City of Guthrie
Novelis Sanitary Sewer Extension

ADDENDUM No. 1

January 23, 2019

This ADDENDUM to plans, specifications and bidding documents for the subject project modifies the referenced items to the extent described herein. Items not modified by this ADDENDUM remain unchanged and in full effect. Bidders are required to acknowledge receipt of this ADDENDUM on the Bid Form.

1. Documents: Appendix: **Add** Appendix 4 – 'Novelis Guthrie Construction Safety Plan'

   For work activities on Novelis property, the Contractor will be required to coordinate work activities with Novelis personnel and adhere to the "Novelis Guthrie Construction Safety Plan", which is attached. (Attachment: 48 pages).

END OF ADDENDUM NO. 1 TEXT
This ADDENDUM consists of a total of 49 pages.

Novelis Guthrie
Construction Safety Plan
8535 Russellville Road
Guthrie, KY 42234

MARCH 19, 2018

Approved By:

Jerry McManus 3/20/18

Novelis Representative Date

Revisions

Revisions Made By: Date:

Revisions to Plan:

Revisions Approved By: Date:

CONSTRUCTION SAFETY PLAN

This Construction Safety Plan (CSP) will be kept on the site during field activities and will be reviewed as necessary. The plan will be amended or revised as project activities or conditions change or when supplemental information becomes available. All Service Provider personnel, Subcontractors, and lower tier Project Contractors must sign Attachment 1.

Project Information and Description

PROJECT NAME: Project Cardinal

SITE ADDRESS: 8535 Russellville Road, Guthrie, KY 42234

DATE CONSTRUCTION SAFETY PLAN PREPARED: March 19, 2018

DATE(S) OF SITE WORK: April 2018

1.0 Tasks to be performed

1.1 Description of Tasks

Refer to project documents (i.e., Work Plan) for detailed task information. Each Project Contractor's activity risk analysis shall be performed for each task and appended to Subcontractor's plan specifying the task-specific hazard controls and requirements for monitoring and protection. Tasks other than those listed below (Table 1.2) require an approved amendment or revision to this plan before tasks begin.

1.2 Recordkeeping

Each contractor shall maintain or be able to provide the following documentation upon request while working at the G Site:

- OSHA 300 Log
- OSHA Notice Posting
- Written Health, Safety and Environment Program(s)
- Written Hazard Communication Program, including Material Safety Data Sheets for all chemicals brought onsite by the contractor.
- Any other written program as specified in OSHA Standards.

1.3 Site Security

All Contractor vehicles and employees shall be subject to unannounced vehicle and package searches by Novelis Security Guards. Persons discovered trying to remove or removing material without authorization may be barred from the premises and will be subject to prosecution.

Contractor shall be responsible for notifying their employees of this requirement, in advance, and ensuring cooperation of their employees.

1.4 Union Business

- Union business shall not be permitted on the premises unless there is an escort provided to and from the place of business by a Contractor representative or a union shop steward.
- Contractors shall be responsible for informing union business agents of this requirement and ensuring that they do not enter areas of the plant other than the one in which outside work is being performed.

- Novelis' Personnel Manager shall be notified of all union business agent visits.

1.5 Jewelry

Neckties and jewelry (watches, bracelets, necklaces, rings, earrings, etc.) are not recommended in any plant production, maintenance or construction area. If worn must be concealed and protected with PPE.

Table 1.2 Hazard Analysis

(Refer to Section 2.0 for hazard controls)

POTENTIALHAZARDS	Project Activities (To Be Developed by Individual Subcontractors)									
Safety Absolutes (zero tolerance)	2.1.1									
Control of Hazardous Energy - Lockout /Tagout	2.1.2									
Machine Guarding	2.1.3									
Mobile Equipment and Pedestrian Safety	2.1.4									
Confined Space Entry	2.1.5									
Cranes and Lifting Equipment	2.1.6									
Molten Metal Explosion Prevention	2.1.7									
Fall Protection & Prevention	2.1.8									
Pre Task Plan (PTP)	2.1.9									
Personal Protective Equipment	2.1.10									
Hazard Communications	2.1.11									
Hot Work (Welding and Cutting)	2.1.12									
Compressed Gas Cylinders & Hoses	2.1.13									
Fire Prevention	2.1.14									
Electrical Safety	2.1.15									
Energized Electrical Work	2.1.16									
Hand & Power Tools	2.1.17									
Steel Erection	2.1.18									
Ladders & Stairs	2.1.19									

Scaffolding	2.1.20									
Excavations	2.1.21									
Heavy Equipment	2.1.22									
Haul Trucks	2.1.23									
Concrete & Masonry Work	2.1.24									
Aerial Lifts	2.1.25									
Vehicle Traffic	2.1.26									
Demolition	2.1.27									
Asbestos Hazard	2.1.28									
Railroad Track Safety	2.1.29									
Hexavalent Chromium from welding	2.1.30									
Lead Hazard	2.1.31									
PCBs/Light Ballasts	2.1.32									
Noise	2.1.33									
Pressurized Lines/Equipment	2.1.34									
Visible Lighting	2.1.35									
Manual Lifting	2.1.36									
Waste Handling	2.1.37									
Spill Prevention	2.1.38									
Water Discharges	2.1.39									

2.0 Hazard Controls

This section provides general safe work practices and control measures used to reduce or eliminate potential hazards. These practices and controls are to be implemented by the party in control of either the site or the particular hazard. OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR employees and Novelis Subcontractors must remain aware of the hazards affecting them regardless of who is responsible for controlling the hazards. OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR employees and Subcontractors who do not understand any of these provisions should contact the OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR Site Safety Manager (SSM) for clarification.

