



NEW ZEALAND ALUMINIUM SMELTERS LIMITED

SUPPLIER HEALTH, SAFETY AND ENVIRONMENT (HS&E) STANDARDS - 2008

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NZAS Supplier Health, Safety, and Environment (HS&E) Standards – 2005

i Introduction to NZAS Preferred Suppliers and Potential Suppliers

As a supplier (or potential supplier) of goods and/or services to NZAS and its employees, your work is important to us. So too is the Health and Safety of you, your employees and subcontractors, our employees, and our community. We also seek to protect the environment from any long-term harm.

The purpose of this document is to describe requirements for supplier management of Health, Safety and Environment (HS&E) issues for the duration of contracted works onsite. We expect that, as a good corporate citizen, you apply equivalent standards throughout all of your business. Our Health, Safety and Environment (HS&E) policy was originally adopted in June 2001, and a current copy is available to your company upon request. Our HS&E management systems support this policy. We have a defined process for management of contracted work and a summary description can be obtained from the NZAS Services Analyst or Company Representative.

ii Your Commitments and Our Expectations:

A NOSA 3 Star Health and Safety (H&S) Accreditation

You commit to actively managing Health and Safety (H&S) matters. We expect safe behaviour from your employees and subcontractors. ("If its not safe, don't do it that way!") You must have or be working towards (on an agreed timetable) an externally accredited NOSA (National Occupational Safety Association – South Africa) "Three Star" or approved equivalent health and safety management system. Any proposed equivalent H&S management system must adequately cover all elements relative to your work, contained within the NOSA SafeWork system, and the DuPont Safety Management Systems that are used by us.

B Health, Safety and Environment (HS&E) Plan

We require you to provide us with the latest copy of your Health, Safety and Environment Plan before you start any work at the NZAS site. This may require an addendum for HS&E issues unique to our site. Such detail must be provided to us within three weeks of contract award and before access to site will be approved. Your performance against your HS&E plan is subject to audit by you and us jointly.

Your HS&E Plan must focus primarily on incident prevention. It must adequately cover and be compatible with our processes for (but not limited to):

- (1) Leadership and Supervision
- (2) Alcohol and Other Drugs Policy
- (3) Induction, Orientation and Training
- (4) Job Safety Analysis and Hazard Evaluation Studies
- (5) Task Observation
- (6) Communications
- (7) Incident Reporting and Investigation

C Environmental Management

You commit to control impacts to the environment from your activities. We have an Environmental Management System for our business, which applies to you in the work undertaken for us. You must advise us of any potential environmental impacts from your activities, and your approach to avoiding, remedying or mitigating those impacts, before you start work. These details must be included in your HS&E Plan.

D Qualification

If you are not already one of our "Accredited Contractors" then we will go through a qualification process with you – either to qualify you as an "Accredited Contractor", or to accept you to complete work on a single project basis. This will include a review of your HS&E Plan and your adherence to this plan, your historical reportable incident data, your facilities, and other areas of your business such as quality management, leadership, administration and finance.

A joint review of your performance will be conducted at contract completion. This review will determine whether "Accredited" status is maintained.

E Communication

We expect from you and commit to you, effective, clear and honest communication on any matter affecting your performance in this contract, including HS&E matters. Your communication methods must be included in your HS&E Plan.

F Skills and Knowledge

You commit that your employees and sub-contractors have the skills and knowledge required for the work. Their skills and knowledge must cover:

- (1) All relevant legislative requirements, and
- (2) Your HS&E Plan, (for example back injury prevention skills), and
- (3) Relevant work or trade skills – including certification/licensing where this is required by local legislation and/or by us, and

(4) Other specific skills or knowledge required by the scope of work, including understanding of relevant standards.

You must keep records of all training and certified competencies and make these records available to us upon request.

G Site Access Requirements

We require that all of your employees and sub-contractors working on our premises:

- (1) Do not bring to site any firearms, knives with blades exceeding four (4) inches (100 millimetres) in length (site standard pocket knives excepted), or any object commonly understood to have its primary design, use or purpose as a weapon,
- (2) Pass a health/medical test as specified by us, and
- (3) Pass an Alcohol and Other Drugs screening test and be subject to our ongoing random or "with cause" alcohol and other drug testing, and
- (4) Participate in site, plant area and project specific inductions, and
- (5) Comply with all of our HS&E requirements.

We also require that all equipment brought onto site meets all legislative and company requirements.

All materials brought to site must be first approved by the NZAS Specialist Safety & Loss Prevention (or designee). You must provide a Material Safety Data Sheet (MSDS) in seeking this approval. NZAS may restrict (and in some cases ban) entry of certain items to the site. A list of restricted or banned items is available from the NZAS Services Analyst or Company Representative.

H Safe, Professional Conduct

We expect that your personnel working at the Site will conduct themselves in a professional, respectful, and courteous manner at all times.

We do not condone threatening, intimidating, abusive, or injurious behaviour from anyone engaged in business at the Site, at any time, or for any reason. Such behaviour includes, but is not limited to, verbal or written threats, misuse of or wilful damage to Company property, acts of vandalism, fisticuffs, horseplay, or coarse jesting.

Unless previously agreed-to in writing by the NZAS General Manager, firearms of any type, knives having a blade length exceeding four (4) inches (100 millimetres) in length (site standard pocket knives excepted), or any other object having its primary design, purpose or use as a weapon, are banned from the Site.

I Legislative Acts, Requirements, and/or Standards

Where Legislative Acts, Requirements, and/or Standards are referenced in this HSE Standards document, available sources of this information are referred to in the Footnotes. All information contained herein, including information regarding Legislative Acts, Requirements, and/or Standards, is considered correct as of the revision date cited in the footer of this Document. It is your responsibility to ensure that you and your employees and/or subcontractors are working to the most recent revision or amendment of the cited Legislative Acts, Requirements, and/or Standards, at the time the work is performed for NZAS.

