likelihood of different types of emergencies based on its production processes, chemical consumption, utility operation, and local geographic, geologic, and meteorological conditions. Emergency scenarios may include fire, explosion, flood, chemical spillage, power outage, and natural disasters.

1.2. Emergency Response Plan

Based on the potential emergency scenarios, Supplier shall develop written emergency response plans to address foreseeable emergencies.

1.3. Emergency Procedure

Supplier shall follow the procedures defined in its emergency response plan when an emergency situation occurs. The basic elements of an appropriate plan are as follows:

1.4. Emergency Response Team

Supplier shall organize and assign trained **Workers** to form an emergency response team (ERT) at each facility that shall be available during all working shifts. The ERT shall have the obligation and authority to direct the Supplier's response to emergencies to ensure the protection of Worker health and safety, the environment, and property.

1.5. Communication

Supplier shall have reliable and effective mechanisms of internal and external communication for notification of emergencies and subsequent evacuation of all persons in the facility. The communication mechanisms shall be audible throughout the entire facility. Supplier shall also develop and maintain the capability to inform the surrounding community, the public, the authorities, and appropriate government agencies in all emergency scenarios, such as release of toxins into the environment or chemical spillage.

1.6. Evacuation and Assembly

Supplier shall immediately evacuate its facility in an emergency situation where the health and safety of the Workers may be threatened. Evacuations shall be conducted under the guidance of designated trained personnel who shall direct Workers to clearly marked safe **Assembly Areas**. Workers shall not return to previously unsafe areas unless and until the emergency situation is resolved and the facility is declared safe by the appropriate authorities and/or other trained and authorized personnel.

Definitions

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at Supplier's facility.

Assembly Area

Pre-determined and communicated locations at which Workers and visitors will gather in the case of a building evacuation.

2. Emergency Preparedness Facility Requirements

2.1. Aisles

Aisles between process and production lines shall be clearly marked, unobstructed, and made from non-slippery material. Width of the aisles shall be maintained as per legal requirements.

2.2. Emergency Exits and Exit Signs

Supplier shall allocate sufficient emergency exits in buildings, according to the building size and number of occupants, in compliance with all **Applicable Laws and Regulations** and prudent safety practice. Emergency exit doors shall:

- Not be blocked, obstructed, or locked at any time when Workers are present in the facility
- Open outward
- Be clearly marked with an "Exit" sign or symbol that meets Applicable Laws and Regulations and is universally understood by all Workers.
- Be in good working order
- Normally be in the closed position

Emergency exits signs shall be visible in the dark and during power outages, by appropriately installed self-illumination, (e.g., battery power or back-up electricity from the facility).

2.3. Evacuation Map

Supplier shall post an accurate and up-to-date and correctly oriented evacuation map in all process and production areas, meeting rooms, dining and living areas, and other public areas. The evacuation map shall be clearly marked in a language understood by all Workers with viewer's position and nearest exit routes.

2.4. Assembly Area

Supplier shall designate a clearly marked, unobstructed, open space for assembly of Workers during emergency situations.

Evacuated Workers must be able to safely assemble at a reasonable distance from emergency exits so as not to interfere with the safe evacuation of the buildings in the event of an emergency.

2.5. Elevator

Supplier shall post signs (in one or more languages such that all Workers understand such signs) on all elevators to prevent usage during emergencies, unless the elevator is designed for firefighting or other emergency use.

2.6. Fire Walls

Openings in fire walls and fire barrier walls shall be protected by self-closing fire doors that have fire-resistance ratings equivalent to the wall design.

3. Emergency Equipment

3.1. Emergency Lighting

Supplier shall provide adequate, functional emergency lighting in stairs, aisles, corridors, ramps, and passageways leading to exits, and in other areas as required by Applicable Laws and Regulations. Emergency lighting may be powered by either battery or backup generator.

3.2. Firefighting Equipment

Supplier shall install and properly maintain all legally mandated or recommended equipment such as fire alarms to detect and notify, monitor, and suppress fires. All emergency equipment shall be maintained and tested at regular intervals, and Supplier shall maintain

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations.

records of such testing, maintenance, and proper working order. Asbestos-containing fire-suppression materials—for example, blankets—are prohibited.

3.3. Shutdown Devices

Supplier shall install manual or automatic shutdown devices on any hazardous production equipment to avoid injury or damage in an emergency.

3.4. Chemical Spillage Equipment

Supplier shall install equipment to detect, notify the facility, and respond in the event of a chemical-related emergency. Such equipment shall include the following:

- Hazardous Chemical–vapor detectors
- Sound/light alarms as per Applicable Laws and Regulations
- Eye wash and emergency shower stations
- Spill kits

3.5. First Aid Equipment

Supplier shall ensure that an adequate supply of appropriate medical equipment is available throughout the facility, well maintained, and easily accessible to all Workers. Supplier shall train a sufficient number of Workers in **First Aid**.

4. Inspection and Maintenance of Emergency Equipment

Supplier shall ensure that all emergency equipment is periodically tested as per manufacturers' instruction or recommendations, and that malfunctioning/ nonfunctional equipment is identified and repaired. All inspections must be carried out at least annually or as otherwise required by Applicable Laws and Regulations, and records of such inspections and maintenance must be maintained and made available to Apple for review upon its request.

5. Emergency Contacts

Supplier shall assign emergency contacts in each work unit and for all shifts to enable internal communication in emergencies. Contact information for internal and external emergency responders/agencies shall be posted in a language understood by all Workers in public areas that are easily accessible to Workers.

6. Training

Supplier shall provide emergency response plan training to all Workers. All Workers must be informed of changes in company policy or procedures related to emergency preparedness within 30 days of implementation. Training shall be delivered at least annually to all relevant/designated persons.

Supplier shall provide information to vendors, contractors, and other temporary visitors about the evacuation routes, Assembly Areas, and emergency contacts and procedures.

7. Evacuation Drills

Supplier shall conduct semi-annual evacuation drills, covering all Workers, and evaluate Workers' emergency evacuation performance. Records of all evacuation drills shall be maintained and should detail evacuation speed, number of Workers participating, and potential improvements.

Definitions

First Aid

Emergency care and treatment of an injured or ill person before complete medical and surgical treatment can be secured.



Supplier Responsibility Standard

Incident Management

Supplier Code of Conduct Requirements

Supplier shall have a system for Workers to report health and safety Incidents and Near-Misses, as well as a system to investigate, track, and manage such reports. Supplier shall implement corrective action plans to mitigate risks, provide necessary medical treatment, and facilitate Workers' return to work.

Supplier Responsibility Standards

1. Policy and Procedures

1.1. Written Policy and Procedures

Supplier shall have a written policy that addresses **Incident** management requirements specified in Applicable Laws and Regulations and this Standard.

Supplier shall have written procedures and systems to implement its Incident management policy.

Supplier shall comply with its written policy and procedures at all times.

1.2. Directly Responsible Individual(s)

Supplier shall identify the responsible individual(s) to oversee and enforce the implementation of the Incident management policy and procedures.

2. Incident Tracking Mechanisms

Supplier shall have a system for **Workers** to report health and safety Incidents and **Near-Misses**.

Supplier shall have a mechanism to track all Incidents, the mechanism shall include at least the following:

- Incident investigation
- Incident reporting

3. Incident Investigation

3.1. Root Cause Investigation

On a regular basis and immediately following material Incidents, supplier shall analyze Incident data including Incident tracking, medical surveillance, Incident scene and witness testimony data.

Supplier shall conduct root cause analysis to determine the immediate causes, root causes, and management system failures that contributed to Incident occurrences.

3.2. Corrective and Preventative Actions

Supplier shall perform corrective and preventive actions to mitigate risks. Each immediate and root cause shall have at least one corrective and preventative action identified and conducted. Each corrective and preventative action shall be assigned to directly responsible individual(s) and shall be tracked through timely closure.

3.3. Medical Assistance and Return to Work

If a Worker is injured at Supplier's facility:

Definitions

Incident

An unplanned event that results in personal injury or property damage.

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Near-Miss

An Incident with clear potential for undesirable consequences (e.g., adverse impact on people, property, the environment, or the business), even though no actual consequences occurred.

- Supplier shall provide necessary medical treatment immediately after Incidents.
- Supplier shall provide post-Incident medical surveillance as per applicable legal requirements and the Worker's needs as diagnosed by a specialized medical practitioner.
- Supplier is prohibited from terminating the labor contract with the Worker on because of injuries sustained at Supplier's facility or while working.
- Supplier shall make reasonable efforts to accommodate the Worker's return to work, which may include rearranging working time and, providing special equipment, opportunities for rest breaks, time off for medical appointments, part-time work, and other return-to-work arrangements.
- Supplier shall cover the cost of the Worker's medical treatment, re-examination, and rehabilitation.

4. Incident Reporting

4.1. Regulatory Reporting

Supplier shall comply with all Applicable Laws and Regulations regarding reporting of Incidents.

4.2. Reporting to Apple

Supplier shall report any fatality or other Incidents of public-concern (e.g., multiple people seriously injured) to Apple within 24 hours of the Incident. The Incident report shall include but is not limited to:

- Location of facility and accident
- Time of accident
- Site description
- Accident description
- Number of injured, dead, and/or missing
- Control measures and remedial actions

5. Training and Communication

5.1. Responsible Staff

Supplier shall provide comprehensive Incident reporting and root cause analysis training to all responsible staff. All Personnel involved in Incident investigation should be properly trained to do so, in order to ensure the integrity, consistency, and effectiveness of investigations.

5.2. Workers, Supervisors, and Managers

Supplier shall provide Incident reporting training to all Workers, supervisors, and managers of the facility, to encourage accident and Near-Miss reporting.

6. Documentation

6.1. Document Management

Supplier shall retain Incident investigation documentation for at least 5 years or in accordance with Applicable Law and Regulations, whichever is more stringent.

All documentation shall be made available to Apple for review upon request.



Supplier Responsibility Standard

Dormitories and Dining

Supplier Code of Conduct Requirement

Supplier shall provide Workers with reasonably accessible and clean toilet facilities and potable water. Supplier-provided Dining, food preparation, and storage facilities shall be sanitary. Worker Dormitories provided by Supplier or a Third-Party shall be clean and safe and provide reasonable living space.

Supplier Responsibility Standards

1. Dormitory Facilities

1.1. Facilities

Dormitory facilities shall be safe and shall meet all **Applicable Laws and Regulations**.

Dormitory facilities shall have all relevant and required permits related to health, safety, and security, including fire protection and sanitation and electrical, mechanical, and structural safety.

All Dormitory buildings shall be separated from buildings that contain production, warehousing, or chemical storage areas.

Separate sleeping accommodations shall be provided for each gender. If sleeping accommodations for men and women are in the same building, separate rooms shall be provided for each gender.

Comfortable beds, cots, or bunk beds shall be provided for each Dormitory resident.

Dormitory sleeping rooms shall have adequate light, heat, and ventilation.

Dormitory sleeping rooms (not including partitioned areas) shall have at least one window or skylight opening directly to the outdoors.

Dormitory residents shall be free to enter or exit their Dormitory sleeping room and Dormitory building at any time. Any sign-in/sign-out system shall not require the Dormitory resident to receive permission to enter or exit.

1.2. Personal Space

Dormitory sleeping rooms shall use double-deck bunk beds or single beds only. Triple-deck bunk beds are prohibited. Sharing beds is prohibited except within individual family accommodations.

Dormitory sleeping rooms shall offer no less than 3 square meters of individual living space per occupant. Individual living space is a place that include the provisions for private storage of personal effects for each individual inside the room, but should exclude the inside washing room area and balcony area.

Minimum clearance between upper and lower bunks of double-deck beds should be no less than 0.7 meters. The width of the passage between two bunk beds parallel to each other shall be no less than 1.2 meters.

No more than 8 individuals shall occupy one Dormitory sleeping room.

Dormitory sleeping rooms shall have adequate and private arrangements such as personal closets or bins for storing clothing and toiletries. Dormitory rooms shall be equipped with secure storage for storing valuable personal effects and documents.

Definitions

Dormitory

A building (or buildings) or part of a building that provides sleeping and residential quarters for workers and includes shared toilet facilities and sleeping rooms.

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

2. Toilets and Showers

Supplier shall not place any undue restrictions on the use of toilets.

Toilets or privy seats for each gender shall number as per Applicable Laws and Regulations and not less than one per 15 residents, with a minimum of one such unit for each gender in common-use toilet facilities.

Except within individual family accommodations, separate toilet facilities for men and women shall be provided. If toilet facilities for men and women are in the same building, at least one solid wall from floor to ceiling shall separate them.

Toilet facilities shall be visually marked with "men" and "women" in the native language of the persons expected to access the toilet facilities.

Common-use toilet facilities shall be well lighted, well ventilated, clean, and sanitary. These toilet facilities shall be located as per Applicable Laws and Regulations and not more than 200 feet (61 meters) of each Dormitory sleeping room inside the Dormitory building.

Supplier shall provide both hot and cold pressurized water showers for the use of all occupants. These shower facilities shall be clean and sanitary and located within 200 feet (61 meters) of each Dormitory building.

There shall be a minimum of one showerhead per 15 persons.

Shower floors shall be sloped downward towards properly constructed floor drains.

Separate shower facilities shall be provided for each gender, and must be designated "men" or "women" in the native language of the persons expected to use the facilities. If shower facilities for both sexes are in the same building, at least one solid wall from the floor to ceiling shall separate them.

3. Drinking Water

Supplier shall provide access to potable water, in accordance with Applicable Laws and Regulations, in sufficient quantity for all Dormitory residents and available within 200 feet (61 meters) from each Dormitory sleeping room.

Potable water shall be freely available at all times and within a reasonable distance from the workplace and Dormitory sleeping rooms.

Potable water must be tested at least annually and must be safe to drink. Potable water test reports must be maintained/posted as required by Applicable Laws and Regulations.

4. Safety

4.1. General Safety

Each Dormitory sleeping room and all common use rooms and areas such as hallways and stairways shall have adequate ceiling or wall-type lights. Adequate lighting shall be provided for the yard area and hallways to common-use rooms. The lighting level shall meet with Applicable Laws and Regulations or relevant international standards.

Storage of hazardous, flammable, or toxic chemicals is not permitted on Dormitory premises.

Durable, fly-proof, rodent-proof, clean containers in good condition shall be provided adjacent to each housing unit for the storage of garbage and other refuse.

4.2. Electrical Safety

All electrical wiring and lighting fixtures shall be properly installed and maintained in compliance with applicable regulations. No improper or illegal splicing of wire is allowed.

For fire safety and electrocution prevention reasons, electrical equipment exceeding the electrical outlet maximum power rating shall not be allowed. Electrical equipment should be listed for electrical safety per applicable certification authorities.

4.3. Emergency Equipment

First-aid kits shall be provided in each Dormitory building and readily accessible for use by residents at all times and shall contain adequate supplies.

Each Dormitory sleeping room and all common areas shall have proper and functioning smoke detectors. These detectors may be centrally wired or be stand-alone battery-operated detectors. The detectors shall be tested at least annually to ensure continued proper operation.

Proper firefighting equipment shall be provided in a readily accessible place not more than 82 feet (25 meters) from each Dormitory sleeping room and common assembly rooms.

4.4. Egress

All Dining facilities and common-use rooms shall have at least two doors remotely separated so as to provide separate means of escape to the outside of the building or to an interior hallway.

All Dormitory sleeping rooms shall open to common areas or hallways that provide at least two clearly marked exits that are clear, free of obstructions, and available for emergency use at all times.

There shall be at least two clearly marked unobstructed exits on each floor, or more if required by applicable regulatory requirements. Emergency lighting shall be installed in hallways and stairways and above each exit.

Hallways and exits shall be free of obstructions to ensure a safe and rapid evacuation in case of fire or other emergencies. Exit doors shall be outward opening and shall not be locked so as to prevent egress. Exit routes shall be maintained during construction, repairs, or building Alterations.

Supplier shall post signs (in the native language of the residents) showing the correct evacuation directions in all Dormitory sleeping rooms and common use areas to ensure a safe and rapid evacuation in case of fire or other emergencies.

4.5. Drills and Worker Education

Fire drills shall be conducted at least on a semiannual basis and involve **Workers** from all shifts. Fire drill records shall be maintained for at least 3 years.