Certain health and safety hazards posed by field activities have been identified for each project activity and are listed in the Hazard Analysis Table (Table 1.2). Hazard control measures for project-specific and general health and safety hazards are located in section 2.1 and 2.2 of this document.

2.1 Project-Specific Hazards

Safety Absolutes (Zero Tolerance Programs)

Novelis is committed to providing safe working conditions for all of our employees, contractors and visitors. As part of this commitment, critical procedures (or absolutes) for the protection of life safety have been developed. These Safety Absolutes are taken directly from various Novelis EHS Performance Standards. Employees that fail to adhere to these Safety Absolutes will be subject to progressive disciplinary action, up to and including termination. Contractors and visitors failing to adhere to these rules may be subject to immediate removal from the premises. Employees, contractors and visitors are expected to stop work and request assistance from supervisory or management personnel in questionable situations.

Employees shall not put themselves, or others, at-risk for injury by failing to follow the following Safety Absolutes:

- Control of Hazardous Energy (Lockout Tagout) - refer to section 2.1.2
- Machine Guarding - refer to section 2.1.3
- Mobile Equipment & Pedestrian Safety - refer to section 2.1.4
- Confined Space Entry - refer to section 2.1.5
- Cranes and Lifting Equipment - refer to section 2.1.6
- Fall Prevention & Protection - refer to section 2.1.8.

Zero Tolerance – Code of Conduct

- No fighting, threatening or abusive language
- No presence and/or use of drugs and/or alcohol
- No presence and/or use of a fire arm.

Control of Hazardous Energy - Lockout/Tagout Activities

A zero-energy state must be achieved before performing maintenance or working on equipment that is subject to the requirements of the Novelis Control of Hazardous Energy Performance Standard. Employees must achieve a zero energy state by doing the following.

- Identify all energy sources (electric, hydraulic, pneumatic, water, steam, gas, chemical, molten metal, etc.).
- Isolate the equipment from those energy sources at the source of energy; e.g. turning off the power that drives the motor.
- Block or pin equipment to prevent equipment movement where such devices are provided.

- Relieve all stored energy; e.g. bleed off residual hydraulic pressure).
- Secure the energy isolation devices with a personal lock (every employee must have a lock on each energy isolation device or group lockout box if used).
- Test the system to verify that the equipment is in a zero-energy state before beginning work; e.g. try to operate the equipment.
- At the conclusion of the work, the equipment shall be re-energized in a safe manner; e.g. ensuring that all employees are in a safe position and in accordance to the task specific procedure.
- Only qualified personnel may work on energized equipment that has not been de-energized by lockout/tagout procedures.
- Subcontractors affected by the unexpected operation of equipment shall develop a written lockout/tagout program, provide training on lockout/tagout procedures and coordinate its program with other affected Subcontractors. This will include compliance with the Novelis lockout/tagout program.
- Standard lockout/tagout procedures include the following six steps: 1) notify all personnel in the affected area of the lockout/tagout, 2) shut down the equipment using normal operating controls, 3) isolate all energy sources, 4) apply individually keyed lock and tag to each energy isolating device, 5) relieve or restrain all potentially hazardous stored or residual energy, and 6) verify that isolation and verify zero-energy of the equipment has been accomplished. Once verified that the equipment is at the zero energy state, work may begin.
- All safe guards must be put back in place, all affected personnel notified that lockout has been removed and controls positioned in the safe mode prior to lockout removal. Only the individual who applied the lock and tag may remove them.
- Formal lock removal procedure shall be followed if a worker leaves his/her lock or tag on a energy isolation point and the machine is ready to be re-energized.

Machine Guarding

The following requirements shall be met:

- Equipment with inoperable or defective machine safeguarding shall not be operated.
- Machine safeguarding devices or systems shall not be removed, defeated and/or bypassed.
- Employee shall not place their hands or any other body part into a known pinch points, in-running nip points and/or machine entrapment area when equipment is energized and operational.

Ensure that all machine guards are in place to prevent contact with drive lines, belts, chains, pinch points or any other sources of mechanical injury.

Unplugging jammed equipment will only be performed when equipment has been shut down, all sources of energy have been isolated and equipment has been locked / tagged and tested.

Maintenance and repair of equipment that results in the removal of guards or would otherwise put anyone at risk requires lockout of that equipment prior to work.

Mobile Equipment & Pedestrian Safety

The following requirements shall be met.