J Company Representative

We have appointed a Representative to assist you in interfacing with our site operational activities and to monitor and audit your work. Your personnel must follow all directions provided by the Company's Representative. In addition, all of our employees are required and authorised to stop any activities that they judge to be unsafe. Notification to you and/or the company's Representative is a requirement of such action by one of our employees.

K Penalties for Non-Compliance with NZAS Health, Safety, and Environment (HS&E) Policy

It is imperative that you and your employees comply with the NZAS HS&E policy while visiting or performing works at the NZAS site. Where it can be ascertained or reasonably inferred that any supplier employee and/or authorised representative is acting (or failing to act) in direct material breach of NZAS HSE policy while visiting or working onsite, NZAS reserves the right to act immediately to protect the safety of its employees and visitors to site, including, but not limited to, the following actions:

- (1) Remove the responsible individual(s) from site
- (2) Terminate the specific work contract(s) for the affected supplier(s) and sub-contractor(s)
- (3) Place the affected supplier(s) on a debarment list until supplier's compliance with NZAS HS&E policies can be successfully determined.

Contract termination and/or debarment in such instance shall be at the sole discretion of the NZAS General Manager. In such case, the Contractor may be debarred from soliciting business from NZAS, or performing work for NZAS, for at least one year from the date of incident.

L If In Doubt, Ask!!!!

You and your employees and sub-contractors must seek clarity in any matter, especially HS&E issues before acting if there is any doubt. You must discuss such issues with our Contract Representative and reach agreement on any action required.

NZAS HS&E POLICY REQUIREMENTS

1 HS&E Policy

- 1.1 SUPPLIER shall submit to NZAS a written Health, Safety, & Environment (HS&E) Plan, for review and acceptance within three (3) weeks after contract award and/or prior to commencing work at the site (whichever comes first).
- 1.2 This HS&E plan shall be amended as operations or conditions require and such amendments shall be submitted to NZAS for review and acceptance.
- 1.3 SUPPLIER shall flow all Project HS&E requirements to lower tier suppliers: viz subcontractors, visitors, suppliers, and subcontractors of every tier.
- 1.4 SUPPLIER, manager and supervisor's behaviour shall demonstrate that cost, schedule, and quality concerns do not prevail over Project HS&E requirements.
- 1.5 SUPPLIER's managers, and supervisors shall demonstrate positive reinforcement, recognition for safe behaviour and actively correct unsafe behaviour.
- 1.6 SUPPLIER's managers and supervisors shall be familiar with and enforce HS&E rules, regulations, laws, and codes applicable to the work, and have the authority to ensure the effective application of these.

2 Inspection/Audit

- 2.1 SUPPLIER's managers, and supervisors shall participate in scheduled, documented HS&E assessments, work area audits and incident/accident investigations to be conducted by NZAS as required.
- 2.2 SUPPLIER's managers, supervisors and employees shall participate in a behaviour-based safety process that incorporates employee observation of the work place, such as the DuPont Safety Training Observation Program (STOP), or other similar program, as agreed to by the NZAS Specialist Safety & Loss Prevention (or designee) prior to SUPPLIER beginning contracted works onsite.
- 2.3 SUPPLIER shall stop work if unknown or unanticipated hazards or work conditions evolve which place employees at risk or necessitate greater precautions than currently exist or are required by these Standards.
- 2.4 SUPPLIER shall arrange for Regulatory inspections of any type relevant to the work and provide to NZAS a written report or other certification detailing the outcome.

3 Communication & Hazard Control

- 3.1 SUPPLIER's managers, supervisors and employees shall attend and actively participate in Toolbox Safety Meetings in order to update hazard controls, identify potential new hazards and to imbed CBP learnings.
- 3.2 SUPPLIER's managers, and supervisors shall actively participate in documented pre-job planning activities, including Job Safety Analysis (JSA). JSA is used to identify, analyse, understand and eliminate, isolate and minimise potential hazards associated with onsite work operations, including HS&E hazards.
- 3.3 SUPPLIER shall immediately inform all its personnel and the NZAS Specialist Safety & Loss Prevention (or designee) of any potential hazardous conditions and/or near miss incidents. If serious harm occurs, the SUPPLIER will ensure compliance with the **Health and Safety in Employment Act 1992 (HSEA)**,¹ including ensuring there is no interference with the scene. SUPPLIER shall document such communications in a written form compliant with the HSEA.

4 Training

- 4.1 SUPPLIER shall ensure (and be able to demonstrate immediately upon request) that its manager, supervisors, and employees have current skills training, licences, certification and registration as may be required for the work.
- 4.2 SUPPLIER employees shall actively participate in specialised HS&E training, such as confined space, fire watch, equipment operations, vibration and heat stress awareness, and other specialised training, as applicable to the work being performed.

5 Inductions

- 5.1 All SUPPLIER employees shall attend site safety inductions (and work area-specific safety inductions, as required) prior to performing work at the NZAS site.
- 5.2 SUPPLIER shall ensure its employees understand and comply with NZAS medical management procedures and the current site Alcohol and Other Drugs (AOD) policy².

6 Medical Services and Medical Treatment

- 6.1 SUPPLIER shall immediately notify the NZAS Medical Centre of any injury onsite, irrespective of seriousness.
- 6.2 SUPPLIER shall ensure injured employees are referred to qualified medical providers if offsite treatment/consultation is desired or necessary. SUPPLIER shall ensure that the treating doctor understands NZAS'S commitment to rehabilitation, the alternative work available and the occupational health support available through NZAS.
- 6.3 If SUPPLIER elects to allow the NZAS Medical Centre to provide "first response" or first aid-type medical assessment or treatment to SUPPLIER's personnel, SUPPLIER shall release, defend, indemnify and hold harmless NZAS from all claims, demands and liabilities arising from the use of the facility and/or its services.