Each new occupant needs to receive an orientation on fire safety, emergency evacuation procedures, and training on the use of fire extinguishers. Annual training records shall be maintained.

Practices on how to properly load the electrical outlets, extension cords, and power strips, so as not to induce overloading, should be addressed through an education and awareness program.

Suppliers shall educate Workers on potential fire safety risks created by smoking in non-designated smoking areas such as bedrooms, common rooms, etc.

5. Dining and Food Preparation

All food made available to Workers shall be prepared, stored, and served in a safe and sanitary manner in accordance with all Applicable Laws and Regulations.

All areas of food preparation shall meet the hygiene and sanitary standards specified in Applicable Laws and Regulations.

Sanitary licenses and permits and inspection records shall be maintained and posted in areas of food preparation and serving as per Applicable Laws and Regulations.

Definitions

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.

Dining

A building (or buildings) or part of a building where food is prepared and/or served and/or consumed by Workers.



Supplier Responsibility Standard

Combustible Dust Hazard Management

Supplier Code of Conduct Requirements

Supplier shall identify, evaluate, and manage occupational health and safety hazards through a prioritized process of hazard elimination, substitution, engineering controls, administrative controls, and/or personal protective equipment.

Supplier Responsibility Standards

1. Identification and Evaluation of Potential Hazards

1.1. Identification of Potential Hazards

Any **Dust** used or created by one of the following processes shall be considered a **Potential Combustible Dust Hazard**:

- A process where a dry or wet Dust collector is being used to collect Dust.
- Any grinding, sanding, cutting, milling, routing, or drilling process that creates Dust.
- Any polishing or buffing process that creates Dust.
- Any other process or manufacturing operation that generates or handles Dust or media blasting or other powders.

1.2. Evaluation of Potential Hazards

Supplier shall evaluate all identified Potential Combustible Dust Hazards as follows:

- The Dust must be tested to determine whether it is explosible by first testing in a Modified Hartmann Lucite tube with a constant arc energy source of 10 joules and if not explosible in this test, conducting a subsequent test in a 20-liter vessel according to ASTM E1226 Go/No-Go Screening Test criteria.
- If the Dust is determined to be explosible, Supplier shall have the Dust tested to determine its K_{st} and P_{max} (Explosion Severity Test ASTM E1226) and **Minimum Ignition Energy** (ASTM E2019) values.
- If the sample is not ignitable in the Modified Hartmann Lucite tube, the Minimum Ignition Energy test is not required and the Minimum Ignition Energy shall be reported as greater than 10 joules.
- If the K_{st} value is greater than 0 bar·m/sec, the Dust shall be deemed a Combustible Dust and those areas of the facility where the **Combustible Dust** is present, in sufficient quantities to create a deflagration or explosion, shall be deemed to contain a **Combustible Dust Hazard**.
- If the Dust is determined to be explosive, it shall be deemed a Combustible Dust and those areas of the facility where the Combustible Dust is present shall be deemed to present a Combustible Dust Hazard.
- Supplier shall document each Potential Combustible Dust Hazard and permanently maintain such records. At least once per quarter or upon Apple's request, Supplier shall submit records of Combustible Dust to Apple.

Definitions

Dust

A powder consisting of tiny particles of any solid material (for example, metal, plastic, paper, etc.)

Potential Combustible Dust Hazard

The presence of a particulate solid or a condition within the manufacturing process that has the likelihood of creating an explosion hazard.

K_{st}

The dust deflagration index. This is the product of the maximum rate of pressure rise reported in bar/sec multiplied by the cubic root of the test vessel volume (in cubic meters) in which the experiments were conducted. The K_{st} is a relative measure of the burning rate of a Combustible Dust and is used to assess the explosion severity potential of a particular Combustible Dust.

Minimum Ignition Energy

The lowest electrical spark energy capable of igniting the most easily ignitable concentration of a Combustible Dust cloud.

Combustible Dust

A particulate solid material where combustion propagates away from the ignition source under the criteria set by laboratory testing specified by ASTM E1226 Go/No-Go screening test.

Combustible Dust Hazard

A condition created by the presence of a Combustible Dust.

2. Management of Combustible Dust Hazards

Supplier shall implement measures to mitigate the risk and meet the requirements of this section for Combustible Dusts and Combustible Dust hazards.

2.1. Management of Change

A management of change program shall be documented, maintained, and implemented for any changes to process materials, technology, equipment, procedures, and facilities, other than replacement in kind. This program shall ensure that the following issues are addressed before the change:

- The safety and health implications
- Whether the change is permanent or temporary
- Modifications to operating, maintenance, and housekeeping procedures
- Whether a **Hazardous Area Classification** needs to be revised
- Existing equipment impacts and suitability for the change
- Worker information and training requirements
- Authorization requirements for the proposed change

Where a Combustible Dust hazard exists, new building expansions or alterations shall include process safety requirements and a Combustible Dust risk analysis shall be conducted and documented by an engineer knowledgeable in applicable building construction and safety requirements.

2.2. Hazard Risk Data

For all Combustible Dusts, Supplier shall obtain the following additional test data to assist in the development of engineering controls to mitigate the hazards:

- **Minimum Ignition Temperature of the Dust Layer** ASTM E2021 "Test Method for Hot-Surface Ignition Temperature of Dust Layers"
- **Minimum Explosible Concentration** ASTM E1515 "Test Method for Minimum Explosible Concentration of Combustible Dusts"

Where a Combustible Dust hazard exists, Suppliers should consider obtaining the following tests data, depending upon the process and the methods used to mitigate the hazard:

- **Minimum Ignition Temperature of the Dust Cloud** ASTM E1126 "Standard Test Method for Explosibility of Dust Clouds" if the Dust could be exposed to extreme temperatures higher than 300 °C.
- **Limiting Oxygen Concentration** ASTM E2931 "Standard Test Method for Limiting Oxygen (Oxidant) Concentration of Combustible Dust Clouds" if the safety of the process requires the use of an inert gas.
- **Combustibility Screening Test** – based on UN Recommendations on the Transport of Dangerous Goods: Model Regulations-Manual of Tests and Criteria, Part III, Subsection 33.2.1, Test N.1, "Test Method for Readily Combustible Solids".

2.3. Life Safety

The facility, Combustible Dust processes, and human element programs shall be designed, constructed, equipped and maintained to protect occupants not in the immediate proximity of the fire, deflagration, or explosion, and provide occupants with the time needed to evacuate, relocate or take refuge.

2.4. Electrical Hazard Area Classification

Facilities where Combustible Dust is being produced or is otherwise present shall be subject to a Hazardous Area Classification analysis. NFPA 499, GB 12476.1, and GB 12476.2 or equivalent should be followed for guidance in conducting the analysis.

The Hazardous Area Classification analysis shall be performed by qualified persons who have demonstrated competency in the area of conducting these analyses.

Definitions

Hazardous Area Classification

The process of determining the type of electrical equipment that should be installed in an area (to prevent electrical ignition sources from being present) of the plant based on the conditions in that area with regard to formation of a Combustible Dust cloud or layer.

Minimum Ignition Temperature of the Dust Layer (MIT-layer)

The lowest surface temperature capable of igniting a powder or Dust when in the form of a layer.

Minimum Explosible Concentration (MEC)

The minimum concentration of a Combustible Dust suspended in air that will support a deflagration.

Minimum Ignition Temperature of the Dust Cloud (MIT-cloud)

The lowest surface temperature capable of igniting a powder or Dust dispersed in the form of a Dust cloud.

Limiting Oxygen Concentration (LOC)

The minimum concentration of oxygen (displaced by inert gases such as nitrogen (N₂), argon (Ar) or carbon dioxide (CO₂)) capable of supporting combustion of a Dust cloud in a concentration above its Minimum Explosible Concentration. The LOC value depends on the inert gas used.

The Hazardous Area Classification analysis shall include a report that identifies the Combustible Dust hazard areas that have been classified (for example: NFPA Class II Division 1, Division 2 or, European and China Standards Zones 20, 21, and 22), the extent/distances of these classified areas, and the type of electrical equipment that shall be used in these areas.

The electrical connections of electrical circuits, electrical equipment, monitoring and alarming devices located in Dust explosion hazardous areas shall conform to the requirements of GB 50058 for China based operations.

2.5. Dust Collection Systems

2.5.1. Dust Collection General Requirements

Where Combustible Dust is being transported, ductwork shall be constructed of noncombustible, conductive materials and shall be fabricated and assembled with smooth interior surfaces and with internal lap joints facing the direction of airflow.

Dry type Dust collectors shall be made of noncombustible, corrosion resistant materials.

Square or rectangular type Dust collectors shall be designed to eliminate "dead spots" where Dust can accumulate.

All conductive components of the Dust collector and ductwork shall be bonded and grounded independently of the electrical grounding system to minimize accumulation of static electric charge.

The ductwork and the fan system shall be designed such that a concentration of Dust in the system is less than 25 percent of the Minimum Explosible Concentration.

Ducts shall be as short as possible and shall have as few bends and irregularities as possible, to prevent interference with free airflow.

Duct seams shall be oriented in a direction away from personnel.

Branch lines shall not be added, removed, or closed in an existing system without a ventilation rebalance and redesign, if necessary, to ensure adequate transport velocities exist in the ductwork.

Flexible hose used for duct shall be in vertical sections only and only when required for movement or vibration of the connected equipment in normal operation.

Where flexible hose is used, the hose shall be fabricated with smooth interior surfaces and shall either be conductive or anti-static, the length shall be minimized, and reinforcing wires, if used, shall be bonded to metal ducts on both ends. Hoses made from ordinary insulating plastics shall not be used under any circumstances.

A suitable anti-static hose shall exhibit either a Surface Resistivity of less than 10^{10} ohm/sq, or a Volume Resistivity less than 10^9 ohm·m when tested per ASTM 0257-Standard Test Methods for DC Resistance or Conductance of Insulating Materials.

When the Dust-handling system has been balanced to achieve the desired airflow rate, all dampers or other flow-control devices shall be secured in position to prevent unauthorized changes.

Dry Dust collectors shall be provided with a differential pressure gauge to monitor the pressure drop across the filter media.

The Dust-producing equipment shall be interlocked with the Dust collection system so that improper functioning of the Dust collection system will shut down the equipment where Dust presenting a Combustible Dust hazard is present. The interlock shall be triggered under any of the following conditions:

- The pressure differential between the air inlet and outlet is above the specified value indicating obstructed airflow in the system. For this purpose, a pressure differential gauge shall be installed between the dirty and clean side of the Dust collector.
- The pressure differential between the air inlet and outlet is low or at zero.
- Unusual temperature rise within a dry Dust collector.

- The air pressure for the pulse jets in the Dust collector is too low.
- Dry Dust collector unloading device stops working.

In the event of interlock activation, each facility must follow these steps in this order:

- Remove personnel from the area
- Investigate interlock activation
- Clean facility and ductwork, if necessary
- Implement corrective action related to the interlock activation incident
- Restart equipment and confirm proper functioning
- Allow workers back into production area

Transport velocities inside the ductwork shall be sufficient to ensure the transport of both coarse and fine particles and to ensure re-entrainment if, for any reason, the particles fall out before delivery to the collector. For metal Dusts, a minimum transport velocity of 23 m/sec is required. For non-metal Dusts a minimum transport velocity of 20 m/sec is required.

Inspection doors shall be installed on horizontal sections of ductwork on the sides or top of the ducts. The inspection doors shall be sized to allow duct inspection and cleaning of no less than 1.8 meters into the duct. Inspection doors shall be designed to seal to minimize air leakage.

Horizontal ducts shall have inspection doors installed on centers not to exceed 3.6 meters.

Horizontal ducts shall have inspection doors within 1 meter of elbows and junctions.

Ductwork shall be inspected at one-week intervals. Based on recorded observations of accumulations, the inspection frequency may be decreased but not less than once per month. If four consecutive weekly inspections detect no visible accumulation of Dust, the frequency of inspections may be reduced to once per month. However, if the Dust-collection system malfunctions, is damaged, or is changed, inspections shall once again be done weekly until it is clear that the malfunction, damage, or change and subsequent operation of the collection system did not result in any visible accumulation of Dust. If Dust accumulations are observed, the causes must be determined and corrected.

Where Dust accumulations are found, they shall be cleaned out using a non-sparking tool or an acceptable vacuum system with conductive or anti-static hose and tools.

A system airflow rebalance shall be conducted when any changes in the collection system are undertaken, including removal or addition of a collection point(s).

Compressed air shall not be used to clean out ductwork or any production station where Dust is produced.

Duct work need not be provided with pressure vents for explosion control.

A time delay switch or equivalent device shall be provided on equipment producing Dust that presents a Combustible Dust hazard to prevent operation until the Dust collector is in full operation and to prevent shutdown of the Dust collection system for at least 10 minutes after the equipment producing Dust stops operating.

2.5.2. Determination of Type of Dust for Mixtures

Metal-containing mixtures that also contain combustible non-metal dusts shall be permitted to be treated as non-metal dust, if by testing it is established that the mixture meets all of the following criteria:

- It has been demonstrated that mixture fires can be controlled safely and effectively with Class ABC fire extinguishing agents.
- It has been demonstrated that mixture fires can be controlled safely and effectively with water.
- The material is not a UN Class 4.3 solid as tested using UN Class 4.3 water reactivity

test methods.

- It has been demonstrated that the Volume Resistivity is greater than 1 M ohm-m.
- It is not a metal/metal-oxide mixture (e.g., thermite).

2.5.3. Collection of Combustible Dust

Machines that produce fine particles of combustible material shall be provided with hoods, capture devices, or enclosures that are connected to a Dust collection system having suction and capture velocity to collect and transport all the Dust produced.

Electrostatic precipitator type dust collectors shall not be permitted.

Dry Dust collectors shall be protected against explosion either by using deflagration venting or deflagration venting through a Dust retention and flame arresting device in accordance with NFPA 68, explosion suppression systems in accordance with NFPA 69, or dilution with a noncombustible Dust to render the mixture noncombustible. Explosion vents shall be clearly marked: "WARNING: Explosion relief device".

Where explosion suppression systems are used they shall be interlocked to shut down the Dust producing operations and exhaust fan upon activation.

Where sparks are generated, preventive measures, such as an in-line spark arrester, shall be taken to prevent sparks from being aspirated into the ductwork servicing the Dust collector.

When toxic or corrosive Dust is being collected, deflagration venting devices for pressure relief shall not be used and explosion suppression devices using dry chemical extinguishing agents or inert gas shall be used instead.

If the Dust collector is located indoors and an explosion vent is used, the Dust collector shall be located less than 2 meters from an outside wall or the roof and the vent shall be directed, without bends, to a safe location outside the building by means of a vent duct that shrouds the vent opening.

Recycling of Dust collector exhaust air back into the factory shall be permitted if the system is designed to:

- Prevent return of Dust in concentration above applicable industrial hygiene exposure limits.
- Prevent the transmission of energy from a Dust collector fire or explosion back into the factory. Exception: Exhaust air from dry metal Dust collectors shall not be returned back to the factory.
- Where dry Dust collectors are used, explosion isolation devices shall be installed downstream of the last collection point in the ductwork. Isolation devices shall conform to NFPA 69 Chapter 12. This chapter addresses design, placement and testing of these devices.
- Activation of an explosion isolation device shall result in shutdown of the Dust producing equipment and the exhaust fan of the Dust collector.
- An interlock shall be installed on all Dust collector rotary airlocks that will remove power to the airlock in the event of a deflagration inside of the Dust collector.

2.5.4. Enclosureless Collectors

Enclosureless dust collectors are prohibited for collection of metal dust.

Enclosureless dust collectors meeting all the following criteria shall be permitted to be used for collection of non-metal dust:

- The filter medium is not shaken or pressure-pulsed to dislodge Dust during operation.
- The Dust collector is not used to vent or serve metal grinders, hot work processes, or machinery that can produce sparks.

- The Dust collector is not used to vent or serve sanders, abrasive planers, or similar sanding process equipment.
- Each collection system has a maximum air flow handling capacity of 1.4 m³ per second.
- The Minimum Ignition Energy of the collected Dust is greater than 500 mJ.
- The fan motor is suitable for Class II, Division 2, or Class III as appropriate.
- The collected Dust is removed frequently to limit to less than 10 kg.
- The collector is located at least 6.1 m from any means of egress or area routinely occupied by personnel.
- Multiple collectors in the same room are separated from each other by at least 1 m.
- The fan construction is spark resistant.
- The filter medium is not located within 10.7 m of any open flame or hot surface capable of igniting a Dust cloud of the material it contains.