- Only trained, certified and/or licensed employees may operate mobile equipment.
- Mobile equipment shall not be operated if any safety features are inoperable; e.g. lights, audible/visual warning devices, brakes, parking brakes, steering, etc.
- Mobile equipment operators shall not operate mobile equipment if the load obstructs the view of the intended direction of travel. They must drive with the load trailing, or be guided by a spotter(s).
- Mobile equipment operators shall not dismount mobile equipment for any reason without putting the equipment in neutral, lowering the load (fork trucks, lull), setting the parking brake and turning off the engine.

- Pedestrians shall not walk through areas designated as “no pedestrians due to mobile equipment operations”.
- Pedestrians shall not approach an operating piece of mobile equipment without first getting permission from the operator to do so.
- Mobile equipment operators shall not grant pedestrians to approach their mobile equipment without first putting the equipment in neutral, lowering the load (fork trucks, lull), setting the parking brake and turning off the engine.
- Fork truck operators shall yield the right of way to cranes and shall not drive into and/or raise loads/mast into the path of oncoming cranes and/or suspended loads.

The following rules apply whenever a mobile equipment is used on the project:

- The driver must complete a formal/documented inspection on the equipment once a shift and document this inspection.
- A rated lifting capacity must be posted in a location readily visible to the operator.
- Equipment must not be used to elevate employees unless specific approved provisions have been made to allow so.
- Persons operating the equipment must post and enforce a set of operating rules for equipment.
- Drivers will wear seatbelts.
- Drivers will use headlights when driving forklifts.
- Stunt driving and horseplay are prohibited.
- For lifting devices persons must not ride on the forks.
- For lifting devices persons must never be permitted under the forks (unless forks are blocked).
- The operator must look in the direction of travel and must not move the vehicle until all persons are clear of the vehicle.
- Forks must be carried as low as possible.
- Trucks must have wheels chocked and have brakes set when forklifts are driven onto their beds.
- Equipment must have operable brakes capable of safely stopping it when fully loaded.
- Equipment must have parking brakes and an operable horn and operable back-up alarm/indicator.
- When the operator is exposed to possible falling objects, industrial trucks must be equipped with overhead protection (canopy).
- Equipment shall be shut-off and NO Smoking during refueling.

<u>Mobile Equipment Pedestrian Safety</u>

- Never approach operating equipment from the rear. Always make positive contact with the operator, and confirm that the operator has stopped the motion of the equipment.
- **25-Foot Rule** - Pedestrians shall never approach mobile equipment within 25-feet without making eye contact with the operator and the operator acknowledges the presence of the pedestrian and/or the operator signals the pedestrian to proceed.
- **90-Degree Rule** - Pedestrian's are to remain within designated, established walkways where they exist. Unless clearly indicated otherwise, any open area must be assumed to be a mobile equipment, non-pedestrian traffic area. Crossing or entering these areas must be done at a 90-degree to the pedestrian aisle.
- Mobile equipment has the Right-of-Way. Never assume the mobile equipment operator can see you and will allow you to pass when entering their work area.
- Never approach the side of operating equipment; remain outside of the swing and turning radius.
- Because heavy equipment may not be equipped with properly functioning reverse signal alarms, never turn your back on any operating equipment.
- Never climb onto operating equipment or operate Subcontractor equipment.

- Never ride Subcontractor equipment unless it is designed to accommodate passengers; equipped with firmly attached passenger seat.
- Never work or walk under a suspended load.
- Never use equipment as a personnel lift; do not ride excavator buckets or crane hooks.

Confined Space Entry Activities

Entry into a permit required confined space shall not be made unless all the following conditions are met.

- Atmospheric testing of the confined space has been conducted with a direct reading instrument for oxygen deficiency and flammable vapor concentrations.
- The instrument shall also test for other potential harmful atmospheric contaminants; e.g. hydrogen sulfide, etc.
- Safe entry procedures shall be developed if potentially hazardous condition exists.
- Safe entry conditions and rescue procedures are defined on an entry permit.

The following requirements must be met prior to permit-required confined space entry:

- Subcontractor employee Confined Space Entry training has been provided to their confined space entrant, attendant, and entry supervisor.
- Use their own atmospheric monitoring equipment and complete their own Confined Space Entry Permit and post it near the space entrance point for review.
- Attend a pre-entry briefing conducted by the entry supervisor if entering or attending permit-required confined spaces.
- Verify that the entry supervisor has authorized entry and that all permit requirements have been satisfied.
- Only enter the space if listed on an Authorization/Attendant Accountability Log.
- Verify that atmospheric monitoring has been conducted at the frequency specified on the permit, monitoring results are documented, and results are within acceptable safe levels.

The following requirements must be met during permit-required confined space entry:

- Maintain communication between the attendant and entrants to enable the attendant to monitor entrant status.
- Use equipment specified on the permit or certificate accordingly.
- Follow all permit or certificate requirements.
- Evacuate the space upon orders of the attendant or entry supervisor, when an alarm is sounded, or when a prohibited condition or dangerous situation is recognized.
- Inform the entry supervisor of any hazards confronted or created in the space or any problems encountered during entry.

Personnel entering confined spaces requiring respiratory protection must have completed respiratory protection training, received a respirator fit test, and completed respirator wearer medical surveillance.