¹ Information regarding the **Health and Safety in Employment Act 1992** and subsequent legislation, if applicable, may be found on the Internet at the Statutes of New Zealand website, at http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes

² The site **Alcohol and Other Drugs (AOD)** policy document is included in contract documentation sent to suppliers prior to the start of contract. A copy of this document may be obtained via email from the NZAS Supplier Analyst (or designee)

- 6.4 SUPPLIER employees injured on the site and returned for modified duty shall obtain a clearance from the NZAS Medical Officer (or designee) prior to commencing work.
- 6.5 SUPPLIER shall maintain records of HS&E performance and shall submit the following statistics to NZAS as required:
- (a) Lost time injuries
 - (b) Medical treatment injuries
 - (c) First aid injuries
 - (d) Critical incidents
 - (e) Environmental violations

7 Tools and Equipment

- 7.1 SUPPLIER shall provide and ensure that all tools are used in accordance with the manufacturers' recommendations, have required guards in place, and are maintained in good working order.
- 7.2 SUPPLIER will ensure that excess flow valves are installed on air manifolds and compressors supplying air hoses of 12mm internal diameter (ID) or greater.
- 7.3 SUPPLIER will not use "job-made" tools of any kind (e.g. tools made of rebar, rigging equipment, etc). All tools and equipment shall be used and maintained in accordance with manufacturer recommendations. If exceptions to this rule are necessary (e.g., spreader beams), SUPPLIER shall request a review and approval of the exception by the NZAS Specialist Safety & Loss Prevention (or designee) prior to use.
- 7.4 SUPPLIER shall only permit properly trained and certified employees to use powder-actuated tools. Documentation of employee training shall be made available to NZAS and each employee using such tools shall carry qualification cards. Control shall be kept of the powder-actuated charges (cartridges). Each cartridge shall be accounted for and properly stored. No live or spent cartridges shall be left on the ground or disposed of in NZAS waste bins or other unauthorised on or off-site container.
- 7.5 SUPPLIER shall ensure that work is performed only in areas and at times where adequate illumination exists. SUPPLIER shall provide all lighting required to safely perform work. Artificial lighting equipment shall be manufactured and used in accordance with standard **AS 1680.1-1990**³ (as amended **AS 1680.1-1990/Amdt 1-1993**) (or equivalent).
- 7.6 SUPPLIER shall recognize the risk of vibration-induced injuries and the allowable dose of vibration exposure per individual, as recognised by standards **AS 2670.1-2001** and **AS 2673-1988**, and monitor for early signs and symptoms of Hand Arm Vibration (HAV), or whole body vibration (WBV). If any SUPPLIER employees or subcontractors are determined to be at risk of HAV or WBV symptoms, SUPPLIER shall notify the NZAS Medical Centre immediately.

8 Hazardous Substances

- 8.1 SUPPLIER shall develop a written Hazardous Substances Plan and, as required, develop procedures to communicate the hazards associated with chemical handling, use, storage and disposal. The plan shall be submitted to and accepted by the NZAS Specialist Safety & Loss Prevention (or designee) prior to beginning work.
- 8.2 SUPPLIER shall seek approval from the NZAS Specialist Safety & Loss Prevention (or designee) for chemicals to be bought onto the site and make available to NZAS Material Safety Data Sheets (MSDS) for each hazardous material purchased and/or carried onto the NZAS site, prior to use.
- 8.3 Chemicals that arrive onsite not accompanied by a MSDS shall be quarantined and not released until the MSDS is received on the site and the material is approved for use by NZAS.
- 8.4 SUPPLIER shall maintain a list of hazardous materials on the site and the quantities of each.
- 8.5 SUPPLIER shall ensure that employees are trained in the recognition, proper handling and use of hazardous substances. In addition, specific hazardous material training shall be provided by SUPPLIER for its employees working at the NZAS site whose work involves the use of any hazardous material under its control. Such training shall be properly documented, filed and made available to NZAS upon request.

9 Personal Protective Equipment

- 9.1 SUPPLIER shall require employees to wear eye protection with hard side shields (safety glasses) compliant with standard **AS/NZS 1366:1997** (or equivalent). Prescription eyewear must also meet this safety standard. SUPPLIER and its employees shall monitor the eye protection worn by its employees and take immediate corrective actions when non-compliance is noted.
- 9.2 Employees performing grinding and buffing operations shall wear face shields and safety glasses or mono goggles.
- 9.3 Welders shall wear hardhat/welding hood combinations compliant with standards **AS2445**, **AS1558**, **AS1338**, **AS164** (or equivalent), and safety glasses while welding.
- 9.4 SUPPLIER shall erect welding screens around the site/equipment where welding work is being performed, to protect other employees from visual and physical hazards associated with direct welding arc rays.
- 9.5 SUPPLIER employees with field responsibilities shall wear sturdy work shoes or boots that are considered to be "fit for purpose" by the manufacturer of such items.
- 9.6 SUPPLIER employees who handle chemicals or harmful substances shall be trained and shall wear appropriate personal protective equipment pursuant to the chemical manufacturer's recommendations, in accordance with the [Hazardous](#)

³ Information regarding **AS**, **AS/NZS**, and **AS/NZS ISO standards** may be found online at <http://online.standards.com.au/online> (user may incur subscription fees to access information available on this website)

[Substances and New Organisms Act 1996 \(HSNO\)](#)⁴. Where required, all persons handling chemicals shall be "Approved Handlers" as defined by the Act.

- 9.7 Hardhats compliant with standard **AS/NZS 1800:1998** (or equivalent) shall be worn with the brim forward at all times when in the field. Company and employee name shall be conspicuously displayed on the front of the hat.
- 9.8 SUPPLIER shall require all employees to wear long trousers and a long-sleeved shirt as the minimum work clothing to be worn on the site. Where work is in close proximity to molten metal, woollen or flame retardant clothing compliant with NZAS Clothing Requirements (or equivalent) must be worn. Outer garments are to have high visibility markings attached.
- 9.9 SUPPLIER shall provide and require the use of hearing protection compliant with standard **AS/NZS 1270:2002**⁵ (or equivalent), whenever an auditory hazard exists.
- 9.10 SUPPLIER shall provide gloves and require use of these to be worn for protection from environmental workplace hazards such as adverse thermal conditions and vibration as intended by the manufacturer of these items.