2.5.5. Metal Dust Collection

2.5.5.1. Fan and Blower Construction*

*Section 2.5.5.1 shall not be applicable for Fan and Blower installations operational prior to January 1, 2020.

Where metal is used for construction of fan blades or housings, metal shall be a non-sparking metal such as bronze, nonmagnetic stainless steel, or aluminum.

The design of the fan or blower shall not allow the transported combustible metal powder to pass through the fan before entering the final collector.

Fans and blowers shall be equipped with ball or roller bearings.

Bearing shall be equipped with temperature indicating devices.

Bearing shall be arranged to sound an alarm in case of overheating.

2.5.5.2. Dry-Type Metal Dust Collection

Dry Dust collectors shall not be used for collection of legacy metal (aluminum, magnesium, niobium, tantalum, titanium, zirconium or hafnium) dusts.

Dry Dust collectors shall not be permitted for other metal Dusts, for example iron and stainless steel, unless the K_{st} is less than 150 bar-m/sec, the filter media is conductive (if the MIE is less than 1000 mJ) and means of monitoring of dust for exothermic reaction is in place. Dry media collectors used to collect other metal Dust shall be located outdoors unless there is hazard analysis is conducted to ensure that the risk to personnel in operations is minimized in existing systems. In addition, the material being collected must meet the following: the MIE is greater than 100 mJ and P_{max} value generated from the Explosion Severity test is less than 8.0 barg. Where cyclones are used as part of a dry dust collection system they shall be conductive non-sparking construction suitable for the surface intended. Accumulations on filter media shall be limited to levels below the thresholds for any oxidative self-heating ignition and any possible ignition due to exothermic reaction of humid air. Accumulation levels during the operation shall be monitored across the media by pressure drop or any one sensor; if the accumulation exceeds the predetermined limits, a controlled shutdown of the collector and dust generation equipment shall be implemented. Periodic inspections and replacement of media shall be based on intervals determined by the pressure drop across the media or by indication of self-heating detection equipment based on moisture reactivity. The ingress, accumulation, or condensation of water in a dry type collector shall be prevented.

2.5.5.2.1. Indoor Dry-Type Dust Collectors

Indoor dry-type dust collectors shall be permitted for metals other than legacy metals,

meeting the following requirements:

- The P_{max} is less than 8 barg, as measured using the test method in ASTM E1226, Standard Test Method for Explosibility of Dust Clouds.
- The K_{st} is less than 150 bar•m/s as measured using the test method in ASTM E1226.
- The minimum ignition energy (MIE) is greater than 100 mJ as measured using the test method in ASTM E2019, Standard Test Method for Minimum Ignition Energy of a Dust Cloud in Air.
- The material is not a UN Class 4.2 solid as tested using UN 4.2 self-heating test methods.
- The collection of materials other than iron or steel dust is prohibited in collectors with a dirty volume greater than 0.57 m³ (20 ft³) or an airflow greater than 2549 m³/hr (1500 ft³/min).

An automatic fixed fire suppression system shall be provided with a fire extinguishing agent that has been shown to be effective with the material collected for indoor collectors.

An automatic fixed fire suppression system shall not be required where the amount of material collected is less than 0.45 kg (1 lb) combustible metal and the dust collector is emptied after each day of operation.

Collected material shall not be stored in the collector, but shall be continually emptied from the collector into a sealed metal container through an isolation device in accordance with NFPA 69.

The collection of materials other than iron or steel dust shall be prohibited in collectors with a dirty volume greater than 0.57 m³ (20 ft³) or an airflow greater than 2549 m³/hr (1500 ft³/min).

Media collectors shall contain a filter break (e.g. broken-bag) detection system that automatically shuts down the collector and connected equipment if a filter break is detected.

The exhaust duct from the fan discharge shall exit the building using as straight and short a path as is practical.

The collector inlet duct, exhaust duct, and blower shall be inspected at least every 6 months to ensure that material is not accumulating.

The collector exhaust duct located inside the building shall use one of the following deflagration protection methods:

- Deflagration pressure containment in accordance with NFPA 69
- Deflagration isolation in accordance with NFPA 69

If the material meets either of the following criteria:

- The material is a UN Class 4.3 solid as tested using UN 4.3 water reactivity test methods.
- Water has not been shown to be an effective extinguishing agent

Then the following requirements must be in place:

- Media collectors shall include automatic cleaning of filters, and the pressure drop across the filter shall be continuously monitored and alarms activated if the pressure is outside of established operating ranges.
- The collector shall contain a warning sign stating the following:

THIS COLLECTOR CONTAINS COMBUSTIBLE METAL DUST. DO NOT EXTINGUISH WITH WATER.

2.5.5.3. Wet Collection Requirements (including waterfall types)

Wet Dust collectors are permitted to be located indoors.

The blower for drawing the Dust-laden air into the wet collector shall be located on the clean

air side of the collector.

The exhaust vent shall be inspected and cleaned frequently to prevent build-up of deposits in the duct, where Dust presenting a Combustible Dust hazard exists.

Recycling water in wet-type Dust collector shall be filtered to remove particulates, oil and other impurities.

All water lines and the water sludge tank shall be protected against freezing.

The sludge in the water filtration tank shall be cleaned every shift, and the sludge and waste water shall be treated prior to disposal to ensure they are safe for the environment.

Vents shall remain open and unobstructed at all times.

Some metal Dust (for example, aluminum and magnesium) produces hydrogen gas when put in contact with water. Wet Dust collectors handling these materials shall have an alternate means for the hydrogen gas to be released and prevent accumulation in the event of an exhaust blower shutdown.

The Dust-producing equipment shall be interlocked with the airflow to the exhaust blower, liquid level controller, and water flow through scrubber nozzles so that improper functioning of the Dust-collection system will shut down the equipment where Dust presenting a Combustible Dust hazard is present.

In the event of interlock activation, facility shall follow these steps:

- Remove personnel from the area
- Investigate interlock activation
- Clean facility and ductwork, if necessary
- Implement corrective action related to the interlock activation incident
- Restart equipment and confirm proper functioning
- Allow workers back into production area

The use of dry filter medium or dry collection systems downstream of or combined within a wet Dust collection system is prohibited.

2.5.5.4 Downdraft Tables

Self-contained, dry-type AMS, down-draft benches, and environmental control booths (e.g., buffing, grinding, and finishing booths) with integral filter media in the wall shall be permitted where less than 0.22 kg (0.5 lb) of dust less than 500 microns is collected and emptied each day.

2.5.5.5 Portable Dust Collectors for Metal Dust Collection

Portable indoor dry-type dust collectors shall be used only for grinding, buffing, or sanding operations.

Individual machines with portable dry dust-collection capabilities shall be permitted to be used indoors when the object being processed or finished is incapable of being moved to a properly arranged fixed hood or enclosure and shall incorporate the following safeguards:

- Portable indoor dry-type dust collectors shall not be connected to a permanent fixed piping system.
- The operation of portable dry dust-collection devices shall be subject to a DHA to ensure that the risk to personnel and operations from flash fire and shrapnel is minimized.
- The portable dust collector shall not be used in an identified deflagration hazard area until appropriate housekeeping methods in Section 2.7 have been used to remove hazardous quantities of dust.
- Portable dry AMS with a dirty side volume greater than 0.2 m³ (8 ft³) shall be protected against explosion in accordance with NFPA 69.

- Prior to a change in the collected materials, the portable dry-type AMS and all associated components shall be thoroughly cleaned.
- Hoses shall be appropriate for use and be static dissipative or conductive.
- Hoses and nozzles shall be bonded and grounded, and a path to ground shall be verified prior to use after each movement, each new connection, or both.
- The resistance of the path to ground shall be documented and maintained.
- The material collected shall be limited to 2.2 kg (5 lb) and, at a minimum, emptied daily.
- The collector shall not be used on processes generating hot embers or sparks.

2.5.6 Portable Vacuum Cleaners

2.5.6.1 All Dusts (including metal dust)

Portable vacuum cleaners used to clean up dust presenting a combustible dust hazard in non-classified areas shall meet the following requirements:

- Materials of construction shall be noncombustible. Exception: Filter media and filter media support frames may be constructed of combustible material.
- Hoses shall be conductive or static dissipative. A hose with an anti-static liner shall demonstrate a Surface Resistivity (SR) of less than 10^{10} ohm/sq or a Volume Resistivity (VR) of less than 10^9 ohm•m.
- All conductive components, including wands and attachments, shall be bonded and grounded.
- Dust-laden air must not pass through the fan or blower.
- Electrical motors shall not be exposed to dust-laden air, unless they are listed for Class II, Division 1 locations; otherwise, a vacuum cleaner with a compressed-air motor shall be used.
- When liquids or wet materials are picked up by the vacuum cleaner, paper filter elements shall not be used.

Portable vacuum cleaners used in areas that have been classified as either Class II Division 1 or Class II Division 2 shall be listed for use in Class II hazardous locations or shall be a fixed-pipe suction system with remotely located exhauster and dust collector.

Where Class I flammable vapors or gases are present, portable vacuum cleaners shall be listed for both Class I and Class II hazardous locations.

2.5.6.2 Metal Dusts (additional requirements)

Dry Portable Vacuum Cleaners

Vacuum cleaners used for clean-up of metal dust presenting a combustible dust hazard shall be designed for use on the specific dust being collected.

The material collected shall be limited to 2.2 kg (five lbs) and, at a minimum, emptied daily.

Wet Immersion Type

When the collector is to remain inoperative for a period of 24 hours or more, sludge shall be removed from the collector or the collector shall be permitted to be moved to a safe location where hydrogen venting and other hazards are sufficiently mitigated.

The maximum capacity of the wet immersion unit shall not exceed 20 pounds of sludge.

Clean out the unit after each use.

2.5.7 Machining, Fabrication and Finishing

Guidelines specifically for titanium and magnesium machining are available on request from Supplier Responsibility.

2.6. Drag and Screw Conveyors

Mechanical conveyors including drag and screw conveyors shall meet the following requirements:

- Enclosure, including covers, shall be designed to prevent the release of dust
- Mechanical drives shall be equipped with a sheer pin or overload detection device and alarm
- The alarm shall sound at the operator control station
- All drives shall be directly connected
- Belt, chain and sprocket, or other indirect drives that are designed to stall the driving forces without slipping and to provide for the removal of static electrical charges are permitted to be used.

2.7. Dust Control and Housekeeping

Dust-collection systems shall be installed where Dust presenting a Combustible Dust hazard is produced during normal operation.

Equipment shall be maintained and operated in a manner that minimizes the escape of Dust presenting a Combustible Dust hazard.

Dust presenting a Combustible Dust hazard shall be conveyed to Dust collectors in ductwork or in another contained manner.

A housekeeping plan shall be developed and maintained for any areas presenting a Combustible Dust hazard. The plan shall include appropriate methods and processes for performing the cleaning. The housekeeping plan shall be reviewed and approved by designated safety personnel who are knowledgeable about Combustible Dust hazards.

Regular cleaning frequencies shall be established for walls, floors, and horizontal surfaces, such as equipment, ducts, pipes, hoods, ledges, beams, and above suspended ceilings and other concealed surfaces, to minimize accumulations of Dust that presents a Combustible Dust hazard within the facility.

In areas where metal Dust is being produced, or otherwise handled, Dust shall not be allowed to accumulate to a level that obscures the color of the surface beneath it.

For Dust other than metal Dust, ensure that accumulation of Dust that presents a Combustible Dust hazard does not exceed the threshold Mass (M) as calculated using the equation: $M = 0.02 \times A_{\text{floor}}$, where M is the mass in kilograms and A_{floor} is the area of the floor in meters squared.

Surfaces shall be cleaned in a manner that minimizes the generation of Dust clouds.

Vigorous sweeping, brushing, or blowing Dust with compressed air produces Dust clouds and shall not be permitted.

Preliminary clean-up of metal Dust shall be accomplished using conductive, non-sparking scoops or shovels, soft brooms or brushes with natural-fiber bristles, or vacuum cleaning systems designed for handling Combustible Dust as defined later in this section.

Final clean-up for removing thin films of Combustible Dust may be accomplished using wet rags or mops. When using water for cleaning up metal Combustible Dust, ventilation, either natural or forced, shall be used to prevent hydrogen gas build-up.

2.8. Control of Ignition Sources

2.8.1. Hot Work

The requirements below shall apply to all areas where metal Dust or Dust presenting a Combustible Dust hazard is present.

- A fire permit (hot work) program shall be in place and shall follow the requirements of NFPA 51.
- Fire permits shall be required when hot work is performed.

- Open flames, cutting or welding operations, and use of spark-producing tools or other equipment shall not be permitted unless designated safety personnel approve the fire permit.
- All hot work areas that requires a permit shall be thoroughly cleaned of combustible materials, including metal Dust and Dust that presents a Combustible Dust hazard, before hot work is performed, and nearby workers shall be notified of the high risk.

2.8.2. Smoking

Smoking shall not be permitted in areas where metal Dust or Dust presenting a Combustible Dust hazard is present.

Matches and lighters shall not be permitted in Class I or Class II areas.

2.8.3. Control of Static Electricity

All permanently installed process equipment and all building structural steel shall be grounded by permanent ground wires.

Movable or mobile process equipment or tools of metal construction shall be bonded and/or grounded prior to use.

Workers in a Class I area or in a Class II area where Combustible Dust minimum ignition temperature is less than 30 millijoules shall be grounded. The surface on which they are standing shall be suitably conductive as indicated by a maximum electrical resistance to ground of 100 mega ohms. An anti-static mat may be required if the resistance of the floor is too high.

All machinery where non-conductive components present a discontinuity in the grounding path shall be bonded between adjacent conductive components.

The wire between two bonding clips shall be verified as conductive.

2.8.4. Control of Friction and Hot Surfaces

All machinery shall be installed and maintained in a manner that minimizes the possibility of friction sparks.

All hot surface temperatures shall be controlled to not exceed the Combustible Dust MIT layer in areas where the Combustible Dust may exist.

2.8.5. Bearings

Ball or roller bearings shall be sealed against Dust ingress.

Clearances between moving surfaces that are exposed to Dust shall be maintained to prevent rubbing or jamming.

Machines shall be designed to minimize localized frictional heating of bearings and an appropriate maintenance program shall be implemented.

2.9. Protective Clothing

Workers in Class II Division 1 or Class II Division 2 areas shall be provided with outer clothing that is flame retardant in accordance with NFPA 211 2-2012 "Standard on Flame Retardant Garments for Protection of Industrial Personnel against Flash Fire" or local equivalent, whichever is more conservative.

2.10. Portable Fire Extinguishers

Portable fire extinguishers shall be provided in areas where Combustible Dust is present.

The type, number, and size of extinguishers, the placement and travel distances between extinguishers shall be as per NFPA 10.

Where metal Combustible Dust is present, portable fire extinguishers shall be rated for Type D fires.

2.11. Training

All workers in areas generating, handling, or otherwise processing Combustible Dust shall be initially trained and retrained annually in the following:

- Hazards of their working environment and appropriate procedures in case of fire or explosion.
- Location of electrical switches and alarms, first-aid equipment, safety equipment, and fire-extinguishing equipment.
- Basic fire safety.
- Hazards involved in causing Dust clouds and the danger of applying liquids onto a metal fire shall be explained.
- Safe and proper evacuation of work areas.
- Equipment operation, proper methods of start-up and shutdown, and response to abnormal conditions shall be explained.
- The necessity for proper functioning of related fire and explosion protection systems shall be explained.
- The workers' roles in evacuation, sounding of alarms, gathering areas, and any other related items in the event of an emergency shall be explained.

Training shall be documented and permanent records kept on site.

2.12. Inspection and Maintenance

An inspection, testing, and maintenance program shall be implemented that ensures appropriate process controls and that all equipment performs as designed.

The inspection, testing, and maintenance program shall include the following:

- Fire and explosion protection and prevention equipment.
- Dust control equipment:
- Inspection of doors on Dust collection equipment, to ensure proper fit including condition of gaskets
- Inspection of Dust collection ductwork for accumulations of Dust, leaks, etc.
- Housekeeping
- Potential ignition sources
- Electrical, process, and mechanical equipment, including process interlocks.
- Continuity checks on grounding and bonding systems.
- Resistivity testing of static dissipative footwear and conductive floors where required.