Cranes and Lifting Equipment

- All cranes shall have a third party inspection prior to arrival on site and a copy of the report provided to Owner's Construction Management Contractor. The crane must have a current annual inspection to include load test certification (within the last 12 months) that meets all state and federal safety standards. Documentation of this inspection must be available for review.
- A competent person shall complete a formal documented pre-use inspection on the crane daily to confirm it is in safe operating condition.
- Cranes shall be operated by a certified crane operator.
- The crane's operations manual and load chart specifically designed for the crane shall be on the crane at all times.

- All rigging equipment must be inspected by a competent person prior to use for signs of excessive wear; equipment found to be damaged will be tagged and removed from service.
- A pre-lift meeting shall be conducted to include all parties involved in that days crane operation.
- Only one person shall signal the crane operator. This person shall be thoroughly familiar with all of the cranes operation and be able to communicate with the crane operator with the appropriate hand signals.
- No personnel shall be permitted under the load at any time.
- Tag lines shall be attached to every load being made by the crane.
- The swing radius of the rear rotating superstructure (counterweight) of the crane shall be barricaded and no entrance allowed.
- No part of the crane will come within 20 feet of overhead electrical power lines rated 50 kV or less. For lines over 50 kV, increase clearance distance by 5 feet for every 150 kV over 50kV.

Fall Protection and Prevention

- Fall protection systems must be used to eliminate fall hazards of 6 feet or greater.
- All components of the personal fall arrest system must be inspected for proper working condition prior to each use.
- The Pre Task Plan form for the project requires the crew to assess and answer several questions related to fall arrest and fall prevent to ensure the crew is planning the task accordingly to prevent a fall from occurring.
- Personal fall arrest system anchorages must be capable of supporting 5000 pounds per individual.
- You must be tied-off while working from any aerial lift (boom or scissors type).
- Never secure your lanyard back to itself unless you have a lanyard designated for that purpose.

Fall Prevention:

- Warning lines shall be erected around all sides of roof work areas:
- The warning line shall be erected in from all edges of the roof the following distance (low sloped roofs only):
- Six (6') for all roof work
- Ten (10') if mechanical equipment is used for roofing work
- Fifteen (15') for all other work.
- Line shall be flagged at six (6') intervals with a high visibility material.
- Line shall hold between 34" – 39" high with sag.
- Temporary handrail/guardrail systems and components shall be designed and erected to include the following:
- Support a lateral or downward force of 200 pounds
- Top rail at 42" (plus or minus 3 inches) above walking/working level
- Mid-rail midway between top rail and walking/working level
- 4" Toe boards

Fall prevention on open sided trailers and flatbed truck beds

- In situations where it is necessary to be on the back of an open trailer or flatbed of a truck, the use of fabricated rail systems are to be used to prevent falls from the edge of the elevated surface.
    - **Stand clear of truck and/or trailer while material is being unloaded or loaded.** No personnel shall be allowed in the cab or on the trailer while material is being unloaded or loaded by a crane or industrial lift truck.

Pre Task Plans (PTP)

Before the start of each day's activities, the crew supervisor/foreman shall complete the PTP, example provided in Attachment 7 with input from the work crew. The day's tasks, personnel, tools and equipment that will be used to perform these tasks are listed, along with the hazards posed and required health & safety procedures. The use of PTPs promotes engagement and worker participation in the hazard recognition and control process, while reinforcing the task-specific hazard and required health & safety procedures with the crew each day. The use of PTPs is a common safety practice in the construction industry.

The organization of task steps in an easily understood sequence that eliminates hazards to both personnel & equipment by application of adequate control measures

- Pre-task planning is a process that has many names and slight variations in form
- We have named the form that supports our process the Pre-Task Plan or PTP
- A PTP is completed by foreman and crew for each task performed
- The PTP is reviewed and signed by each crew member and posted in the work area
- The foreman's job is to provide an environment that supports the crew accepting ownership of the safety effort.
- The PTP form is used to assist foremen & crew in discussing hazards & hazard control measures for every task

Steps in completing a Pre Task Plan Form (PTP) (reference Attachment 8 PTP Form)

- Scope out the job
- Date, company, description of activity, supervisor's name, and location of task
- Checklist & Memory log
- Complete the evaluate your work area, potential hazard checklist, & PPE sections
- Describe the work to be performed by work step
- List the hazards associated with each step
- List the actions that will be taken to eliminate or control each identified hazard
- Sign the completed PTP verifying that you have read it and are in agreement that all hazards have been identified and addressed appropriately
- Post the PTP in the immediate work area

Hazard Communication

In compliance with OSHA Regulation 1910.1200 (e) (111), Contractor shall provide Material Safety Data Sheets (MSDS) for all chemicals brought onto the Site prior to beginning Work.

Contractor shall comply with the requirements of OSHA Regulation 1910.1200, Hazard Communication, with respect to Contractor's employees, its subcontractors and suppliers and any Contractor-related personnel prior to their entry on Site. A copy of the written program shall be made available to Novelis upon request.