10 Respiratory Protection (Provided By NZAS)

- 10.1 SUPPLIER shall ensure its employees use appropriate respiratory protective equipment whenever a respiratory system hazard exists.
- 10.2 SUPPLIER shall be familiar with and adhere to the NZAS Respiratory Equipment Policy and standard **AS/NZS 1715:1994** for the use, care and cleaning of respiratory equipment. This procedure includes the name of the procedure administrator for the NZAS site, cartridge change-out information, sanitising method, fit testing method, and employee respirator use training. Records of employee respirator use training are maintained by NZAS.
- 10.3 SUPPLIER shall ensure that employees understand and comply with the requirement to be clean-shaven (face must be shaved daily) so that respirator "facefit" is not compromised.

11 Construction Non-Destructive Testing

- 11.1 SUPPLIER shall submit a written Radiography/Non-Destructive Testing Safety Procedure to NZAS for review and acceptance prior to commencement of work onsite.
- 11.2 Only SUPPLIERS possessing licenses and/or certificates recognised and approved by the New Zealand [National Radiation Laboratory](#) shall perform radiography work, in accordance with the **Radiation Protection Act 1965**⁶.
- 11.3 SUPPLIERS who use lower-tier subcontractors for the purpose of non-destructive testing shall ensure that subcontractors possess the required licenses and/or certificates (as per subparagraph 11.2 above). Copies of these licenses and/or certificates shall be made available to NZAS upon request.
- 11.4 SUPPLIER shall instruct its employees on the potential for radioactive hazards during radiography, along with applicable precautions to be followed in the event of an emergency.
- 11.5 The NZAS Specialist Safety & Loss Prevention (or designee) shall approve each radiographic work activity prior to its commencement.
- 11.6 SUPPLIER shall barricade perimeter areas around radiographic work and post appropriate warning signs. SUPPLIER shall conduct perimeter surveys whenever radiography is in progress to ensure safety of any personnel working in the vicinity where radiographic work is being performed.
- 11.7 SUPPLIER shall ensure that radiographic exposure devices, storage containers and source changers are kept locked and physically secure when not in use.

12 Heat and Cold Stress Prevention

- 12.1 As/if required, SUPPLIER shall have operating and emergency procedures in place for heat and/or cold stress.
- 12.2 SUPPLIER shall ensure that all field employees, especially front-line supervisors, are trained on the warning signs/symptoms of early heat or cold related disorders, and instructed on the clothing and work methods best suited to avoid heat and/or cold stress. Work activity duration times shall be agreed and monitored by SUPPLIER to reduce the possibility of heat or cold related disorders, if necessary.
- 12.3 SUPPLIER shall ensure its employees are aware of the nearest potable water outlet to the work area.

13 Housekeeping, Fire Prevention and Protection

- 13.1 All eating and sanitary facilities (either shared with NZAS personnel or SUPPLIER controlled) shall be maintained in a clean and sanitary condition at all times. SUPPLIER provided facilities must include soap and drying facilities.
- 13.2 SUPPLIER shall supply labour as required to clean and maintain these eating and sanitary facilities (either shared with NZAS personnel or SUPPLIER controlled) to a high level of sanitation.
- 13.3 SUPPLIER shall provide all fire protection and prevention equipment necessary for its operations, including, but not limited to all equipment required under NZAS Hot Work Policy. SUPPLIER shall provide an adequate number of fire extinguishers of the

⁴ Information regarding the **HSNO Act 1996** and subsequent legislation, if applicable, may be found on the Internet at the Statutes of New Zealand website, at http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes; additionally, the New Zealand Ministry for the Environment has a general website covering various HSNO issues at <http://www.hsn.govt.nz>

⁵ Information regarding **AS, AS/NZS, and AS/NZS ISO standards** may be found online at <http://online.standards.com.au/online> (user may incur subscription fees to access information available on this website)

⁶ Information regarding the **Radiation Act 1965** and subsequent legislation, if applicable, may be found on the Internet at the Statutes of New Zealand website, at http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes; additionally, the New Zealand Ministry of Health (MoH) has a website for the National Radiation Laboratory (a specialist business unit within the MoH that advises on all matters concerning radiation safety), at <http://www.nrl.moh.govt.nz/leindex.html>

correct size and type for its work activities, as determined by the New Zealand **Fire Service Act 1975**⁷. Extinguishers shall be maintained as per manufacturers recommendations and inspected in accordance with this Act. SUPPLIER shall train its employees in the proper use of fire extinguishers prior to these employees working on NZAS site.

- 13.4 SUPPLIER shall ensure that fire protection equipment is placed and maintained in proper locations as work progresses.
- 13.5 SUPPLIER shall monitor its work area to ensure that all doors, stairwells, aisles and means of egress are kept clear and unobstructed at all times.
- 13.6 SUPPLIER shall develop a specific written Flammable and Combustible Material Storage Procedure, setting out the requirements for the handling, storage, and use of flammable and combustible liquids, and shall ensure they are stored properly, dispensed in safety cans manufactured comply with the **HSNO Act**⁸, and areas designated for these activities are maintained in an orderly fashion. All hazardous areas shall be posted with appropriate signs and access shall be controlled.
- 13.7 Where temporary welding enclosures are required, SUPPLIER shall ensure that these enclosures are constructed with flame resistant materials that comply with **NZAS Safe Work Element 5.59 – Hot Work**⁹.
- 13.8 SUPPLIER shall instruct its employees in regards to the NZAS smoking policy and monitor to ensure that posted “no-smoking” zones are observed. To ensure compliance with the New Zealand **Smoke-Free Environments Act 1990**¹⁰, smoking in enclosed areas is not permissible.
- 13.9 SUPPLIER work areas shall be monitored by SUPPLIER to contain and control storage and loading of combustible materials. Material shall be well arranged, and access ways shall be maintained open and clear of obstructions. Stored material shall be kept away from heaters, lamps, hot pipes, equipment, and machinery.
- 13.10 SUPPLIER shall minimise the use of extension cords whenever possible. Extension cord construction shall comply with standard **AS/NZS 3760**¹¹ (or equivalent) and **NZAS Safe Work Element 2.21 – Electrical Equipment**.
- 13.11 SUPPLIER shall maintain a minimum of 500 mm of free space around sprinkler heads when working in facilities having sprinkler systems.
- 13.12 SUPPLIER shall ensure that combustible waste containers are covered and emptied regularly.
- 13.13 Electrical, mechanical, and telegraphic rooms shall be kept in order and free of combustible storage materials. Cable trays and raceways shall be free of combustible material, debris, or trash.
- 13.14 SUPPLIER shall ensure welding cutting apparatus is inspected before each use. Cutting torch assemblies shall be equipped with pressure relief valves, back flow prevention devices, and flash arrestors, in accordance with **NZAS Safe Work Element 2.16 – Compressed Gas Cylinders, Unfired Pressure Vessels / Air Powered Tools & Hand Tools**.
- 13.15 SUPPLIER shall effectively ground the frame of arc-welding and cutting machines that incorporate a power outlet.
- 13.16 SUPPLIER shall abide by the **NZAS Safe Work Element 5.59 – Hot Work** with respect to cutting, welding and grinding.
- 13.17 Unless otherwise specified by NZAS, SUPPLIER shall not permit open fires onsite.