A thorough inspection of the operating area shall take place periodically on an as-needed basis, not to exceed quarterly, to ensure that the equipment is in good condition and that proper work practices are being followed.

A person(s) knowledgeable in the proper practices related to Combustible Dust safety shall conduct the inspection, and all findings and recommendations shall be documented and recorded.

3. Performance Based Design Option

As an alternative, where and when necessary, a person(s) with qualifications acceptable to the Apple Supplier Responsibility Team, may develop performance-based design provisions with regard to management of Combustible Dust fire and explosion hazards, in lieu of the prescriptive requirements outlined in this standard.

- The performance-based design must demonstrate that the approach provides at least an equivalent measure of safety with regard to prescriptive requirements.
- The performance-based design should be documented with all calculations, references, assumptions, and sources from which material characteristics and other data have been obtained or on which the designer has relied for some material aspect of the design.

- The completed design shall be reviewed by the Apple Supplier Responsibility Team to determine the adequacy and to ensure that the approach does not result in a diminution of safety when compared to prescriptive requirements.

4. Referenced Standards

The documents or portions thereof listed in this Section shall be considered part of the requirements of the Standard. Local standards may be applied in lieu of NFPA standards only where the local standards provide an equivalent level of protection. In the event of substitution, Supplier is responsible for documenting justification.

Where a requirement specified in a National commodity-specific standard differs from the requirement specified in this Standard, the requirement in the industry or commodity-specific standard shall be used unless specifically addressed in this Standard.

4.1. National Fire Protection Association (Internationally Recognized) Publications (1 Batterymarch Dr., Quincy, MA, USA)

- NFPA 10 "Standard for Portable Fire Extinguishers"
- NFPA 68 "Standard on Explosion Protection by Deflagration Venting"
- NFPA 69 "Standard on Explosion Prevention Systems"
- NFPA 70 "National Electrical Code"
- NFPA 77 "Recommended Practice on Static Electricity"
- NFPA 91 "Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids"
- NFPA 101 "Life Safety Code"
- NFPA 484 "Standard for Combustible Metals"
- NFPA 499 "Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas"
- NFPA 652 "Standard on the Fundamentals of Combustible Dust"
- NFPA 654 "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids"

4.2. Chinese Publications

- AQ-4272 Safety Specifications for Prevention of Dust Explosions from the mechanical processing of aluminum and magnesium products
- AQ-4273 Safety Specifications for Dedusting System used in Dust Explosion Hazardous Area
- GB-15577 – 2007: Safety Regulation for Dust explosion prevention and protection
- GB/T 17919 – 2008: Directives for Dust explosion protection for Dust collectors in Dust explosion hazardous areas
- GB/T 1 651: Code of Practice for Selection of Personal Protective equipment
- GB 12476.1: Electrical apparatus for use in the presence of Combustible Dust Part 1: Electrical apparatus protected by enclosures and surface temperature limitation – Section 1: Specification for apparatus (IDT IEC 61241 – 1: 1999)
- GB 12476.2 Electrical apparatus for use in the presence of combustible dust—Part 2: selection and installation
- GB/T 15605: Guide for pressure venting of Dust explosions
- GB 50058 Electrical installations design code for explosive atmospheres and fire hazard
- GB 50016-2006: Code of design on building fire protection and prevention

- GB/T 18154: Technical specification of automatic Dust explosion suppression devices

4.3. European Standard

- IEC 60079-10-2 "Explosive Atmospheres - Part 10-2: Classification of Areas - Combustible Dust Atmospheres

4.4. United Nations Regulation

- UN Recommendations on the Transport of Dangerous Goods: Model Regulations - Manual of Tests and Criteria, Part III, Subsection 33.2.1.



Supplier Responsibility Standard

Hazardous Waste Management

Supplier Code of Conduct Requirements

Supplier shall implement a systematic approach to identify, manage, reduce, and responsibly dispose of or recycle Hazardous Waste.

Supplier Responsibility Standard

1. Regulatory Permits

Supplier shall have the required environmental permits and other required approvals for its current operations.

Supplier shall plan and provide adequate time to update current environmental approvals and permits for any **Alteration** that may change the environmental impact of Supplier's operations.

Supplier shall comply with applicable **Hazardous Waste** permitting and reporting requirements in accordance with applicable regulations. Supplier shall implement the following:

- Register all Hazardous Waste in accordance with applicable regulatory requirements.
- Obtain permits for pollutant discharge, Hazardous Waste handling, Hazardous Waste storage, and Hazardous Waste transport in accordance with applicable regulatory requirements.
- Report any Alteration that may change the status of registration and permitted Hazardous Waste generation to the appropriate local and national regulatory agencies.

2. Direct Responsible Individual(s)

Supplier shall identify the responsible individual(s) responsible for Hazardous Waste management.

3. Identification of Waste Streams

Supplier shall identify all sources of **Waste** and characterize each Waste stream as either Hazardous Waste or **Non-Hazardous Waste** as per applicable regulations, or if no regulations apply, in accordance with this Standard.

Supplier shall develop and maintain a Waste inventory for all Waste generated. The Waste inventory shall include generated quantities of Waste per month; the Waste category (hazardous or non-hazardous); the method of disposal, recycling, or other disposition for all Waste; and names of Waste transport and disposal vendors.

Supplier shall review the facility Waste inventory annually.

Supplier shall update the Waste inventory to reflect any process or production changes.

4. Control of Waste

4.1. Waste Collection and Storage Practices

Supplier shall segregate Hazardous Waste from Non-hazardous Waste per applicable regulations and this Standard.

Definitions

Alteration

Any change to a production or other process that may lead to introduction of new process Waste stream or a change in the composition, volume, treatment process, or monitoring requirements of existing process Waste stream.

Hazardous Waste

Waste that poses a direct threat to human or animal health or the environment.

Waste

Materials resulting from the production, transformation, and/or consumption of other materials, for which the generator or holder has no further use, and that will be or have been discarded or released to the environment.

Non-Hazardous Waste

Waste that does not pose a direct threat to human or animal health or the environment, such as food and yard or garden Waste, packaging materials, and sanitary Wastes as specified in applicable regulations.

Supplier shall implement responsible Waste collection and storage practices, including but not limited to:

- Waste shall be collected and stored in appropriate containers based on their chemical and physical characteristics.
- Secondary Containment shall be provided during collection and transfer of Hazardous Waste from production areas to Hazardous Waste storage areas.
- Waste containers shall be provided with standardized labels in accordance with applicable regulations. At a minimum, each label shall include the type of Waste, appropriate hazard warnings, and the date of Waste origination.
- Waste containers shall be in good condition and capable of preventing leaks or spills.
- Hazardous Waste shall not be stored on-site for more than the period required by applicable local regulations.
- Hazardous Waste containers shall be inspected weekly to ensure container integrity, to prevent and control leaks, and to identify and correct missing or incorrect labels. Supplier shall maintain written copies of these weekly inspections.

4.2. Hazardous Waste Storage Areas

Supplier's Hazardous Waste storage areas shall meet the following requirements:

- Construction materials and electrical equipment shall be compatible with the Hazardous Waste stored.
- Signage shall be posted inside and outside the Hazardous Waste storage areas to indicate:
 - o The nature of any hazards posed by the Hazardous Waste.
 - o Any personal protective equipment required to enter the area.
 - o Any labeling stipulated by applicable regulations and standards.
 - o Any restrictions on smoking and other activities.
- Unauthorized access to Hazardous Waste storage areas is prevented.
- An enclosure or other covering prevents exposure to the elements.
- Equipped with Secondary Containment that will capture and hold leaks or spills.
- Designed and constructed to prevent spills or leaks from the Hazardous Waste storage area from contaminating surface water or groundwater, or from entering storm drains or sewers.
- Firefighting equipment shall be readily available and accessible.
- A working alarm system that will alert facility workers and outside emergency responders in the event of an emergency.
- Forced ventilation equipment for areas where volatile, acidic, caustic, or corrosive substances are stored.
- Personal protective equipment for workers handling Hazardous Waste.
- Storage area for personal protective equipment outside the Hazardous Waste storage area that maintains the integrity and functionality of the equipment.
- Sufficient space for the ingress, egress, and other movement of emergency response personnel and equipment.

5. Disposal of Waste

Supplier shall only use licensed and qualified Hazardous Waste transporters.

Supplier shall audit hazardous-Waste transportation vendors annually. Audits shall include reviewing environmental violations and copies of vendor licenses, permits, and registrations. If an environmental violation is identified, Supplier shall:

- Notify Apple of the Hazardous Waste transporter and its violation.
- Work with the hazardous-Waste transporter to develop, implement, and monitor corrective actions.
- Obtain approval for Hazardous Waste transfers from each applicable regulatory agency in accordance with applicable regulations.
- Complete written records and manifests for all Hazardous Waste disposal activities in accordance with local and national regulations.
- Submit copies of records, manifests, and other required documentation to the appropriate authorities and regulatory agencies, and any relevant third parties (transporters and receivers) in accordance with applicable requirements.

6. Emergency Response

Supplier shall designate at least one properly trained **Emergency Coordinator** on the premises with the responsibility for coordinating all facility emergency response and reporting activities. An Emergency Coordinator shall be on the premises whenever the facility is in operation.

Supplier shall conduct emergency response drills related to the hazards of the facility annually, or such other time period specified by applicable regulatory requirements, whichever is shorter.

Supplier shall establish a written **Emergency Response Plan** to minimize the risks to human health and the environment. The Emergency Response Plan shall include:

- Internal reporting and notification requirements.
- Names and contact information for responsible facility personnel, local fire and emergency response contacts, and local hospitals and other appropriate medical contacts.
- Identification and assessment of immediate potential threats, including risks of fire/explosion or spillage or leakage from facility processes and storage areas.
- Emergency evacuation routes, procedures, and controls.
- Detailed procedures for control and containment of released hazards.
- Proper cleanup and disposal of any released hazardous materials.

7. Operations and Maintenance

Supplier's pollution-control technologies shall be operational prior to Supplier generating any Waste.

Supplier shall plan and provide adequate time to implement controls and obtain approvals for any Alteration that may change the identification, collection, storage, handling, and disposal of Hazardous Waste.

Supplier shall maintain a Waste-minimization plan to assess on-site Hazardous Waste generation and to identify opportunities to minimize Hazardous Waste. If the facility's environmental permit requires meeting Hazardous Waste-minimization goals, Supplier shall develop and implement a plan to meet the regulatory agency's Waste-minimization goals.

8. Training and Communication

Supplier shall provide worker training for Hazardous Waste handling, storage, emergency response actions, and proper record keeping.

Definitions

Emergency Coordinator

A person designated by the facility to manage any emergency-related activities at the facility. This person shall have the authority to commit the resources needed to respond to all emergencies and be thoroughly familiar with the facility, all facility operations, all aspects of the facility Emergency Response Plan, and locations of all records within the facility.

Emergency Response Plan

A document prepared by Supplier that describes actions to be taken during an emergency. It includes emergency contact information, emergency communication procedures, emergency hospital information and procedures for control and containment of released materials and cleanup.

9. Documentation

All Hazardous Waste—management records and documentation shall be made available to Apple for review upon its request. Supplier shall retain the documentation related to Hazardous Waste management as follows:

- Employee training records shall be retained for the previous 5 years or such other period specified by applicable regulatory requirements, whichever is longer.
- Employee medical records shall be retained for the length of employment plus 30 years or as required by applicable regulatory requirements, whichever is longer.
- Current and historical copies of permits and registrations as required by applicable regulations or this Standard.
- Current Hazardous Waste inventory.
- Documentation showing Hazardous Waste is removed from the storage unit at least once per applicable accumulation period.
- Hazardous Waste manifests and other shipping records shall be retained for 5 years.
- Current list of vendors performing reuse, recycle, transport, or disposal of Hazardous Waste directly for the Supplier.
- Incident records regarding all Hazardous Waste incidents at the facility shall be retained for 5 years.



Supplier Responsibility Standard

Wastewater Management

Supplier Code of Conduct Requirements

Supplier shall implement a systematic approach to identify, control, and reduce wastewater produced by its operations. Supplier shall conduct routine monitoring of the performance of its wastewater treatment systems.

Supplier Responsibility Standards

1. Regulatory Permits

Supplier shall obtain, retain, and manage valid or current copies of all necessary **Process Wastewater** permits, licenses, registrations, and regulatory approvals as required by applicable regulatory requirements, including but not limited to:

- Obtain environmental approval for current production
- Obtain new, additional, and/or amended or updated permits/registrations prior to any **Alterations**.
- Acquire and maintain all wastewater discharge permit(s) per Applicable Laws and Regulations.
- Report and/or register Process Wastewater discharges in accordance with Applicable Laws and Regulations.

2. Directly Responsible Individual(s)

Supplier shall identify a specific individual or individuals within the facility organization who will be responsible for all aspects of Process Wastewater discharge treatment, including maintenance and inspection of WWTP, monitoring of Process Wastewater discharge, and responding to emergencies.

3. Identification of Process Wastewater Sources

Supplier shall identify and characterize all Process Wastewater streams.

Supplier shall organize and maintain Process Wastewater stream inventory:

- The inventory shall include the composition and volume of each Process Wastewater stream.
- Supplier shall revise the inventory after any Alteration likely to affect Process Wastewater.
- Supplier shall review the inventory annually.

4. Control of Process Wastewater Discharge

Supplier shall install and maintain appropriate Process Wastewater treatment systems that reduce the pollutant contribution of each of its facilities to levels compliant with Applicable Laws and Regulations.

Supplier shall:

- Comply with all Applicable Laws, Regulations, and requirements related to Process Wastewater discharge
- Update control technologies before any Alteration takes effect.

Definitions

Process Wastewater

Water discharged from manufacturing or industrial processes with the potential to contain contaminants.

Alteration

Any change to a production or other process that may lead to introduction of new Process Wastewater stream or a change in the composition, volume, treatment process, or monitoring requirements of existing Process Wastewater stream.

- Verify compliance with current Process Wastewater discharge requirements.
- Not intentionally dilute Process Wastewater to meet permit requirements and/or regulatory standards.
- Comply with the recycle and reuse requirements for Process Wastewater as required by relevant regulatory agencies.
- Treat and/or discharge Process Wastewater according to the approved environmental permits and other Applicable Laws and Regulations.

If no Process Wastewater is allowed to be legally discharged, the Process Wastewater shall be handled as **Hazardous Waste** in accordance with Applicable Laws and Regulations and Apple Standards.

If local requirements are not available for a pollutant, the thresholds specified in the table Apple Wastewater Discharge Quality Standards shall be used:

Apple Wastewater Discharge Quality Standards		
Parameter	Discharge Limit to Wastewater Treatment Plant	Discharge Limit to Surface Water
Temperature	40°C	3°C increase of receiving water body
pH	6.0 – 9.0	6.0 – 9.0
Chemical Oxygen Demand (COD _{Cr})	300 mg/L	100 mg/L
5-day Biochemical Oxygen Demand (BOD ₅)	150 mg/L	20 mg/L
Total Suspended Solids (TSS)	300 mg/L	20 mg/L
Fluoride	20 mg/L	5 mg/L
Total Nitrogen	70 mg/L	10 mg/L
Nitrites (NO ₂ -N)	Not Applicable	1 mg/L
Nitrates (NO ₃ -N)	Not Applicable	10 mg/L
Ammonia Nitrogen	25 mg/L	5 mg/L
Total Phosphorus	8 mg/L	1 mg/L
Oil and Grease (O&G)	20 mg/L	5 mg/L
Total Arsenic	0.2 mg/L	0.01 mg/L
Total Cadmium	0.05 mg/L	0.02 mg/L
Total Chromium	1 mg/L	0.05 mg/L
Hexavalent Chromium	0.1 mg/L	0.01 mg/L
Total Copper	0.5 mg/L	0.5 mg/L
Total Lead	0.2 mg/L	0.1 mg/L

Definitions

Hazardous Waste

Waste that poses potential direct threat to human or animal health or the environment.