Personal Protective Equipment

- Minimum requirements for PPE include the following items:
    - Hard hat (worn brim forward)
    - Safety glasses/with side shields – ANSI Z.87.1 approved.
    - Safety-toed footwear (over the ankle) Z-41 No Tennis shoe/ low cut safety footwear permitted.
    - Hi-visibility work vest with reflective stripes.
    - Gloves for the appropriate task (e.g., leather welding glove for hot work tasks and a general work glove for general tasks).

- Exceptions: Gloves may present a hazard when performing certain tasks. Any exceptions must be identified on the Pre-Task Plan (PTP).
- The minimum laceration prevention PPE required when using a utility knife or when handling aluminum sheet, scrap, metal banding is Kevlar gloves with Kevlar arm guards.

Safety Glasses

- Safety glasses shall have an ANSI Z87.1 stamp.
- Prescription glasses shall be ANSI Z87.1 with side shields.
- Safety glasses with shaded lenses are not to be worn when working inside of buildings.
- Additional eye protection is required for tasks including welding, cutting, chipping, grinding, and working with hazardous materials that present a splash hazard
- Face shields and welding hoods shall be attached to hard hats
- Safety glasses are required under welding hoods and face shields

Hearing Protection

- High noise producing operations can result in permanent hearing loss unless hearing protection is worn consistently.
- Wear hearing protection in all work areas where signage (Hearing Protection Required in this Area) is posted.
- Evaluate the need for hearing protection when you develop the PTP for each task.
- "Rule of Thumb" - Hearing protection is probably required if you have trouble communicating without shouting at 3 feet.

Respiratory Protection

- You may need to wear respiratory protection from airborne hazards. If so the contracted company shall have a formal Respiratory Protection program compliant with OSHA 29 CFR 1926.103.
- Evaluate the need for respiratory protection when you develop the PTP for the task to be performed.
- Use only the respirator provided for the task to be performed.
- Keep it properly cleaned and maintained.
- Training, fit testing, and medical clearance is required.

Hand Protection

- Gloves are required for any operation where hand injury is possible.
- Use the right gloves for the task you are performing.
- Do not wear gloves when operating moving machinery or rotating equipment.
- Consult your Pre Task Plan (PTP) for proper direction.
- Task exposures to cuts, punctures, heat, and abrasion will determine what glove type is the right one for you.

Clothing

- Short sleeve shirts are permitted within the construction project. If the construction task presents a risk of an arm injury, the exposed skin shall be covered/protected by long sleeves, welding leathers, etc; this requirement should also be included in the Pre Task Plan.
- Proper work clothing consists of a shirt with minimum 4 inch sleeves. Tank tops, low cut shirts, sleeveless shirts, etc… are not permitted
- Long pants free of holes that expose skin to possible injury are required.
- Hi-visibility work vest or garment with reflective stripes are required.
- Hooded parkas and sweatshirts are permitted on the construction job site. However, they shall not be up covering the head if the employee is operating mobile equipment (e.g., cranes, fork truck, pay-loader, etc.).

Hot Work (welding/cutting with compressed gas cylinders)

- A hot work permit is required for all hot work, open flames welding and cutting etc.

- OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR or Novelis will manage the writing and issuance of the Hot Work permits.
- Hot work permit fire watch must be established. Fire watch must be present for duration of the task and continue on for 1-hour after the task is complete.
- Hot work permits shall be properly filled out indicating the start of the work (time) and the designated fire watch.
- Welding screens shall be used to shield others from welding flash.
- Welding lead shall be free of exposed conductors and must be free of repair or splice within ten (10') of the stinger.
- Piping containing gases or flammable liquids shall not be used as ground return.
- Flash back arrestors shall be attached to the regulator/gauges.
- The contractor must provide fire extinguishers and fire watch for each separate job.
- All overhead cutting or welding requires two-fire watch with four fire extinguishers
- Wear appropriate personal protective equipment.
- Remove or combustible materials in the immediate hot work area.
- Station fire watch with fire extinguisher.
- Cylinder valves must be closed when cylinders are not being used and when cylinders are being moved.
- Cylinders must be positioned to avoid being struck or knock over; coming in contact with electrical circuits or extreme heat sources; and shielded from welding and cutting operations.
- Completed Hot Work Permits shall be returned to the SSM for record retention.

Compressed Gas Cylinders and hoses (e.g., oxygen, acetylene, etc)

- Compressed gas and oxygen must be stored at least 20 feet apart or be separated by a 5 foot barrier with a 1/2 hour fire protection rating
- Flash back arrestors shall be attached to the gauges
- Valve caps must be in place when cylinders are not in use, transported, moved, or stored.
- Cylinder valves must be closed when cylinders are not being used and when cylinders are being moved.
- Cylinders must be secured in an upright position at all times.
- Cylinders must be shielded from welding and cutting operations and positioned to avoid being struck or knocked over; contacting electrical circuits; or exposed to extreme heat sources.
- Cylinders must be secured on a cradle, basket, or pallet when hoisted; they may not be hoisted by choker slings.
- Hoses shall be inspected at the beginning of each shift.
- Storage racks and cabinets shall be labeled with the contractor company name.