14 Compressed Gas Cylinders

- 14.1 SUPPLIER shall provide cradles and/or cages for lifting compressed gas cylinders and ensure that cylinders being transported are secured and in the upright position.
- 14.2 SUPPLIER shall ensure proper use and storage of compressed gas cylinders, in accordance with **NZAS Safe Work Element 2.16 – Compressed Gas Cylinders, Unfired Pressure Vessels / Air Powered Tools & Hand Tools**. This shall include segregation by type, proper signage, protective isolation of fuel gasses from oxygen, and positive upright securing of bottles. Flashback arrestors shall be fitted to gas lines.
- 14.3 SUPPLIER shall ensure that a key wrench is provided for each individual cylinder (where valves are turned on or off by a key wrench) whenever in use.

15 Fall Prevention/Protection

- 15.1 The SUPPLIER HS&E Plan shall include a written Fall Prevention/Protection Procedure acceptable to the NZAS Specialist Safety & Loss Prevention (or designee), that makes maximum use of primary fall protection systems, such as scaffolds, aerial lifts, personnel hoists, etc.
- 15.2 SUPPLIER shall require the inspection of fall protection equipment prior to each use.
- 15.3 SUPPLIER shall adopt a 100% fall protection policy that makes provision for secondary fall protection (full-body harness) for all employees who are working, climbing or walking more than 1.8 metres above the ground, where such areas do not include installed fall protection measures that are compliant with standard **AS 1657-1992** (or equivalent). All fall protection devices shall be manufactured and used in accordance with standard **AS/NZS 1891** (or equivalent).

⁷ Information regarding the **Fire Service Act 1975** and subsequent legislation, if applicable, may be found on the Internet at the Statutes of New Zealand website, at http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes; additionally, the New Zealand Fire Service maintains its own website at <http://www.fire.org.nz>

⁸ Information regarding the **HSNO Act 1996** and subsequent legislation, if applicable, may be found on the Internet at the Statutes of New Zealand website, at http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes; additionally, the New Zealand Ministry for the Environment has a general website covering various HSNO issues at <http://www.hsn.govt.nz>

⁹ **NZAS Safe Work Elements (Standards)** are available on the HSE section of the NZAS Intranet. A copy of these Elements will be sent to suppliers via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

¹⁰ Information regarding the **Smoke-Free Environments Act 1990** and subsequent legislation, if applicable, may be found on the Internet at the Statutes of New Zealand website, at http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes

¹¹ Information regarding **AS, AS/NZS, and AS/NZS ISO standards** may be found online at <http://online.standards.com.au/online> (user may incur subscription fees to access information available on this website)

- 15.4 SUPPLIER shall review its scope of work to identify the methods to achieve 100% fall protection prior to commencement of such work.
- 15.5 SUPPLIERS using retractable lifeline devices shall secure them by means acceptable to the NZAS Specialist Safety & Loss Prevention (or designee), and in all cases complying with "[OSH Guidelines for Prevention of Falls](#)" to meet the requirements of [Occupational Safety and Health Service \(OSH\)](#) of the New Zealand Department of Labour, **HSEA and Regulations 1995**¹².
- 15.6 No work shall be performed from ladders unless 3-point personal contact can be maintained and ladders are securely tied off.

16 Scaffolding

- 16.1 SUPPLIER shall have a written Scaffolding Procedure and use scaffold material acceptable to the NZAS Specialist Safety & Loss Prevention (or designee).
- 16.2 Scaffold platforms shall be fully planked or decked out, capable of supporting 4 times the maximum intended load to be imposed upon them, and all sides protected by standard guardrail system. The top rail shall be approximately 1100 mm from the platform. A mid-rail and 100 mm toe-board shall be installed. Vertical support posts for handrails shall be installed at not more than 2.5 metre intervals.
- 16.3 SUPPLIER-erected scaffolds, where employees are working/passing below, shall have planking or netting installed from the platform to the top rail.
- 16.4 SUPPLIER shall conform to the [Aculog Scaffold Tagging System](#)¹³ to indicate scaffolds have been erected in a complete and safe manner.
- 16.5 SUPPLIER shall erect or modify scaffolds under the direction of a trained, competent scaffold builder whose resume and qualifications have been submitted to and accepted by the NZAS Specialist Safety & Loss Prevention (or designee). The competent person shall sign all scaffold tags and perform and document inspections before initial use, including initial use following alteration, and at least every 30 calendar days thereafter, or after any event that could have adversely affected the stability or adequacy of the scaffold.
- 16.6 SUPPLIER shall provide safe access/egress to all levels of scaffolds
- 16.7 Special scaffolds (hanging scaffolds, 2 point suspension scaffolds, etc) shall be designed by a qualified **Chartered Professional Engineer**¹⁴ (or equivalent) and erected with all necessary personnel safety equipment installed, such as rope grabs and lifelines.
- 16.8 SUPPLIER must have a **Chartered Professional Engineer** (or equivalent) design all scaffolds over 45 metres in height.
- 16.9 All scaffolds erected by SUPPLIER shall have casters, jackscrews, or base plates installed. Mudsills shall be used where required. Scaffolds shall be level and plumb and secured to a solid structure whenever possible.
- 16.10 SUPPLIER shall provide scaffold user training to all employees, shall verify employee comprehension by testing and shall maintain training and testing records. SUPPLIER must make these training and testing records available to NZAS for inspection/review upon request.