Apple Wastewater Discharge Quality Standards		
Parameter	Discharge Limit to Wastewater Treatment Plant	Discharge Limit to Surface Water
Total Mercury	0.005 mg/L	0.002 mg/L
Total Nickel	0.5 mg/L	0.1 mg/L
Total Silver	0.1 mg/L	0.1 mg/L
Total Zinc	1.5 mg/L	0.5 mg/L
Cyanide	0.2 mg/L	0.15 mg/L

5. Evaluation and Monitoring of Process Wastewater Discharge

Supplier shall:

- Monitor Process Wastewater discharges in accordance with regulatory requirements. The parameters selected for monitoring shall be indicative of the pollutants of concern and shall include parameters that are included in the permit or in applicable regulations.
- Monitor Process Wastewater discharges (for both pollutant concentrations and volume generated) at the frequency required by local regulations, or in the absence of such regulations at least once per month, to ensure compliance with Applicable Laws and Regulations.
- Monitor all Process Wastewater discharges at the locations or in the manner specified in the permit or required by Applicable Laws and Regulations.
- Submit Process Wastewater monitoring reports to the relevant regulatory agency as required for regulatory compliance.

6. Emergency Response

Supplier shall prepare for emergencies and implement emergency response actions if the on-site Process Wastewater treatment system exceeds its capacity or if it malfunctions. The emergency response actions are as follows:

In the event the capacity of the Wastewater Treatment Plant ("WWTP") is exceeded:

- Supplier shall stop Process Wastewater discharge from the production areas into the WWTP.
- Supplier shall isolate Stormwater drain inlets within its facility so there is no cross-contamination from backed-up Process Wastewater.
- Supplier shall direct the excess Process Wastewater into a backup collection system/containers.

In the case of WWTP malfunction:

- Supplier shall stop wastewater discharge offsite from the WWTP immediately.
- Supplier shall stop Process Wastewater discharge from the production areas into the WWTP.
- Supplier shall replace or repair the WWTP equipment in a timely manner so the WWTP expeditiously resumes normal operations.
- Supplier shall report malfunctions to the local authorities per Applicable Laws and Regulations.

- If contaminated wastewater in excess of permitted limits is discharged, Supplier shall notify and obtain a variance permit from the local authorities, if possible.
- For treatment system malfunctions, Supplier shall immediately implement any system upgrades, repairs, and/or monitoring programs to meet regulatory discharge standards.

Upon receipt of any community complaints, Supplier shall conduct Process Wastewater discharge monitoring to verify the Process Wastewater discharge status and promptly implement any necessary or advisable corrective actions.

Upon receipt of any **Notice of Violation** from local authorities, Supplier shall communicate with the authority in a timely manner, inform all relevant parties about the violations, and subsequently take any corrective actions in a timely manner or as specified by the authorities.

7. Operations and Maintenance

Supplier's Process Wastewater treatment system shall be operational prior to use of corresponding production equipment.

Supplier shall develop operating and preventive maintenance programs for on-site WWTP in accordance with the following:

- Clearly defined and documented worker responsibilities and training requirements for the operation, inspection, and maintenance of the WWTP.
- Standard operating procedures for preventive maintenance that incorporate manufacturers' specifications/recommendations and industry best practices.
- Key parameters for monitoring WWTP effectiveness and the frequency of routine inspections based on regulatory and/or permit requirements, preventive maintenance requirements, and other factors. The inspection plan shall cover all shifts during typical facility operations.
- Defined and documented operating procedures for shutting down the WWTP. Before shutting down the WWTP for any planned reason (for example, maintenance, exceeding capacity, or malfunction), Process Wastewater discharge to the WWTP shall be suspended and prevent Process Wastewater discharge from being released without treatment. Associated production equipment may resume operation only when the WWTP is operating properly.

Supplier shall establish a program to evaluate the integrity of existing Process Wastewater collection systems, including wastewater pipelines, underground drains, wastewater sumps, and the on-site WWTP, and correct any identified deficiencies immediately. The program shall include regular integrity testing of the Process Wastewater system at a frequency based on the risks of leaks identified during the evaluation.

8. Training and Communication

Supplier shall provide training to operators of Process Wastewater treatment facilities that cover operation and maintenance of equipment and other process units in the WWTP. Operators shall hold WWTP operator certificates as required by local or national regulatory requirements.

Supplier shall notify Apple within 7 days and appropriate regulatory agencies as required by applicable regulations if an **Unusual Environmental Event** occurs. Notification shall include the probable cause of the Unusual Environmental Event and corrective or preventive actions.

9. Documentation

Supplier shall retain both written and electronic copies of Process Wastewater discharge data and documentation for at least 5 years or as per local regulatory requirements, whichever is longer. Required documents to be retained include but are not limited to:

- Licenses, permits, and other regulatory registration documents.

Definitions

Notice of Violation

A written method of alleging:

- 1) a violation that does not qualify as a minor violation for which a "Notice to Comply" is the only allowable means of citation, or
- 2) a minor violation that is not corrected within the time required.

Unusual Environmental Event(s)

Include but are not limited to process equipment upsets like increased load, natural disasters, wastewater treatment system breakdowns, accidents, and power failures. These events lead to failed wastewater treatment systems and discharge of pollutants in excess of permitted limits.

- Process Wastewater stream inventories.
- Process Wastewater discharge monitoring results.
- Expansion, renovation, or new WWTP records, permits, or regulatory correspondence.
- Written records of Process Wastewater–related communications with external parties, including but not limited to community groups and local authorities.
- Routine inspection and maintenance records.
- Reports of Unusual Environmental Events and corrective response actions undertaken.
- Records of any corrective actions, rectifications, or follow-up actions taken for any deficiencies, complaints, or Notices of Violation.
- Training records for personnel assigned to the operation, inspection and maintenance of the WWTP

All documentation shall be made available to Apple for review upon its request.



Supplier Responsibility Standard

Stormwater Management

Supplier Code of Conduct Requirements

Supplier shall implement a systematic approach to prevent contamination of Stormwater runoff. Supplier shall prevent illegal discharges and spills from entering storm drains, the public water supply, or public Bodies of Water.

Supplier Responsibility Standards

1. Regulatory Permits

Supplier shall comply with **Stormwater** permitting and reporting requirements per applicable regulations.

2. Directly Responsible Individual(s)

Supplier shall identify a specific individual or individuals within the facility who will be responsible for the development, implementation, revision, monitoring, and inspecting, in accordance with the requirements of the **Stormwater Management Plan**, and responding to emergencies.

3. Identification of Pollutant Sources

3.1. Potential Pollutant Sources

Supplier shall identify potential pollutant sources that might affect Stormwater runoff. Supplier shall do the following to identify pollutant sources:

- Prepare a list of areas of **Industrial Activities** exposed to Stormwater and its **Pollutant Constituents**.
- Prepare a list and description of potential spills and leaks that could contribute pollutants to Stormwater discharge, and specify which outlets are likely to be affected.
- Prepare a list and description of past spills and leaks in the previous 3 years that occurred at areas exposed to Stormwater, or that drained to the Stormwater drainage system.
- Prepare a list of **Non-Stormwater Discharges** and eliminate any **Unauthorized Non-Stormwater Discharges**.

3.2. Facility Map

Supplier shall prepare a facility map that includes the following information:

- Outlines of Stormwater drainage areas within the facility, portions of the drainage area affected by run-on from surrounding areas, and direction of flow of each drainage area, on-site Bodies of Water, and areas of soil erosion.
- Location of nearby **Bodies of Water** and municipal storm drain inlets where the facility's Stormwater discharges and **Authorized Non-Stormwater Discharges** may be received.
- Location of Stormwater collection and conveyance systems, associated points of discharge, and direction of flow, including any Structural Control measures that affect Stormwater discharges, authorized Non-Stormwater Discharges, and runoff.

Definitions

Stormwater

Water that originates during precipitation events, snowmelt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

Stormwater Management Plan

A document that identifies structural and non-structural controls that will be put in place to minimize negative effects to the environment caused by offsite Stormwater discharges.

Industrial Activities

Areas that include storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage / maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust- or particulate-generating areas, and cleaning and rinsing areas.

Pollutant Constituents

Pollutants associated with Industrial Activities such as oil, metals, solvents, acids, and alkalis.

Non-Stormwater Discharge

Flows that do not consist entirely of Stormwater, such as surface runoff at the facility that can be potentially contaminated with pollutants from Industrial Activities.

Unauthorized Non-Stormwater Discharge

Includes waters from rinsing or washing vehicles, equipment, buildings, or pavement; materials that have been improperly disposed of or dumped; and spilled or leaked materials.

Bodies of Water

Includes rivers, lakes, and ponds.

Authorized Non-Stormwater Discharge

Non-Stormwater Discharges that are allowed if they meet certain conditions in some jurisdictions.

- Outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, and other roofed structures.
- Locations where materials are exposed to precipitation and locations where significant spills or leaks have occurred.
- Locations of areas of Industrial Activities that are potential pollutant sources.

4. Control of Stormwater Discharge

Supplier shall select effective **Structural controls** or **Non-structural Controls** to prevent Stormwater pollution.

Supplier shall conduct surveys at least annually to identify any direct connections from industrial production areas into a Stormwater drainage system. Supplier shall conduct the survey after any Alteration likely to affect the connections. If there are such connections, Supplier shall remove them immediately.

Supplier shall manage wastes generated from Stormwater control systems in accordance with all applicable regulations.

5. Evaluation and Monitoring of Stormwater Discharge

Supplier shall conduct periodic monitoring of its Stormwater discharges per applicable regulations. Supplier shall monitor Stormwater discharges to evaluate the effectiveness of control measures at the facility to minimize or eliminate pollutants from Stormwater runoff.

5.1. Assessments of Discharges

Supplier shall take a grab sample of Stormwater discharge while it is raining and visually assess key indicators of Stormwater pollution: color, odor, clarity, floating solids, foam, oil sheen, etc. The findings of these assessments shall lead to further facility inspections and corrective actions to modify any problems with control measures for Stormwater discharges.

5.2. Indicator Sampling

Supplier shall collect Stormwater discharge samples from a facility's discharge points for laboratory analyses. The sampling frequency shall be based on the potential risk level for Stormwater contamination and no less than once every six months. Chemical parameters for laboratory analyses shall be dependent on the types of pollutant sources identified as per Identification of Pollutant Sources and include at a minimum pH, chemical oxygen demand, color, and oil, and grease.

Results shall be compared with the receiving water body's allowable pollutant concentration limit. If local requirements are not available for a pollutant, the thresholds specified in the table Apple Wastewater Discharge Quality Standards (located in the Wastewater Management Standard) shall be used. If concentration exceeds limits, than Stormwater pollution control measures shall be evaluated and fixed.

5.3. Compliance Sampling

If Supplier is governed by local and/or national discharge limitation guidelines sampling shall be required to determine compliance with those limits. If effluent limits are exceeded, the Supplier shall conduct corrective actions and additional sampling to show compliance.

Supplier shall conduct one comprehensive annual evaluation of its Stormwater control measures that includes the following:

- Visual observations and inspection of sampling/analytical data.
- A summary of inspections specified in the Stormwater Management Plan.
- Incident reports and corrective action tracking results.

6. Emergency Response

Supplier shall ensure that there is at least one employee responsible for coordinating all facility Stormwater-related emergency response and reporting activities.

Definitions

Structural Controls

Structural devices (such as catch basins, berms, ponds, secondary containment, and oil/water separators) used to reduce or prevent pollutants from entering Stormwater runoff.

Non-structural Controls

Processes, prohibitions, procedures, and operating schedules that prevent industrial pollutants from contacting Stormwater and Authorized Non-Stormwater Discharges. These are low-tech, cost-effective measures.

Supplier shall have a system in place that can immediately close a Stormwater drain outlet discharging outside the facility boundary if there is a hazardous substance spill released to the Stormwater drainage system.

Supplier shall have the necessary plans and procedures to notify internal management and local regulatory agencies and take immediate steps to fix a hazardous substance spill that has reached outside the facility boundary.

Supplier shall conduct an analysis to determine the cause of the emergency release incident and implement corrective actions.

7. Operations and Maintenance

Supplier shall create, implement, and maintain a written Stormwater Management Plan to support prevention of Stormwater-runoff pollution.

Supplier shall revise the Stormwater Management Plan as appropriate, and implement it prior to any changes in Industrial Activities at the facility that do any of the following:

- Significantly increase the quantities of pollutants in Stormwater discharge.
- Cause new areas of industrial activity to be exposed to Stormwater.
- Begin an industrial activity that would introduce a new pollutant source at the facility.

8. Communication and Training

Supplier shall provide adequate Stormwater management training for all workers whose work may affect the quality of Stormwater as per applicable regulations.

9. Documentation

Supplier shall retain the following Stormwater management-related documentation:

- Current copies of Stormwater control and/or treatment system drawings.
- Copies of employee training records for the previous 5 years or as per Applicable Laws and Regulations, whichever is longer.
- Records of internal incident investigation, management/regulatory notifications, and follow-up actions/closure for the previous 5 years.

All documentation shall be made available to Apple for review upon its request.



Supplier Responsibility Standard

Air Emissions Management

Supplier Code of Conduct Requirements

Supplier shall identify, manage, reduce, and responsibly control Air Emissions emanating from its operations that pose a hazard to the environment. Supplier shall conduct routine monitoring of the performance of its Air Emission control systems.

Supplier shall regularly quantify, set targets, and reduce its emissions of greenhouse gasses through process modification, conservation, use of **Clean Energy**, or other measures.

Supplier Responsibility Standards

1. Regulatory Permits

Supplier shall have all required environmental approvals and permits for its current operations.

Supplier shall plan and provide adequate time to update current environmental approvals and permits for any **Alteration** that may change the environmental impact of Supplier's operations.

2. Directly Responsible Individual(s)

Supplier shall identify a specific individual or individuals within each facility who will be responsible for all aspects of air-emissions management, including maintenance and inspection of Air Emissions-control devices, monitoring and reduction of Air Emissions, and emergency response.

3. Identification of Air Emission Sources

Supplier shall identify Air Emissions sources, including those from industrial activities, auxiliary devices, and Dormitory and canteen areas. Examples of processes that contribute to Air Emissions and corresponding air pollutants are identified in the table Examples of Typical Processes and Air Pollutants.

Air Emissions: Any regulated polluting substance introduced directly or indirectly into the ambient air by the Supplier's facility and likely to have harmful effects on human health and/or the environment as a whole. Air Emissions include but are not limited to **Volatile Organic Compounds**, nitrogen oxides (NO_x), sulfur oxides (SO_x), carbon monoxide (CO), **Suspended Particulate Matter**, and **Greenhouse Gas**. These pollutants can damage property and vegetation, and cause serious health problems in humans and animals. In addition, air pollutants include toxic air contaminants, such as acids, hexavalent chromium, and ammonia, which have direct and indirect effects on human health. Toxic air contaminants can lead to cancer and other chronic and acute ailments.

Definitions

Clean Energy

Clean energy resources are renewable energy solutions with the highest environmental benefits. These solutions include solar, wind, geothermal, low-impact hydro, and some forms of biogas and biomass. Impound hydro, trash/household waste, and nuclear are not considered to be clean energy due to significant environmental risks.

Alteration

Any change to a production or other process, management of waste, volume of waste, or the addition of other chemical substances.

Volatile Organic Compounds (VOCs)

Any volatile compound of carbon, excluding the following: methane, carbon monoxide, and carbon dioxide, carbonic acids, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions.

Suspended Particulate Matter (PM)

Small particles of solid or liquid matter suspended in a gas or liquid, which may adversely affect human health and the environment.

Greenhouse Gas (GHG)

Includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases (sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

Examples of Typical Processes and Air Pollutants	
Processes	Air Pollutants
Cutting/drilling	Dust/particulates
Surface treatment	Acid/alkaline fog and Hazardous Air Pollutants
Etching	Ammonia, acid fog, and hazardous air pollutants
Electroplating/anodizing	Acid fog, particulates, and hazardous air pollutants
HVAC and refrigeration systems	GHGs
Welding/grinding/polishing	Dust, particulates, and fumes
Painting and coating	VOCs, acid mists, aerosols, and particulates
Boiler/generator operations	Sulfur dioxide, nitrous oxide, and particulate matter/ dust, carbon monoxide, and GHG (CO ₂)
Incinerating/burning	Sulfur dioxide, nitrous oxide, particulate matter/dust, dioxins and other hazardous air pollutants, carbon monoxide, and GHG (CO ₂)

Definitions

Hazardous Air Pollutants (HAPs)

Pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Examples include dioxin and toluene, and metals such as cadmium, mercury, chromium, and lead compounds. Also known as toxic air pollutants.