Fire Prevention

- Fire extinguishers shall be provided so that the travel distance from any work area to the nearest extinguisher is less than 100 feet. When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet. Extinguishers must:
    - Be 20-lb. ABC dry chemical type fire extinguishers.
    - Be maintained in a fully charged and operable condition,
    - Be visually inspected each month, and
    - Undergo a maintenance check each year.
- Combustible materials stored outside should be at least 10 feet from any building.
- Solvent waste and oily rags must be labeled and kept in a fire resistant, covered container until removed from the site.
- Flammable/combustible liquids must be labeled and kept in approved containers, and must be stored in an approved storage cabinet.
- When welding is completed, check to ensure you have a good/proper ground next to your immediate work area to prevent damage to electrical equipment & systems.

Electrical Safety

General Electrical Safety

- Only qualified personnel are permitted to work on unprotected energized electrical systems.
- Only authorized personnel are permitted to enter high-voltage areas.
- Do not touch electrical wiring and equipment unless qualified to do so. All electrical wiring and equipment must be considered energized until lockout/tagout procedures are implemented.
- Inspect electrical equipment, power tools, and extension cords for damage prior to use. Do not use defective electrical equipment, remove from service.
- Documented inspections monthly for all cord sets. Must include appropriate color-coded tape for the month (See Attachment 5).
- All temporary wiring, including extension cords and electrical power tools, must have ground fault circuit interrupters (GFCIs) installed.
- Extension cords must be:
    - Equipped with third-wire grounding.
    - Covered, elevated, or protected from damage when passing through work areas.
    - Protected from pinching if routed through doorways.
    - Not fastened with staples, hung from nails, or suspended with wire.

- Electrical power tools and equipment must be effectively grounded or double-insulated UL approved.
- Operate and maintain electric power tools and equipment according to manufacturers' instructions.
- Maintain safe clearance distances between overhead power lines and any electrical conducting material unless the power lines have been de-energized and grounded, or where insulating barriers have been installed to prevent physical contact. Maintain at least 10 feet from overhead power lines for voltages of 50 kV or less, and 10 feet plus ½ inch for every 1 kV over 50 kV.
- Temporary lights shall not be suspended by their electric cord unless designed for suspension. Lights shall be protected from accidental contact or breakage.
- Protect all electrical equipment, tools, switches, and outlets from environmental elements.
- Electrical cords and welding leads shall be suspended 7 feet in the air with non conductive material.
- Electrical cords shall be rated for hard construction use.
- Damaged cords shall be taken out of service immediately.

Portable Generator Hazards

Portable generators are useful when temporary or remote electric power is needed, but they also can be hazardous. The primary hazards to avoid when using a generator are carbon monoxide (CO) poisoning from the toxic engine exhaust, electric shock or electrocution, and fire.

Carbon Monoxide (CO) Hazards

NEVER use a generator in enclosed or partially-enclosed spaces. Generators can produce high levels of CO very quickly. When you use a portable generator, remember that you cannot smell or see CO. Even if you can’t smell exhaust fumes, you may still be exposed to CO.

If you start to feel sick, dizzy, or weak while using a generator, get to fresh air **RIGHT AWAY. DO NOT DELAY**. The CO from generators can rapidly lead to full incapacitation and death.

If you experience serious symptoms, get medical attention immediately. Inform project staff that CO poisoning is suspected. If you experienced symptoms while indoors, have someone call the fire department to determine when it is safe to re-enter the building.

- **NEVER** use a generator indoors

- Follow the instructions that come with your generator. Locate the unit outdoors and away from doors, windows, and vents that could allow CO to come indoors.

Electrical Hazards

- Keep the generator dry and do not use in exposed rain or wet conditions. To protect from moisture, operate it on a dry surface under an open, canopy-like structure. Dry your hands if wet before touching the generator.
- Plug appliances directly into the generator. Or, use a heavy duty, outdoor-rated extension cord that is rated (in watts or amps) at least equal to the sum of the connected appliance loads. Check that the entire cord is free of cuts or tears and that the plug has all three prongs, especially a grounding pin.
- Most generators come with Ground Fault Circuit Interrupters (GFCI). Test the GFCIs daily to determine whether they are working
- If the generator is not equipped with GFCI protected circuits, plug a portable GFCI into the generator and plug appliances, tools and lights into the portable GFCI.

Electrical Fire Hazards

- Never store fuel near the generator or near any sources of ignition.
- Before refueling the generator, turn it off and let it cool down. Gasoline spilled on hot engine parts could ignite.

Energized Electrical Work

- Subcontractors are responsible for complying with all applicable HS&E training requirements and for providing the training necessary to complete their tasks safely. Subcontractor training shall be verified by the Subcontractor to OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR prior to the start of field operations.
- Electrical wiring and equipment shall be de-energized prior to conducting work unless it can be demonstrated that de-energizing introduces additional or increased hazards or is unfeasible due to equipment design or operational limitations.
- All electrical systems shall be considered energized until lockout/tagout procedures are implemented.
- Only qualified personnel donning a garment compliant with NFPA 70E are permitted to work on unprotected energized electrical systems. An Energized Electrical competent person shall be present and shall complete an Energized Electrical Work Permit.
- An Energized Electrical Work Permit is required to be completed by the energized electrical qualified persons who enter a Limited Approach Boundary or the Flash Protection Boundary to work on electric circuit parts or equipment that have not been properly de-energized, locked out, and tagged.
- An Electrical Hazard Analysis must be performed to identify energized electrical safe work practices before any person approaches exposed live parts within a Limited Approach Boundary (as determined by the shock hazard analysis), by performing both shock hazard analysis and flash hazard analysis, which comprise the electrical analysis.
- The Energized Electrical Work Permit shall be completed prior to energized electrical work and shall be specific to the electrical equipment or system. It shall be approved by the competent person, all involved qualified personnel, and the OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR SSM.