17 Barricades

- 17.1 SUPPLIER is responsible for properly erecting and maintaining barricades and barriers in such a manner that they provide adequate protection and do not impede the work of other contractors unless the NZAS Specialist Safety & Loss Prevention (or designee) approves such placement.
- 17.2 Barricades and barriers erected by SUPPLIER shall have appropriate signs and tags indicating the nature of the hazard and the responsible supervisor. Barricades left after dark on or in close proximity to roadways shall be properly equipped with flashing amber lights as per **NZAS Safe Work element 5.63 – Barricades & Cordons**¹⁵.
- 17.3 SUPPLIER shall provide and use appropriate barrier devices to identify the nature of the job hazard involved (i.e., yellow and black for "CAUTION" or red and black for "DANGER"). Barrier devices, including barrier tape, shall not be used as a substitute for a barricade as they do not offer adequate protection from falls. Barrier devices shall be used only in those applications where temporary identification of a hazard is needed; but not as a primary means of protecting employees from exposure.
- 17.4 SUPPLIER shall ensure that employees understand that entry into areas demarked by any barrier device, including flags, tapes and cones is prohibited unless authorised by the superintendent or supervisor named responsible for the work area.
- 17.5 SUPPLIER shall barricade all floor openings, or install properly labelled and substantial covers (e.g., 19 mm, exterior grade plywood) rated at least twice the anticipated weight load. All floor-opening covers shall be stencilled or painted with this statement: "OPEN HOLE – DANGER, DO NOT REMOVE".

18 Excavation and Trenching

- 18.1 SUPPLIER shall not commence any excavation or trenching work, until they have first obtained permission and complied with the conditions of all required approvals and permits, as agreed-to between the SUPPLIER authorised representative and the NZAS Specialist Safety & Loss Prevention (or designee).

¹² Latest **OSH Health, Safety, and Environmental (HSE) legislation** may be found on the Internet at the NZ Parliamentary Counsel Office website, <http://www.pco.parliament.govt.nz>

¹³ For more information regarding the **Aculog Scaffold Tagging System**, contact **Aculog Systems Ltd**, P.O. Box 175, Ruakaka, Northland, New Zealand (by telephone +64 9 432 7643, facsimile +64 9 432 7649, or via the Internet at <http://www.aculog.com>)

¹⁴ **Chartered Professional Engineer** title refers to engineers certified through the Institute of Professional Engineers New Zealand (IPENZ). More information regarding IPENZ and certification requirements may be found on the Internet at the IPENZ official website, <http://www.ipenz.org.nz>

¹⁵ **NZAS Safe Work Elements (Standards)** are available on the HSE section of the NZAS Intranet. A copy of these Elements will be sent to suppliers via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

- 18.2 SUPPLIER shall be supplied by NZAS an engineered drawing for reference, showing the location of all underground services and/or utilities, and will make all required notifications as per the current **NZAS Excavation Permit Procedure**¹⁶ prior to commencing any excavation. If, in the course of the work, SUPPLIER discovers any variance in service information from that which is provided in the engineered drawing, such variances shall be notified to the NZAS site representative overseeing the work.
- 18.3 SUPPLIER shall ensure that spoil material is kept at least 1 metre away from the excavation edge.
- 18.4 Where trenches or excavations will exceed 1.3 metres in depth, the SUPPLIER shall use protective systems deemed acceptable for use by the NZAS Specialist Safety & Loss Prevention (or designee) (e.g., shoring or battering). No more than 7 metres of lateral travel shall be required in any trench to reach a ladder. Warning signs and barricades shall be installed in a manner that prevents accidental entry into the trenched or excavated area.
- 18.5 At least one person shall be outside the excavation, monitoring work activities at all times.
- 18.6 SUPPLIER shall notify [OSH](#) of any excavation, planned or otherwise, exceeding either 1.5 metres deep or 1.5 metres wide.
- 18.7 SUPPLIER shall ensure that confined space testing is performed in trenches, where such testing is required in accordance with **NZAS Safe Work element 5.56 – Working in Confined Space**¹⁷.

19 Vessels and Confined Spaces

- 19.1 SUPPLIER shall adhere to NZAS' Confined Space Procedure, **NZAS Safe Work element 5.56 – Working in Confined Space**, in accordance with **Rio Tinto Safety Audit, Standards and Protocol, C.5, Confined Spaces**.
- 19.2 SUPPLIER shall ensure that all employees have awareness training regarding the hazards of confined spaces. Special training will be provided by the NZAS Specialist Safety & Loss Prevention (or designee) to all entry supervisors, entrants, and attendants, prior to the start of the work.
- 19.3 SUPPLIER shall review its work areas and ensure confined spaces have been identified and marked accordingly. The NZAS Specialist Safety & Loss Prevention (or designee) shall examine each confined space before initial entry to evaluate the specific hazards and SUPPLIER's safety precautions.
- 19.4 Prior to each entry into a confined space SUPPLIER shall ensure:
- Proper ventilation of the confined space,
 - All electrical service is extra low voltage or RCD protected,
 - Adequate access/egress from the confined space is provided,
 - A task specific rescue plan has been developed and reviewed with all involved employees, and
 - All external sources of atmospheric contamination are isolated.
- 19.5 SUPPLIER shall evaluate all confined spaces for possible heat stress and ensure that employees understand methods that may be utilised to reduce or mitigate the effects of heat stress.
- 19.6 SUPPLIER shall ensure that all personnel responsible for safety watches (confined space attendants) are easily identified, properly trained and aware of the duties associated with each emergency situation that may occur within the confined space and how to summon assistance.
- 19.7 SUPPLIER shall not permit entry into any confined space until the NZAS confined space permit system has been properly executed. The permit shall be conspicuously posted at or near the confined space. All personnel movements in and out of confined spaces must immediately be communicated to, and confirmed by, NZAS Security via 2-way radio or equivalent means acceptable to the NZAS Specialist Safety & Loss Prevention (or designee).
- 19.8 SUPPLIER shall ensure that instruments used to test confined space atmospheres are calibrated/verified as per standard NZAS procedures prior to use, in accordance with **NZAS Safe Work element 5.56 – Working in Confined Space**. The NZAS Laboratory Services Team is able verify correct operation of Contractors Confined Space monitoring instruments against this requirement, and may be engaged by SUPPLIER to do so upon request to the NZAS Superintendent Laboratory Services (or designee).