Supplier shall develop and maintain an Air Emissions source inventory.

- The inventory shall include the composition and Mass Rate of emissions for each Air Emissions source.
- The GHG emission inventory shall include Scope 1 Emissions and Scope 2 Emissions following the Greenhouse Gas Protocol accounting standards or standards per Applicable Laws and Regulations.
- Supplier shall revise the inventory after any changes to the production or process that are likely to affect Air Emissions.
- Supplier shall review the inventory annually.
- Supplier shall maintain the inventory in electronic form and make it available for review by Apple upon its request.

4. Control of Regulated Air Emissions

Supplier shall report and/or register Air Emissions sources in accordance with Applicable Laws and Regulations.

Supplier shall install and maintain appropriate Air Emissions–control devices for Regulated Air Emissions, and all control plans must be approved or accepted by all applicable regulatory agencies. Examples of processes and relevant Air Emissions– control devices are identified in the table Examples of Typical Processes and Air Emissions Control Devices.

Examples of Typical Processes and Air Emissions Control Devices	
Processes	Air Emissions Control Devices
Cutting/drilling/polishing	Cyclone/baghouse dust collector (Not applicable for combustible dusts. For combustible dust, refer to Apple's Combustible Dust Standard.)
Surface treatment	Wet scrubber (alkaline/acid solution)
Etching	Wet scrubber (alkaline/acid solution)
Electroplating	Wet scrubber (alkaline solution)
Painting and coating	Wet scrubber (alkaline solution) and/or activated carbon filter
Boiler/generator operations	Wet scrubber (alkaline solution)

Supplier shall report air-emissions discharge points to each applicable regulatory agency. The air-emissions discharge points shall also be reported to Apple for audit purposes and updated once a year to reflect any changes in discharge points during the previous year.

Supplier shall handle, store, and dispose of residues and/or wastes generated from Air Emissions-control devices in accordance with Applicable Laws and Regulations and as per the Apple Hazardous Waste Management Standard.

5. Evaluation and Monitoring of Air Emissions

Supplier shall develop a program to quantify and monitor the composition of Air Emissions including calculating the mass rate for each source identified in the Air Emissions inventory.

Supplier shall perform annual analytical testing of Air Emissions to ensure compliance with applicable regulatory requirements and this Standard.

Air Emissions samples shall be collected under typical operating conditions and tested for parameters identified as potential air pollutants.

Air Emissions shall be controlled below any regulated emission levels.

Supplier shall submit Air Emissions monitoring reports as required by each applicable regulatory agency and shall obtain all required permits to maintain regulatory compliance. In addition, the monitoring reports shall be maintained in electronic form and made available to Apple for review upon its request.

6. Emissions Reduction Targets and Monitoring Progress

Supplier shall annually review its emission inventory and set targets to reduce emissions through process modification, conservation, clean energy, or other measures. Supplier shall set targets for absolute reduction, intensity-based reduction, or both.

Supplier shall monitor progress of meeting the emission reduction targets and document the results of the reduction measures. Supplier shall maintain reports of the emission reduction measures.

Supplier shall submit the emission inventory, reduction targets and results, with supporting documentation, in electronic form to Apple for review annually and upon its request.

7. Emergency Response

Supplier shall implement emergency preparedness and response actions in the event of any Air Emissions-control system malfunctions, failures, maintenance, and/or modifications, as follows:

- For hazardous air pollutants (HAPs), **Process Equipment** vented to the Air Emissions–control system shall suspend operations immediately to prevent uncontrolled Air Emissions from escaping into the atmosphere. Supplier shall install and maintain an automatic shutdown system in which any HAP-emitting operations are ceased when the flow from these operations is diverted away from the Air Emissions–control system—for example, to a bypass line—regardless of circumstances or whether the Air Emissions–control system is shut down or fails.
- For non-hazardous air pollutants, Process Equipment vented to the Air Emissions control system shall suspend operations within 72 hours if no corrective action has been taken to prevent uncontrolled Air Emissions from escaping into the atmosphere, unless suspension is required sooner by applicable regulations.

Upon receipt of any community complaints, Supplier shall conduct Air Emissions monitoring to verify the air-emissions status and implement corrective actions, if any, in a timely manner.

Upon receipt of any **Notice of Violation** from the authorities, Supplier shall communicate with the appropriate regulatory agencies and/or the authorities in a timely manner to inform all relevant parties about the violations, and promptly take corrective actions or as otherwise instructed by the authorities.

Supplier shall notify Apple within 7 days and notify all appropriate regulatory and other agencies as required by applicable regulations if an **Unusual Environmental Event** occurs. In both cases (hazardous or non-hazardous Air Emissions), Supplier shall identify the probable cause of the Unusual Environmental Event and any corrective or preventive actions that were taken.

8. Operations and Maintenance

Supplier’s pollution-control technologies shall be operational prior to Supplier generating any pollutants.

Supplier shall plan and provide adequate time to implement changes and obtain approvals for any Alteration that may change Air Emissions sources, composition of Air Emissions, Mass Rate, Air Emissions–control technology, or Air Emissions monitoring requirements.

Supplier shall develop operating and preventive maintenance programs for all Air Emissions–generating equipment, Air Emissions–control devices, and Air Emissions monitoring equipment. The programs shall include the following:

- Clearly defined and documented worker responsibilities and training requirements for the operation, inspection, and maintenance of the Air Emissions–control systems.
- Standard operating procedures for preventive maintenance that incorporate the relevant manufacturers’ specifications, recommendations, and standard accepted practices.
- Identified and documented key parameters for monitoring effectiveness of the Air Emissions–control system and determining the frequency of routine inspections based on regulatory and/or permit requirements, preventive maintenance requirements, and other factors to ensure that the equipment is maintained in good working order. The inspection plan shall cover all shifts during typical facility operations.
- Documented operating procedures for shutting down Air Emissions–control systems. Before any air-emissions-control system is shut down for any planned reason—for example, maintenance breakdown—Process Equipment vented to the Air Emissions–control system shall be suspended and put into a state that prevents Air Emissions from being released. Associated Process Equipment may resume operations only when the Air Emissions control system is operating properly.

Supplier shall conduct periodic inspection of Air Emissions–control devices to identify and fix any operational deficiencies. A log of inspection and maintenance issues identified and fixed shall be maintained.

Definitions

Process Equipment

The machines or equipment that use or generate the pollutant substance linked to the air emissions–control systems.

Notice of Violation

A written method of alleging: 1) a violation that does not qualify as a minor violation for which a “Notice to Comply” is the only allowable means of citation, or 2) minor violation that is not corrected within the time required.

Unusual Environmental Event(s)

Include but are not limited to process equipment upsets (for example, increased load), natural disasters, emission control–system breakdowns, accidents, and power failures. These events lead to failed emission–control systems and emissions of air pollutants in excess of permitted limits.

9. Training and Communication

Supplier shall provide training per local and national requirements for the workers involved in the maintenance and inspection of the related Air Emissions–control systems. Workers shall receive the following training in addition to all other required training or instruction:

- Identification and understanding of Air Emissions source locations, exhaust stacks, and applicable Air Emissions–control technology.
- Appropriate response procedures in case of ventilation or failure of Air Emissions–control system.
- Specific operating requirements and protocol training for maintenance of Air Emissions–control devices deployed at the facility.

10. Documentation

Supplier shall retain written copies of Air Emissions data and documentation for the previous 5 years or as per local regulatory requirements, whichever is longer. All Air Emissions records and documentation shall be made available to Apple for review upon its request. Required documents to be retained include but are not limited to:

- Air Emissions source inventories
- Air Emissions source testing and monitoring results
- Licenses, permits, and other regulatory registration documents
- Expansion, renovation, or new Air Emissions–control device records, permits or regulatory correspondence
- Written records of Air Emissions–related communications with external parties, including but not limited to community groups, regulatory agencies, and local authorities
- All inspection and maintenance records
- Reports of Unusual Environmental Events, and responsive corrective actions taken
- Records of any corrective actions, rectifications, or follow-up actions taken for any deficiencies, complaints, notices of violations, etc.

Supplier shall retain training records for the previous 5 years for personnel assigned to the operation, inspection, and maintenance of the Air Emissions control systems or as per applicable regulations, whichever is longer.



Boundary Noise Management

Supplier Code of Conduct Requirements

Supplier shall identify, control, monitor, and reduce noise generated by the facility that affects Boundary Noise levels.

Supplier Responsibility Standards

1. Identification of Boundary Noise

Supplier shall use qualified personnel or an external organization to monitor **Boundary Noise** to verify compliance with all applicable regulations. The Third-Party consultant shall use approved, calibrated sound-level meters as per applicable regulations to monitor for Boundary Noise and shall prepare a Boundary Noise report.

Supplier shall use the Boundary Noise report to identify operations that contribute to Boundary Noise, and develop an inventory of such operations and/or equipment. This inventory shall include information such as ranges of noise produced under normal operating conditions and prevention and control technologies to reduce Boundary Noise levels as per applicable regulations.

Supplier shall update the inventory if there are any changes to production, equipment, or operating schedules that are likely to affect Boundary Noise levels.

2. Control of Boundary Noise Levels

Supplier shall install and maintain appropriate boundary-noise-control devices to control Boundary Noise levels per applicable regulations. For installation and monitoring, Boundary Noise control methodology shall be designed by a qualified person to achieve Boundary Noise levels as per applicable regulations.

Supplier shall monitor Boundary Noise for changes to the **Receiving Land Use Category** and comply with applicable regulations.

3. Evaluation and Monitoring

Supplier shall evaluate Boundary Noise levels on an annual basis, upon changes to Receiving Land Use Category in the neighborhood of the facility, or if there are any community noise complaints. The evaluation shall cover the following:

- Monitoring applicable regulatory standard(s) for changes.
- Periodic inspections of Boundary Noise sources, including their location, installation, operation rules, control measures, and maintenance logs.
- Supplier shall meet the applicable local standard for Boundary Noise. In the absence of a local standard, Boundary Noise-level criteria in the table below should be followed.

Definitions

Boundary Noise

The noise levels generated by stationary industrial or construction equipment measured along the boundaries of an industrial enterprise.

Receiving Land Use Category

Defined area or region of a generally consistent land use where the ambient noise levels are generally similar.

Boundary Noise Level at Facility Boundary			
Receiving Land Use Category	Day Time Level (L ₅₀) (6am–10pm)	Night Time Level (L ₅₀) (10pm–6am)	Night Time Level (L _{MAX})
Noise-sensitive areas, low-density residential areas, institutional areas, school, hospital, and worship areas	50 dBA	40 dBA	55 dBA
Suburban medium-density residential areas, public spaces, parks, and recreational areas	55 dBA	45 dBA	60 dBA
Urban high-density residential areas and designated mixed residential-commercial	60 dBA	50 dBA	65 dBA
Commercial zones	65 dBA	55 dBA	70 dBA
Industrial zones	70 dBA	60 dBA	75 dBA

4. Operation and Maintenance

Supplier shall develop and maintain a plan to manage Boundary Noise that includes source identification, evaluation, and monitoring of Boundary Noise, and control as per applicable regulations.

Supplier shall perform corrective and preventive actions to address Boundary Noise permit noncompliance in a timely manner or as specified by local authorities including, but not limited to, installation of Boundary Noise-control devices and/or modification of the facility operating schedules for noise-generating equipment.

5. Training and Communication

Supplier shall provide appropriate training for the employees involved in maintaining and inspecting Boundary Noise-control devices.

6. Documentation

Supplier shall retain current copies of necessary Boundary Noise permits or licenses.

Supplier shall retain written copies of documents and records associated with Boundary Noise levels, including Boundary Noise reports for at least 5 years, and maintain these copies for the period when the equipment is in operation.

Supplier shall maintain records of deviations from the applicable regulations or permits/licenses, and corrective actions taken to address deficiencies or noncompliance.

Supplier shall retain any documentation related to preventive maintenance completed on Boundary Noise-control equipment.

All Boundary Noise reports and documentation shall be made available to Apple for review upon its request.



Resource Consumption Management

Supplier Code of Conduct Requirements

Supplier shall regularly quantify, set targets, monitor progress, and reduce consumption of fossil fuel, water, hazardous substances, and natural resources through conservation, re-use, recycling, substitution, or other measures.

Supplier Responsibility Standards

1. Directly Responsible Individual(s)

Supplier shall identify a specific individual or individuals within each facility who will be responsible for all aspects of resource consumption management, including purchasing and implementation of conservation programs.

2. Identification of Fossil Fuel, Water, Hazardous Substances, and Other Natural Resources

Supplier shall identify **Fossil Fuel** (direct and indirect), water, **Hazardous Substances**, and other natural resources consumed and track resource consumption on at least a monthly basis.

Definitions

Fossil Fuel

Fuel formed by natural processes containing energy from fossilized organisms. Examples of fossil fuels include coal, petroleum, and natural gas. Fuels derived from fossil fuels, such as gasoline and propane, are also considered to be fossil fuels.

Hazardous Substance

Substance that poses a direct threat to human or animal health or the environment.

Examples of Resources Consumed	
Resources	Typical Uses
Fuels (e.g., coal, natural gas, propane, butane, diesel, gasoline, and biofuels)	On-site generation of electricity, heat, and steam; Supplier owned and operated vehicles
Purchased electricity, heat and steam	Lighting, electric motors, pumps and fans, heating and cooling systems
Water	Process heating and cooling, cleaning, and domestic consumption
Hazardous substances	Ingredients used in the processing of goods, and ingredients in finished goods
Virgin forest products (e.g., paper and wood)	Ingredients in finished goods, packaging, and office supplies

3. Consumption Reduction Targets and Monitoring Progress

Supplier shall annually review its consumption of fossil fuel, water, hazardous substances and natural resources and set targets to reduce consumption through conservation, or other measures. Supplier shall set targets for absolute reduction, normalized reduction, or both.

Supplier shall monitor progress in meeting its consumption reduction targets.

4. Minimum Efficiency Standards

Supplier shall comply with local government's minimum efficiency standards for appliances and equipment. Examples include minimum energy performance ratings or labeling for lighting, air conditioners, electric motors, water chillers, boilers, and air compressors.

Supplier shall comply with local government's mandated energy and water consumption and conservation policies and regulations.

5. Documentation

Supplier shall retain written copies of natural resource consumption data and documentation for the previous 5 years or as per Applicable Laws and Regulations, whichever is longer. All records and documentation shall be made available to Apple for review upon its request.

Required documents to be retained include but are not limited to:

- Monthly utility bills and annual summaries
- Purchase records
- Descriptions and results of conservation projects
- Applicable licenses, permits, and other regulatory registration documents



Supplier Responsibility Standard

Management Systems

Supplier Code of Conduct Requirements

Supplier shall implement or maintain, as applicable, management systems that facilitate compliance with this Code and the law, identify and mitigate related operational risks, and facilitate continuous improvement.

Supplier Responsibility Standards

1. Company Statement

Supplier shall develop a company statement affirming its commitment to high standards of social and environmental responsibility, ethical conduct, and continuous improvement. Supplier shall post this statement in the primary local language at all of its facilities.

2. Supplier Responsibility Leadership

2.1. Directly Responsible Individual

At each Supplier site, Supplier shall assign a full-time employee to be the responsible individual to oversee and enforce implementation of social, health and safety, and environmental responsibility at the site.

This individual shall:

- Report directly to the site General Manager or equivalent and directly link to a corporate social or environmental responsibility function (e.g., Human Resources, Health and Safety, Environment and Systems, etc.)
- Be responsible for the overall management of site performance for labor and human rights, health and safety, and the environment.
- Understand and implement the requirements from **Applicable Laws and Regulations** and the Code and Standards.
- Have the authority and resources to lead the social and environmental improvements and take corrective actions.
- Be supported by a cross-functional team (e.g., Operations, Engineering, Human Resources, Health and Safety, Environment and Systems, etc.) to ensure the implementation of social and environmental requirements as per Applicable Laws and Regulations and the Code and Standards.
- Regularly review the effectiveness of the supplier responsibility management systems and take accordant actions to improve the systems.
- Have their performance evaluated based on the enforcement of requirements as per Applicable Laws and Regulations and the Code and Standards.