Hand and Power Tools

- Tools shall be inspected prior to use and damaged tools will be tagged and removed from service.
- Hand tools will be used for their intended use and operated in accordance with manufacturer's instructions and design limitations;
- Maintain all hand and power tools in a safe condition.

- Use PPE (such as gloves, safety glasses, earplugs, and face shields) when exposed to a hazard from a tool.
- Do not carry or lower a power tool by its cord or hose.
- Portable power tools will be plugged into GFCI protected outlets; and
- Portable power tools will be Underwriters Laboratories (UL) listed and have a three-wire grounded plug or be double insulated.
- Disconnect tools from energy sources when they are not in use, before servicing and cleaning them, and when changing accessories (such as blades, bits, and cutters).
- Safety guards on tools must remain installed while the tool is in use and must be promptly replaced after repair or maintenance has been performed.
- Store tools properly in a place where they will not be damaged or come in contact with hazardous materials.
- If a cordless tool is connected to its recharge unit, both pieces of equipment must conform strictly with electrical standards and manufacturer's specifications.
- Tools used in an explosive environment must be rated for work in that environment (that is, intrinsically safe, spark-proof, etc.).
- When using a knife or blade tool, stroke or cut away from the body with a smooth motion. Be careful not to use excessive force that could damage the tool, the material being cut, or unprotected hands. Novelis requires cut resistant Kevlar gloves and Kevlar arm-guards to be worn when using a utility knife. Recommend the use of auto retractable safety blade knifes (No pocket knives permitted).

Steel Erection

- Written site specific erection plan shall be provided to SSM (Site Safety Manager) and address the criteria outlined in 29 CFR 1926.752 Appendix A.
- Protruding reinforcing steel (rebar), onto which personnel could fall, must be guarded to eliminate the hazard of impalement
- Structural steel loads shall not be released from the hoisting line until the members are secured with at least two bolts, or the equivalent at each connection and drawn up wrench tight
- Tag lines shall be used for controlling loads
- Containers shall be provided for storing or carrying rivets, bolts, and drift pins, and secured against accidental displacement when aloft
- Air line hose sections shall be secured together, except when quick disconnect couplers are used to join sections
- Impact wrenches used for bolting shall be provided with a locking device for retaining the socket
- Turnbuckles shall be secured to prevent unwinding while under stress
- Plumbing-up guys shall be removed only under the supervision of a competent person.
- Metal decking of sufficient strength shall be laid tight and secured to prevent movement
- Provisions shall be made to secure temporary flooring against displacement. Planks shall overlap the bearing on each end by a minimum of 12 inches. Wire mesh, exterior plywood, or equivalent, shall be used around columns where planks do not fit tightly.
- All unused openings in floors, temporary or permanent, shall be completely planked over or guarded

Ladders and Stairways

- Stairway or ladder is generally required when a break in elevation of 19 inches or greater exists.
- Personnel should avoid using both hands to carry objects while on stairways; if unavoidable, use extra precautions.
- Personnel must not use pan and skeleton metal stairs until permanent or temporary treads and landings are provided the full width and depth of each step and landing.

- Ladders must be inspected by a competent person for visible defects prior to each day's use. Defective ladders must be tagged and removed from service.
- Ladders must be used only for the purpose for which they were designed and shall not be loaded beyond their rated capacity.
- Only one person at a time shall climb on or work from an individual ladder.
- User must face the ladder when climbing; keep belt buckle between side rails
- Ladders shall not be moved, shifted, or extended while in use.
- User must use both hands to climb; use rope to raise and lower equipment and materials
- Straight and extension ladders must be tied off to prevent displacement
- Ladders that may be displaced by work activities or traffic must be secured or barricaded
- Portable ladders must extend at least 3 feet above landing surface
- Straight and extension ladders must be positioned at such an angle that the ladder base to the wall is one-fourth of the working length of the ladder
- Stepladders are to be used in the fully opened and locked position
- Users are not to stand on the top two steps of a stepladder; nor are users to sit on top or straddle a stepladder
- Fall protection should be considered when working from extension, straight, or fixed ladders greater than four (4') feet from lower levels and both hands are needed to perform the work, or when reaching or working outside of the plane of ladder side rails.