20 Equipment Isolation

SUPPLIER shall comply with the NZAS' Isolation Standard **NZAS Safe Work element 2.12 – Isolation Procedures & Lockout Systems**¹⁸, in accordance with **Rio Tinto Safety Audit, Standards and Protocol, C.1, Isolation**.

21 Portable Ladders – Control and Inspection

- 21.1 Aluminium ladders and wire-reinforced ladders are prohibited at the NZAS site.
- 21.2 SUPPLIER shall monitor ladders to ensure all ladders used onsite have non-slip feet, and that wooden ladders have been treated with preservative.
- 21.3 SUPPLIER shall visually inspect ladders for compliance, on a daily basis.

¹⁶ Information regarding the **NZAS Excavation Permit Procedure** is available on the Engineering Services MRU section of the NZAS Intranet. A copy of this Procedure and associated form(s) will be sent to suppliers via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

¹⁷ Information regarding **Rio Tinto Safety Audits and Standards** is available via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

¹⁸ **NZAS Safe Work Elements (Standards)** are available on the HSE section of the NZAS Intranet. A copy of these Elements will be sent to suppliers via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

- 21.4 SUPPLIER may use ladders for egress and/or to conduct low level work (less than 1.8 metres), of short duration, provided that 3 point contact can be maintained at all times; but will not use ladders in lieu of scaffolds as a primary means of conducting work of longer duration.

22 Cranes & Lifting Equipment

- 22.1 SUPPLIER shall provide suitably qualified personnel and the resources necessary for inspection and maintenance of rigging and lifting equipment. Personnel performing these tasks shall hold a **National Certificate in Rigging** from the **New Zealand Qualifications Authority (NZQA)**, or equivalent, to a level ("strand") that covers the specific rigging task(s) being considered (i.e., **basic, intermediary, or advanced**)¹⁹. SUPPLIER shall monitor all lifts to ensure that acceptable lifting practices are followed.
- 22.2 Tag lines and dogmen shall be used on all lifts.
- 22.3 SUPPLIERS who are performing lifts in excess of 10 tonnes shall submit a lifting plan to the NZAS Specialist Safety & Loss Prevention (or designee) for review and acceptance prior to performing the lift. If the lift is over 50 tonnes or classified as critical (i.e. exceeding 90% of the crane capacity chart, any two-crane lift or any lift over operating or occupied facilities, process pipe racks, or near power lines) the SUPPLIER shall submit a detailed lift plan with all applicable supporting calculations to NZAS for review and acceptance prior to the lift.
- 22.4 SUPPLIER shall ensure that the equipment operators they provide are adequately trained and informed of their responsibility to operate equipment within design limits. The minimum level of competency for operating overhead cranes at NZAS shall be a NZQA 3800 or recognised equivalent qualification²⁰.
- 22.5 SUPPLIER shall ensure that a single person is designated to be in control of the lift throughout the operation and communication, using standard industry recognised methods, following **NZAS Safe Work element 5.67 – Lifting Operations**, in accordance with **Rio Tinto Safety Standard C6 – Cranes and Lifting Equipment**²¹, is clear and secure.
- 22.6 All cranes supplied by SUPPLIER shall have current, annual, documented inspections, following **NZAS Safe Work element 2.15 – Lifting Equipment**, in accordance with **Rio Tinto Safety Standard C6 – Cranes and Lifting Equipment**. Documentation of such inspections shall be made available to the NZAS Specialist Safety & Loss Prevention (or designee) prior to initial site use.
- 22.7 SUPPLIER shall provide and ensure that operators keep daily inspection logs for all equipment. No equipment shall be operated if hazardous conditions are identified.
- 22.8 SUPPLIER shall ensure that chain-falls, inertia reels, etc. are inspected annually (including load tests) and that these inspections are documented. All rigging equipment shall undergo a visual inspection prior to each use and be subjected to a documented inspection on a quarterly basis (utilising a colour coded system).
- 22.9 All capacities shall be clearly indicated on lifting devices. All hooks shall be fitted with a locking device.
- 22.10 All rigging shall be stored properly (i.e. on racks or in protected areas).
- 22.11 SUPPLIER shall ensure that the counter weight and housing swing radius of all cranes is properly barricaded whenever it is possible that personnel may come into contact with or be struck by them.
- 22.12 No cranes will be permitted on site with free fall capability. If present it shall be securely locked out or disabled by a method deemed acceptable by the NZAS Specialist Safety & Loss Prevention (or designee).