2.2. Supplier Responsibility Organization

Supplier shall establish a cross-functional structure or committee as appropriate to ensure implementation of and conformance with social and environmental requirements as per Applicable Laws and Regulations and the Code and Standards.

Supplier shall assign the requirements as per Applicable Laws and Regulations and the Code and Standards to the facility functions and operations for which they apply. Each set of requirements shall be assigned to a directly responsible individual.

Definitions

Applicable Laws and Regulations

All laws, rules, regulations, and legally binding procedures, directives, and guidance applicable to the Supplier's operations and its employment and management of Workers.

Responsible individuals shall:

- Identify, assess, prioritize, and control risks related to their assigned requirements.
- Have their performance evaluated based on enforcement of the assigned requirements.

3. Regular Assessments

Supplier shall perform periodic assessment of its facilities and operations, and the facilities and operations of its subcontractors and next-tier suppliers to ensure compliance with Applicable Laws and Regulations and the Code and Standards. Assessments shall be performed at a minimum on an annual basis.

Supplier shall permit Apple and/or a third party designated by Apple to periodically evaluate Supplier's facilities and operations, and those of its subcontractors and next-tier suppliers, to the extent they are providing goods or services to Apple, for Apple's benefit, or for use in or with Apple products.

4. Corrective Action Plan

Supplier shall implement a process for timely correction of noncompliance and nonconformance identified by internal and external audits and assessments, grievance reports, employee and stakeholder feedback, incident investigations and other means.

The process shall at a minimum include:

- Determination of root cause(s) for every noncompliance/nonconformance
- Corrective actions as well as preventive actions for all similar issues and situations in the facility to ensure the same issue does not reoccur
- Creation of action plans with assigned action item owners, due dates, and means of verifying completion

5. Certifications

Any Apple-managed facilities shall obtain, maintain, and provide Apple a copy of either ISO14001 or European Union Eco-Management & Audit Scheme (EMAS) certification upon request.

6. Training and Communication

6.1. Responsible staff

Suppliers shall provide training to all staff responsible for performing regular assessment of regulatory compliance and conformance with this Standard and the Code.

6.2. Workers, Supervisors and Managers

Supplier shall effectively communicate its social and environmental company statement to all **Workers**, supervisors, and managers. In addition to complying with the Code and the Standards, this training or communication shall include, but shall not be limited to, Workers' rights and benefits and internal policies and procedures.

The training or communication shall be provided in the initial orientation process and via refresher training on an annual basis.

6.3. Next-tier Suppliers and Customers

Supplier shall have a process for communicating clear and accurate information about its performance, practices, policies, and expectations to next-tier supplier(s) and customers.

7. Documentation

Supplier shall maintain documents and records to ensure regulatory compliance.

Supplier shall retain documentation related to its social and environmental management system.

All documentation shall be made available to Apple for review upon its request.

Definitions

Worker

Any person, regardless of nationality or country of origin, who is employed directly or via a third party, to work at a Supplier's facility.



Supplier Responsibility Standard

Responsible Sourcing of Materials

Scope

This Standard applies to all Apple suppliers, their subcontractors, and all entities within their Supply Chains (each a “Supplier” and, collectively, “Suppliers”) directly or indirectly producing and/or procuring Goods for use in Apple’s products. While Apple considers compliance with this Standard to be the minimum a Supplier must do to remain in Apple’s supply chain, a Supplier should seek to go beyond the minimum and apply any relevant best practices, where possible. Apple anticipates that in the future only Suppliers exceeding minimum requirements and operating at the best practices level are likely to remain in Apple’s supply chain.

Supplier Code of Conduct Requirements

- Suppliers shall exercise due diligence on Relevant Minerals and Relevant Materials in their **Supply Chains**.
- Suppliers shall develop particular due diligence policies and management systems in order to identify applicable risks and take appropriate steps to mitigate them.
- Due diligence shall be conducted to the material processing level in order to determine whether relevant materials originate from regions with High Risks, which include areas associated with conflict, worst forms of child labor, forced labor and human trafficking, gross human rights violations such as widespread sexual violence, or other reasonably objective high risk activities, including severe health and safety risks and negative environmental impacts.

Supplier Responsibility Standards

1. Due Diligence System, Policy, and Use of Relevant Minerals and Relevant Materials

1.1. Supplier Due Diligence Management System

Suppliers shall develop an appropriate management system to conduct due diligence in accordance with the standards set out in the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (the “OECD Guidance”) and other applicable international standards, as described in this Standard (see Section 6 of this Standard). For Suppliers using Relevant Materials, see also the OECD-FAO Guidance for Responsible Agricultural Supply Chains (the “OECD-FAO Guidance”).

A due diligence management system shall include:

- Risk identification
- Risk prevention and mitigation
- Third-Party verifications or audits of Supply Chain due diligence
- A mechanism for reporting applicable risks

1.2. Supplier Policy Requirements

Suppliers shall have a due diligence policy that is consistent with OECD Guidance and/or the OECD-FAO Guidance, as applicable and this Standard. The policy shall also require

Processors in the Supplier’s Supply Chain to have corresponding due diligence policies

Definitions

Supply Chain

The chain of supply from point of origin, such as a mine for mined materials, a farm for biologically grown materials, or a point of collection for recycled materials, to Apple, which for a Supplier may include owned, operated, direct and/or indirect sourcing through a subcontractor, supplier, Processor, Mining Company or other source from which a Relevant Material may be mined, biologically grown, processed, traded, recycled, compounded, refined or manufactured into Goods used by the Supplier in Apple products.

Processors

Any entity that smelts or refines Relevant Materials or the point at which the Relevant Materials are first processed. For minerals, this would constitute processing from ore into refined metal or the re-processing of scrap or other waste into recycled or re-used content (typically a smelter, refiner, or recycler). For other materials such as Bio-materials, this would constitute processing from farmed commodity into a refined or isolated byproduct (such as a mill or tannery), a precursor or a compound. Additionally, if the Processor sources materials from a trader or exchange, the Processor should ensure that those intermediaries have policies to the primary production level, the original source of primary ore at the mining level, or the agricultural commodity at the farm level.

Processor and/or Trader

For example, processing of relevant materials, recycled materials, aggregators of relevant materials.

down to the level of the Source or Origin, which includes the level of **Mining Companies**, farms, collection points of **Recyclable Waste**, or the original source of primary ore at the mining level.

Suppliers shall ensure that their facilities and suppliers comply with the obligations and requirements of this Standard.

1.3. Supplier Policy Distribution

For **Relevant Minerals**, Suppliers shall distribute their policies to:

- All subcontractors and suppliers that produce **Goods** for use in Apple's products
- Supplier procurement personnel and factory management

For **Relevant Materials**, Suppliers shall distribute their policies to Apple. As appropriate, Apple may require a Supplier to distribute their policies further.

1.4. Use of Relevant Minerals and Relevant Materials

Suppliers shall not use Relevant Minerals or Relevant Materials in any Goods produced for use in Apple's products if a Supplier cannot reasonably demonstrate that it has a due diligence management system and has performed the required due diligence activities, as outlined below.

To the extent that a Supplier seeks only to implement a due diligence management system and perform required due diligence activities with respect to specific Apple-related supply lines, Apple may require, as appropriate, such Supplier to (i) demonstrate to Apple a reasonable comprehensive system to segregate Relevant Minerals or Relevant Materials for use in Apple's products from Relevant Materials or Relevant Materials used in other parties' products and (ii) undergo a Third-Party verification or audit of such segregation system.

In addition to the requirements pertaining to Relevant Materials, the following use restrictions apply to the use of leather in **Goods**:

- Only domesticated bovine (limited to cow, steer, bull, calf, or oxen) raised for food production may be used; leather originating from wild bovine (including but not limited to bison, water or cape buffalo) or exotic species (including but not limited to shark, crocodile, or snake), or bovine when raised only for the skin or hide (i.e., non-food sourced) are not permitted.
- No **Endangered or Threatened Species** (defined as species listed on the red list by the International Union for Conservation of Nature and Natural Resources)
- No leathers from animals raised or slaughtered in Bangladesh, Brazil, China, India or Morocco
- No inhumane treatment of animals in the production of leather, including at the farm, in transport, or at any other point in the Supply Chain

2. Risk Identification

Suppliers shall identify the High Risks in their Supply Chains by first understanding the Processors of Relevant Minerals or Relevant Materials in their Supply Chains. For Relevant Materials, High Risks shall be identified back to **Source or Origin**. As new Relevant Minerals or Relevant Materials are included in this Standard, Apple will provide timelines for a phase-in period in order for Suppliers to implement corresponding risk identification requirements regarding new Relevant Minerals or Relevant Materials. Types of High Risks are:

- Red Flag Risks -- at the mine, farm, transport, trading, or Processor level of the Supply Chain:
 - Conflict risks: Direct or indirect finance or benefit to armed groups that are perpetrators of serious human rights abuses consistent with the OECD Guidance, including in the DRC or an adjoining country.
 - OECD Annex II and human rights risks: Forced labor, human trafficking, worst forms of child labor, illegal taxation, and widespread gross human rights

Definitions

Mining Companies

Any entity that mines or manages mining operations of Relevant Minerals and produces primary ore. This includes mining companies or organizations that also aggregate and/or purchase minerals from artisanal and small scale mining ("ASM/SSM") and those ASM/SSM responsible market access programs currently in development.

Recyclable Waste

Waste which can still be collected and processed as a material input for a recycling or manufacturing process.

Relevant Minerals

Including, but not limited to:

- Cassiterite (Tin)
- Cobalt
- Columbite-tantalite (Coltan) (Tantalum)
- Gold
- Wolframite (Tungsten)
- Mica
- Any additional minerals notified to Suppliers by Apple

Goods

Any material, part, sub-component, component, or product that is to be incorporated into an Apple product.

Relevant Materials

- Recycled plastics
- Bio-based material
- Any additional materials notified to Suppliers by Apple

Endangered or Threatened Species

Species listed on the red list (iucnredlist.org) by the International Union for Conservation of Nature and Natural Resources (IUCN).

Source or Origin

The farm, mine and/or collection point of Relevant Materials or Relevant Minerals, and, in the case of primary ore, includes but is not limited to Mining Companies. For example, the collection point of Recyclable Waste in the case of recycled material; the farm in the case of Bio-based material; or the mine at which primary ore originated in the case of mined material.

abuses, including sexual violence, as well as other human rights violations. Many of the foregoing are also identified in OECD Annex II.

- Embargoed countries or **High Risk Entities** risks: Sourcing from embargoed countries (as described in the **High Risk Regions** list defined in this Standard) or from High Risk Entities.
- Other High Risks -- at the mine, farm, transport, trading, or Processor level of the Supply Chain:
 - Health and safety violations, including both community and workers.
 - Environmental impacts, including water abstraction and consumption; waste, pollution and tailings management; deforestation, such as illegal logging; encroachment on protected areas.
 - Animal welfare impacts, such as inhumane treatment of animals

These risks may be identified through activities of section 2.1 and 2.2.

2.1. Supply Chain Mapping

Suppliers shall map their Supply Chains for Relevant Minerals and Relevant Materials. This mapping shall occur at least annually, or additionally as requested by Apple, and include:

- Identification and location information with respect to all of a Supplier’s subcontractors and suppliers associated with Relevant Minerals and Relevant Materials
- Identification of the Processors of Relevant Minerals and Relevant Materials
- The country of origin of all Relevant Minerals and Relevant Materials

Suppliers shall communicate the following Supply Chain mapping requirements to their Supply Chains to ensure the following requirements are met by Processors, including their traders (if any) and sub-suppliers back to the Source or Origin in their Supply Chains:

Level of Supply Chain	Required Actions for Mapping Supply Chain
Processor (for it and its traders)	<ul style="list-style-type: none"> ● Map Supply Chain of Relevant Minerals and Relevant Materials to the Source or Origin, for example: to the Mining Company or the original source of primary ore at the mining level, to the original source of commodity at the farm level, or to the secondary material source level (such as collection points) through traders and intermediaries
Source or Origin	<ul style="list-style-type: none"> ● Map Supply Chain of Relevant Minerals and Relevant Materials to the Source or Origin, for example: to the farm for Bio-material, or collection points for recycled material, or to the specific mines for primary ore including, where applicable, artisanal mining responsible sourcing systems (e.g., point of collection approved via a responsible sourcing initiative, standard, or verification or audit program)

See Section 5.1 of this Standard for reporting requirements on required actions above.

2.2. Risk Mapping

Suppliers shall map the particular risks in their Supply Chains annually, regardless of whether such risks are at the level of processing, trading and transporting, or mining, farming or production of Relevant Minerals or Relevant Materials; and Suppliers shall use reasonable efforts to track whether these specific risks are associated with Goods provided to Apple.

Definitions

High Risk Entities

- Entities or persons listed on the comprehensive screening list (https://build.export.gov/main/ecr/eg_main_023148) by relevant agencies of the United States government.
- Entities owned in the aggregate, directly or indirectly, 50% or more by one or more entities or persons listed on the comprehensive screening list.

High Risk Regions

- The Democratic Republic of the Congo (“DRC”) and the following “adjoining countries”: Angola, Burundi, Central African Republic, the Republic of the Congo, Rwanda, South Sudan, Tanzania, Uganda and Zambia. Embargoed countries – Cuba, Iran, North Korea, and Syria as well as the Crimea region of Ukraine – as identified by the United States Department of Treasury Office of Foreign Assets Control. This list is subject to change throughout the year and Suppliers are responsible for ensuring review of the latest available updates. <https://www.treasury.gov/resource-center/sanctions/Pages/default.aspx>
- Any country or region defined by the United States Department of State as “conflict-affected” or “high-risk”.
- Known transit hubs of material from countries or regions identified as High Risk Regions per the above.

Bio-based or Bio-material

Material for which the original primary feedstock can be regenerated within a human lifespan, such as agricultural products or byproducts derived from a farm or other means of organic production.

- Suppliers are expected to proactively and regularly consult current country risk information sources to determine whether Relevant Minerals originate from or through High Risk Regions, and whether Relevant Materials originate from High Risk Regions or from a Source or Origin of High Risk.
- Suppliers shall require, to the extent practicable, that Processors and Mining Companies complete Approved Risk Assessments to gather information on applicable risks.
- Suppliers shall, to the extent reasonably available, use multiple sources of information to determine or confirm the existence of High Risks. Sources of information may include general risk notifications and reports from governments, local or international non-governmental organizations, civil society groups, research organizations, or other Third-Party organizations.

Suppliers shall communicate the following risk mapping requirements to their Supply Chains to ensure the following requirements are met by Processors and Source or Origin (such as Mining Companies) in their Supply Chains:

Level of Supply Chain	Required Risk Mapping Actions
Processor (for it and its traders)	<ul style="list-style-type: none"> • Determine if countries of origin or transport include High Risk Regions • Determine if the Source or Origin of Relevant Minerals or Relevant Materials is a High Risk Entity • Complete Approved Risk Assessments of all owned and operated facilities/sites and all sourcing or trading relationships • Review and investigate identified and prioritized risks received from Apple and any other sources, including any alleged or confirmed High Risks, and request clarification as needed
Source or Origin	<ul style="list-style-type: none"> • Complete Approved Risk Assessments of its mining practices at the mining site level and owned and operated facilities • Review and investigate applicable risks identified by Apple and alleged or confirmed High Risks relating to its region(s) of operations, mining, and mining relationships (or farms for Bio-materials or collection points for recycled materials)

Suppliers shall also gather additional information in connection with risk mapping as may be requested by Apple. Further, Mining Companies shall also support the principles of the Extractive Industries Transparency Initiative <https://eiti.org/document/expectations-for-eiti-supporting-companies>

3. Risk Prevention, Mitigation and Resolution

As risk prevention, mitigation, and resolution systems are presently developing and maturing, Apple will provide timelines for a phase-in period in order for Suppliers to prioritize efforts to prevent, mitigate, and influence the resolution of High Risks on an ongoing basis.