23 Suspended Personnel Platforms

- 23.1 SUPPLIER shall notify NZAS prior to using any suspended personnel platform and develop a Lift Procedure to be reviewed and accepted by the NZAS Specialist Safety & Loss Prevention (or designee) prior to its use. The procedure shall include, but not be limited to, employee training, pre-lift meetings, trial lifts, and platform inspection.
- 23.2 Personnel platforms (baskets) provided by SUPPLIER shall be designed by a **Chartered Professional Engineer**²² (or equivalent) in accordance with standard **AS 2550.16-1997**²³ and manufactured by competent personnel. Personnel platforms shall have permanent markings, prominently displayed, indicating maximum weight.
- 23.3 If the NZAS Specialist Safety & Loss Prevention (or designee) approves the use of crane-suspended personnel platforms, SUPPLIER shall thoroughly inspect the crane/derrick and ensure it has an operational anti two-block device and locking devices installed on the hook. Free fall capacity, if present, shall be positively locked out or disabled. The area under the lift shall be isolated by barrier tape and signs.
- 23.4 SUPPLIER shall provide a clear and secure means of communication between the crane operator and employees working on a crane-suspended personnel platform. Employees working in the platform shall wear full-body harnesses attached to a designated anchor point.

¹⁹ Information regarding the New Zealand Qualifications Authority Certificate in Rigging may be found on the Internet at <http://www.nzqa.govt.nz/framework/explore/domain.do?frameworkId=622>

²⁰ Information regarding the New Zealand Qualifications Authority module 3800 may be found on the Internet at <http://www.nzqa.govt.nz/nqfdocs/units/pdf/3800.pdf>

²¹ Information regarding **Rio Tinto Safety Audits and Standards** is available via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

²² **Chartered Professional Engineer** title refers to engineers certified through the Institute of Professional Engineers New Zealand (IPENZ). More information regarding IPENZ and certification requirements may be found on the Internet at the IPENZ official website, <http://www.ipenz.org.nz>

²³ Information regarding **AS, AS/NZS, and AS/NZS ISO** standards may be found online at <http://online.standards.com.au/online> (user may incur subscription fees to access information available on this website)

24 Articulating Boom Platforms

- 24.1 Articulating Boom Platform machines designed and manufactured for elevated personnel platform work use (JLG, Hi-lift, etc.) shall be operated and maintained by trained and qualified individuals, in accordance with manufacturer recommendations. Training and comprehension test records shall be maintained on file at (or in close vicinity to) the site and made available to NZAS upon request.
- 24.2 All persons working inside articulating boom platforms shall wear a full-body harness attached to a designated anchor point.
- 24.3 Equipment used to hoist personnel shall not be used for lifting any materials which dimensions or weight exceed the dimensions or load limit of the working platform, as rated by the equipment manufacturer.

25 Use Of Portable Electrical Equipment

- 25.1 SUPPLIER shall implement and fully comply with **NZAS Safe Work Element 2.21 – Electrical Equipment**.
- 25.2 SUPPLIER shall operate portable generators onsite in compliance with the **NZAS Safe Use of Generators and Welders Policy**²⁴.
- 25.3 SUPPLIER shall train employees regarding electrical inspection and electrical safety in accordance with section 3 above, "Communication & Hazard Control".
- 25.4 SUPPLIER shall maintain records of all electrical tool inspections and make these records available to NZAS upon request.
- 25.5 SUPPLIER shall ensure all repaired tools are checked for electrical continuity prior to resuming use.

26 Vehicle Operations

- 26.1 SUPPLIER shall ensure all vehicles are registered/licensed, maintained in a roadworthy condition, and operated in a safe manner in accordance with manufacturer recommendations.
- 26.2 SUPPLIER shall ensure that vehicles operated onsite in conformance with the [Land Transport New Zealand \(LTNZ\) 1998 Code of Practice](#)²⁵, including, but not limited to, all persons operating vehicles must be healthy and unimpaired, and must hold current operators licenses that are appropriate for the specific vehicle type/class being operated.
- 26.3 SUPPLIER personnel shall observe established site speed limits, as follows:
 - (a) Wharf Causeway Speed Limit: 50 kph
 - (b) Plant Roads Speed Limit: 30 kph
 - (c) Building Interiors Speed Limit (where allowed): 8 kph
- 26.4 SUPPLIER shall provide a seat belt for each vehicle passenger and enforce the wearing of seatbelts any time a vehicle is in motion. Busses provided for site transportation may be exempt from this requirement, if authorised by the NZAS Specialist Safety & Loss Prevention (or designee) prior to first use.
- 26.5 SUPPLIER shall ensure that all vehicles operated onsite are fitted with an audible reversing alarm device, rated at 75 decibels or higher. Vehicles or mobile equipment capable of travelling at speeds in excess of 11 kph shall be fitted with a working speedometer.
- 26.6 SUPPLIER shall ensure that operators of all vehicles will not be exposed to the risk arising from Whole Body Vibration, (WBV), whether intense short-term exposure or prolonged low-level exposure, as measured by reference to Australian WBV Standard **AS 2670.1 – 2001**²⁶.

27 Site Environmental Management Requirements

- 27.1 SUPPLIER shall submit its environmental risk management plan, specific to the Work under this contract, to the NZAS Specialist, Environmental Support (or designee) for review and acceptance.
- 27.2 SUPPLIER shall fully comply with NZAS environmental authorisations.
- 27.3 SUPPLIER shall ensure materials are used in a manner that minimises waste. Any generated waste shall be disposed of in accordance with disposal methods and procedures approved by the NZAS Specialist, Environmental Support (or designee).
- 27.4 SUPPLIER shall ensure systems are in place to manage the environmental aspects of the contract.
- 27.5 SUPPLIER shall ensure that off-site transportation and disposal of waste and waste treatment complies with all applicable laws and all applicable requirements of NZAS HS&E standards.
- 27.6 SUPPLIER shall perform the Work in a manner that ensures no uncontrolled release of dust, gases, liquids, or solids to atmosphere, land, or drainage systems.

²⁴ The latest copy of the **NZAS Safe Use of Generators and Welders Policy** is available on the NZAS Intranet, or via email upon request to the NZAS Specialist Safety & Loss Prevention (or designee)

²⁵ Information on **LTNZ Codes of Practice** may be found on the Internet at <http://www.itsa.govt.nz/publications>

²⁶ Information regarding **AS, AS/NZS, and AS/NZS ISO standards** may be found online at <http://online.standards.com.au/online> (user may incur subscription fees to access information available on this website)