3.1. Addressing Identified Risks

If a Supplier or Apple discovers alleged or actual risks associated with its Supply Chain, Supplier shall work with Apple to respond to the applicable risks by (to the extent not prohibited by applicable law):

- Requiring corresponding Supply Chain actors, including Processors, to address identified High Risks
- Utilizing grievance channels of recognized Third-Party organizations to report risks and request that appropriate action be taken to address identified High Risks (see section 6.3 of this Standard)

Suppliers shall communicate the following prevention and mitigation requirements to their Supply Chains to ensure the following requirements are met by Processors and Mining Companies in their Supply Chains:

Level of Supply Chain	Required Actions to Prevent and Mitigate Applicable Risks
Processor (for it and its traders)	<ul style="list-style-type: none">• Resolve reporting gaps in Approved Risk Assessments• Directly or indirectly request applicable Supply Chain actors take prevention, mitigation, and resolution actions
Source or Origin	<ul style="list-style-type: none">• Resolve reporting gaps in Approved Risk Assessments• Prevent or resolve High Risks pertaining to the Mining Company's or Source or Origin business; where direct action cannot be taken, an indirect or collective approach may be considered appropriate

3.2. Tracking and Reporting on Action taken to Address Identified Risks

As requested by Apple, Suppliers shall apply appropriate and reasonable leverage to ensure identified risks, and their resolutions, are tracked and publicly reported or, as agreed with Apple, otherwise communicated and addressed.

3.3. Removal of Non-Participating Supply Chain Actors

Suppliers shall cause the termination of relationships with Supply Chain actors that are:

- Unwilling to engage in necessary Supply Chain and risk mapping, resolutions of High Risks, and verifications or audits, or
- Associated with Red Flag Risks but have not taken appropriate timely action to mitigate the corresponding risk

To the extent requested, Suppliers shall work with Apple in connection with such terminations.

Suppliers shall communicate the following requirements to their Supply Chains to ensure the following requirements are met by Processors, Mining Companies, and other Source or Origin with respect to potential terminations of Supply Chain actors:

Level of Supply Chain	Required Actions on removals
Processor (for it and its traders)	<ul style="list-style-type: none"> • Notify Processors, traders and mines of potential removal of those that have demonstrated they are unwilling to conduct risk identification, mitigation, and verification or audit of overall due diligence • Remove such actors if action is not taken within a designated timeframe
Source or Origin	<ul style="list-style-type: none"> • Notify large scale mining (LSM) and Small Scale mining (ASM/SSM) and /or farm enterprises of potential removal of those that have demonstrated they are unwilling to conduct risk identification, mitigation, and verification or audit of overall due diligence • Remove such actors if action is not taken within a designated timeframe

4. Third-Party Verifications or Audits of Supply Chain Due Diligence

Suppliers shall only use or source Relevant Minerals from supply chain actors that have demonstrated progress towards, or completion of, responsible sourcing verifications or audits by recognized Third-Party organizations (see Section 6.1 of this Standard). For Relevant Materials, including recycled and Bio-materials, Suppliers seeking further information on recognized Third-Party organizations and Applicable Standards should contact Apple.

4.1. Responsible Sourcing Verifications or Audits

To the extent requested by Apple, Suppliers using and/or procuring Relevant Minerals shall have their responsible sourcing due diligence activities verified or audited by a recognized Third-Party organization.

Suppliers shall communicate the following requirements to their Supply Chains to ensure the following requirements are met by Processors and Source or Origin.

Level of Supply Chain	Required Actions on verification or audits
Processor (for it and its traders)	<ul style="list-style-type: none"> • Participate in and complete Third-Party verifications or audits of applicable risks at owned and operated facilities • Require upstream supply chain actors to verify or audit their due diligence
Source or Origin	<ul style="list-style-type: none"> • Participate and complete Third-Party verifications or audits of applicable risks of mining practices at the Source or Origin and other relevant owned and operated facilities

4.2. Demonstration of Upstream Progress towards Third-Party Verification or Audit

If Processors or Source or Origin have not completed Third-Party verifications or audits of their mining and processing sources for Relevant Minerals, such upstream supply chain actors may remain in Apple's Supply Chain so long as they demonstrate progress towards verification or audit by taking meaningful, substantive steps to follow a recognized Third-Party organization's requirements for achieving responsible sourcing. In the case of Processors and Source or Origin, the following shall apply:

Definitions

Conflict Minerals Reporting Template (CMRT)

The standardized reporting template developed by RMI that facilitates the transfer of information through the Supply Chain regarding mineral country of origin and smelters and refiners being utilized:
<http://www.responsiblemineralsinitiative.org>.

Apple Specific Supply Chain Mapping

Templates for collecting mapping information from the supply chain.

Level of Supply Chain	Required Actions for Meaningful Steps toward Third-Party Verification or Audit
Processor (for it and its traders); Source or Origin	<ul style="list-style-type: none"> • Provide clear guidance on intended improvements to risk management on the Processor and/or traders or Source or Origin’s website, to the extent such a website exists or, alternatively, to a recognized Third-Party organization, and/or to Apple • Remain actively involved in the preparation and remediation of identified verification or audit gaps • Make progress towards Third-Party verification or audit within a reasonable timeframe

4.3. Completion of Verifications or Audits

Suppliers using and/or procuring Relevant Minerals for Goods intended for Apple, shall ensure Processors and Source or Origin satisfy the following requirements and complete their verifications or audits in a timely fashion. Any exceptions must be made in writing by Apple.

Level of Supply Chain	Required Actions
Processor (for it and its traders); Source or Origin	<p>Conflict Minerals Verifications or Audits:</p> <ul style="list-style-type: none"> • Shall be fully completed periodically as determined by the recognized Third-Party organization (see Section 6.1 of this Standard) <p>Responsible Sourcing Verification or Audits Beyond Conflict Minerals:</p> <ul style="list-style-type: none"> • Where a recognized Third-Party organization or standard is in place for a Relevant Mineral, verifications shall be fully completed periodically as designated by such organization or standard (see Section 6.1 of this Standard) • Where a recognized Third-Party organization or standard may still be under development or supply chain actors are just beginning the Relevant Mineral verification or audit process, a phase-in process may be granted in Apple’s sole discretion, provided that the supply chain actors have publicly demonstrated that they are progressing towards such Relevant Mineral verification or audit

5. Reporting

For Relevant Minerals, Suppliers shall publish information pertaining to their due diligence in accordance with OECD Guidance and shall provide to Apple reasonable documentary evidence of their compliance with this Standard, including (except as otherwise agreed with Apple) making all related supporting records available to Apple upon request.

5.1. Supply Chain Mapping and Due Diligence Verification or Audit Reporting

Suppliers shall provide evidence of their Supply Chain mapping and verification or audit of identified Processors according to specific risks and Relevant Minerals:

- Conflict issues pertaining to tin, tantalum, tungsten, and gold shall be reported to Apple twice annually by completing the RMI’s **Conflict Minerals Reporting Template**

- Cobalt and other Relevant Mineral Supply Chain mapping shall be reported annually to Apple or, with Apple’s agreement, through another recognized industry reporting body. Reporting formatting shall be through a designated Apple template (if applicable) or equivalent widely-accepted industry template, such as the RMI’s **Cobalt Reporting Template** as and when available

Suppliers shall communicate to their Supply Chains the following reporting requirements (which shall be carried out in accordance with OECD Guidance including Annex II Risks) to ensure that the following requirements are met by Processors and Mining Companies in their Supply Chain.

Definitions

Cobalt Reporting Template (CRT)

The standardized reporting template developed by RMI that facilitates the transfer of information through the Supply Chain regarding Cobalt refiners being utilized:
<http://www.responsiblemineralsinitiative.org>.

Level of Supply Chain	Required Supply Chain Mapping and Due Diligence Reporting Actions
Processor (for it and its traders)	<ul style="list-style-type: none"> • Provide Supply Chain mapping information to customers or to a recognized third party to aggregate reporting across the mineral Supply Chain for downstream reporting purposes, in cases where Supply Chain information, such as country of origin or supplier identification information, is restricted due to proprietary sourcing concerns • In the case the Processor is providing secondary material, a Processor may be requested to report the percentage of recycled or scrap product it sources • Post relevant information and verification or audit status on its website and, where applicable, be listed on a recognized Third-Party website
Source or Origin	<ul style="list-style-type: none"> • Post Relevant Mineral sourcing sites and operations on its website • Post relevant verification or audit status on its website and be listed on a recognized Third-Party website

In addition to the foregoing, Processors using Relevant Minerals shall provide information arising under Sections 2.1, 4.2, and 4.3 of this Standard to customers and to Apple as well as to recognized Third-Party organizations for broader dissemination. Mining Companies shall provide such information to Processors, customers, or Third-Party organizations, as appropriate.

5.2. Risk Reporting and Notification of Red Flag Risks

Suppliers shall keep records of all risks identified, and the actions taken to follow up on such risks, for a minimum of 5 years from the date each risk is first identified and reported.

Suppliers shall immediately notify Apple in writing at duediligence@apple.com if they become aware of any Red Flag Risks associated with tin, tantalum, tungsten, gold, cobalt or other defined Relevant Minerals or Relevant Materials.

Such notification shall include reasonable tracking information to identify which Goods may contain the affected Relevant Minerals or Relevant Materials. Apple will provide additional information and procedures to the applicable Suppliers following such notification.

Suppliers shall also provide to Apple any additional information reasonably requested. This information could include gathering data to report risks identified, mitigation steps, and associated resolutions regarding Relevant Minerals or Relevant Materials.

Suppliers which use Relevant Minerals shall communicate to their Supply Chains that risk reporting shall be carried out in accordance with OECD Guidance by Processors and Mining Companies.

5.3. Changes or Exceptions Reporting

Any changes (other than insignificant ones, taking into account the situation of the particular Supplier), new information or exceptions affecting previously provided information with respect to the Supply Chain and risk mapping or identified risk reports within the regular annual reporting period shall be promptly reported to Apple.

To the extent practicable, Suppliers shall also promptly provide updated information to Apple as a Supplier, given its particular circumstances, becomes aware of significant changes to its sourcing of Relevant Minerals or Relevant Materials.

Suppliers shall promptly notify Apple of all failures to meet any reporting, sourcing, and due diligence requirements in this Standard, including any delay in providing a completed Conflict Minerals Reporting Template or other upstream reporting requirement on a timely basis.

6. Recognized Third-Party Organizations and International Standards

For purposes of this Standard, currently "recognized" Third-Party organizations, verification or audit programs, websites and other items are those recognized as such by Apple from time to time.

6.1. Upstream International Standards by Risk Area

The following charts set forth the recognized Third-Party organizations and/or standards and corresponding risk areas met by such organizations/standards for Relevant Minerals.

For Relevant Materials, including recycled and Bio-materials, Suppliers seeking further information on recognized Third-Party organizations and applicable standards should contact Apple.

To the extent appropriate, Apple may add applicable risks to the chart below from time to time. In such case Apple will notify Suppliers and provide any further action in accordance with the same.

In some cases, a Processor or Source or Origin may be using a Third-Party organization or standard that does not meet all relevant risks. In such cases, the Processor or Source or Origin should seek improvements in the Third-Party organization or standard or use a combination of relevant Third-Party organizations or standards.

For purposes of the charts below:

- The symbol "☑" means the organization or standard satisfies Apple's requirements for the corresponding risk category.
- The symbol "☐" means that the organization or standard does not satisfy Apple's requirements for the corresponding risk category.
- The "n/a" means that the organization or standard does not currently include the issue area in its scope or mandate.

Applicable Upstream Standards for Processors								
Organization/ Standard	Human Rights & Labor			Health & Safety		Environment		
	Conflict	Child Labor	Forced Labor	Occupational Health & Safety	Community Health & Safety	Water Consumption Abstraction	Tailings	Pollution
CCCMC	✓	✓	✓	✓	n/a	n/a	n/a	n/a
RMAP	✓	✓	✓	n/a	n/a	n/a	n/a	n/a
IFC Performance Standards	✓	✓	✓	✓	✓	✓	✓	✓
LBMA	✓	✓	✓	n/a	n/a	n/a	n/a	n/a
RJC Chain of Custody++	✓	✓	✓	✓	n/a	✓	✓	✓

**Applicable Upstream Standards for Large Scale Mining Companies * and/or Artisanal and Small Scale Mining ("ASM/SSM")*
(Mining and Metals Supply Chain)**

Organization/ Standard	Human Rights & Labor			Health & Safety		Environment		
	Conflict	Child Labor	Forced Labor	Occupational Health & Safety	Community Health & Safety	Water Consumption Abstraction	Tailings	Pollution
Better Sourcing**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CCCMC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a
Fairmined**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fairtrade Gold**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IFC Performance Standards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IRMA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ITSCI**	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	n/a	n/a	n/a	n/a	n/a
Mining Association of Canada (TSM)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RJC Chain of Custody**++	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
World Gold Council	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n/a	n/a	n/a	n/a	n/a
ICMM+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CRAFT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6.2. Upstream Applicable International Standards by Region and Metal

Applicable Upstream Standards by Region and Material					
Organization/ Standard	Cobalt	Tin	Tantalum	Tungsten	Gold
Better Sourcing**	Mining Company— DRC & Rwanda only	Mining Company— DRC & Rwanda only	Mining Company— DRC & Rwanda only	Mining Company— DRC & Rwanda only	Mining Company— DRC & Rwanda only
CCCMC	Material Processor & Mining Company— China Owned Companies	n/a	n/a	n/a	n/a
Fairmined**	n/a	n/a	n/a	n/a	Mining ASMO & Artisanal and Small Scale mining (ASM/SSM)
Fairtrade Gold**	n/a	n/a	n/a	n/a	Mining ASMO & ASM/SSM
IFC Performance Standards	Material Processor & Mining Company	Material Processor & Mining Company	Material Processor & Mining Company	Material Processor & Mining Company	Material Processor & Mining Company
IRMA	Mining Company	Mining Company	Mining Company	Mining Company	Mining Company
ITSCi	n/a	Mining Company and ASM/SSM* — DRC and Adjoining Countries Only	Mining Company and ASM/SSM* — DRC and Adjoining Countries Only	Mining Company and ASM/SSM*— DRC and Adjoining Countries Only	n/a
LBMA	n/a	n/a	n/a	n/a	Material Processor
Mining Association of Canada (TSM)	Mining Company	Mining Company	Mining Company	Mining Company	Mining Company
RJC Chain of Custody++	n/a	n/a	n/a	n/a	Mining Company & Material Processor
World Gold Council	n/a	n/a	n/a	n/a	Mining Company
ICMM+	Mining Company	Mining Company	Mining Company	Mining Company	Mining Company

+ Mining companies conforming with this standard should contact Apple to confirm present compliance status.

*Standards are being updated; updated versions that satisfy Apple's requirements will go into effect in 2020.

**Several programs have or are establishing ASM/SSM entry standards to feed into these upstream standards that have traditionally been focused on large scale Mining Companies. Apple will consider ASM/SSM Relevant Minerals if channeled through an ASM/SSM pilot due diligence mechanism or responsible sourcing initiative, standard, or verification or audit program.

++ Standard(s) no longer meets Apple's requirements is being phased out

6.3. Recognized Third-Party Programs with Grievance Channels

Several, but not all, Third-Party verification or audit programs have developed grievance channels, including first or second-party channels to address alleged or confirmed High Risks with Suppliers, traders, or mines or due diligence or whistleblowing platforms (as available) established to report on and address identified risks.

Examples include:

- ITRI's Tin Supply Chain initiative:
<https://www.itri.co.uk/information/itsci/membership-information/itsci-whistleblowing-policy-and-procedure>
- The London Bullion Market Association: mail@lbma.org.uk
- The Responsible Jewellery Council++:
<http://www.responsiblejewellery.com/contact-us/rjc-complaints-mechanism/>
- The Responsible Minerals Assurance Process:
<http://www.responsiblemineralsinitiative.org/responsible-minerals-assurance-process/grievance-mechanism>

For more information about Apple's Supplier Responsibility program, visit <http://www.apple.com/supplier-responsibility>

These Standards draw from industry and internationally accepted principles such as the Responsible Business Alliance (RBA) formerly known as the Electronic Industry Code of Conduct (EICC), Ethical Trading Initiative, International Labor Organization's (ILO) International Labor Standards, United Nations Guiding Principles on Business and Human Rights, Social Accountability International, SA 8000, the ILO's Code of Practice in Safety and Health, National Fire Protection Association, Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, and OHSAS 18001.

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