Scaffolds

- All scaffolding is to be erected under the supervision of a competent person.
- All craftspeople working on scaffolding must be trained to recognize possible hazards.
- All scaffolding shall be tagged
- A **red tag** indicates a scaffold is not complete and therefore shall not be used
- A **yellow tag** indicates the scaffold is complete but requires certain precautions; precautions shall be written on the tag, e.g. fall protection required
- A **green tag** indicates the scaffold is good to go…no other fall protection is required.
- Scaffold tags shall be placed at all access points
- Do not access scaffolds until the competent person has completed the work shift inspection and has authorized access.
- Follow all requirements established by the competent person or as identified on the scaffold tag.
- Do not access scaffolds that are damaged or unstable at any time and for any reason.
- Only access scaffolds by means of a ladder, stair tower, ladder stand, ramp, integral prefabricated scaffold access, or other equivalent safe means of access. Scaffold cross bracing shall not be used to access scaffold platforms.
- Remain within the scaffold guardrail system when provided. Leaning over or stepping across a guardrail system is not permitted.
- Use personal fall arrest systems when required by the competent person and when working from suspension scaffolds or boatswains' chairs.
- Do not stand on objects (boxes, buckets, bricks, blocks, etc.) or ladders on top of scaffold platforms to increase working height unless the platform covers the entire floor area of the room.
- Do not work on scaffolds covered with snow, ice, or other slippery material or work on scaffolds during storms or high winds unless personal fall arrest systems or wind screens are provided and the competent person determines it is safe to remain on the scaffold.
- The contractor must have a "competent person" on site for all scaffolding work as required by OSHA. The dedicated safety personnel will not be allowed to oversee these activities as the "competent person" but may assist in the implementation of the plan.

Excavation Activities

Excavation Entry

Do not enter the excavations unless completely necessary, and only after the excavation competent person has completed their daily inspection and has authorized entry. An inspection shall be conducted by the competent person prior to the start of work, as needed throughout the shift, after every rainstorm, and after any hazard increasing occurrence. Documentation of the inspection must be maintained onsite at all times by the contractor.

Follow all excavation entry requirements established by the excavation competent person and any excavation permit being used.

Sloping, benching, shoring, shielding, or other protective systems are required to protect personnel from cave-ins except when the excavation is made entirely in stable rock or is less than 5 feet deep and there is no indication of possible cave-in, as determined by the excavation competent person. Protective systems for excavations deeper than 20 feet must be designed or approved by a registered professional engineer.

Trenches greater than 4 feet deep shall be provided with a ladder, stairway, or ramp positioned so that the maximum lateral travel distance is no more than 25 feet.

Review section 2.2.5 for locating underground utilities.

Excavations shall not be entered when:

- Protective systems are damaged or unstable.
- Objects or structures above the work location may become unstable and fall into the excavation.
- The potential for a hazardous atmosphere exists, unless the air has been tested and found to be at safe levels.
- Accumulated water exists in the excavation, unless precautions have been taken to prevent excavation cave-in.
- The contractor must have a “competent person” on site for excavation work as required by OSHA. The dedicated safety personnel will not be allowed to oversee these activities as the “competent person” but may assist in the implementation of the plan.

Heavy Equipment (earthmoving/excavating machinery)

- Only trained personnel shall operate heavy equipment.
- Equipment must be checked at the beginning of each shift to ensure the equipment is in safe operating condition and free of apparent damage. The check should include: head lights (front and back), service brakes, parking brakes, emergency brakes, tires, horn, back-up alarm, steering mechanism, coupling devices, seat belts and operating controls. All defects shall be corrected before the equipment is placed in service. Documentation of the daily inspection shall be kept on the equipment during the day that it was completed. Contractor shall store completed pre-use inspections in their job trailer.
- Equipment must be on a stable foundation such as solid ground or cribbing; outriggers are to be fully extended.
- Operator(s) shall climb into and out of the equipment only using steps or rungs provided on the machine. Do not jump from the cab.
- Equipment must not be used to lift personnel; loads must not be lifted over the heads of personnel.
- Equipment, or parts thereof, which are suspended must be substantially blocked or cribbed to prevent shifting before personnel are permitted to work under or between them. All controls shall be in a neutral position, with the motors stopped and brakes set.
- Equipment which is operating in reverse must have a back-up indicator alarm distinguishable from the surrounding noise or a signal person when the operators view is obstructed.

- Use of cell phones, head phones or similar devices is prohibited. Cell phone use shall not be a distraction. If there is a need to use a cell phone, stop, park and shut off the equipment. Exit the equipment and proceed to a safe location away from the immediate work area.
- When equipment is used near energized powerlines, the closest part of the equipment must be at least 15' from the power lines < 50 kV. Provide an additional 5 feet for every 150 kV over 50 kV. A person must be designated to observe clearances and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means. All overhead power lines must be considered to be an energized until the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded.
- Underground utility lines must be located before excavation begins; refer to Section 2.2.5 "Procedures for locating buried utilities".
- Operators loading/unloading from vehicles are responsible for seeing that vehicle drivers are in the vehicle cab or in a safe area.
- The parking brake shall be set whenever equipment is parked; wheels must be chocked when parked on inclines.
- When not in operation, the blade/bucket must be blocked or grounded; the master clutch must be disengaged when the operator leaves the cab. When equipment is unattended, power must be shut off, brakes set, blades/buckets landed and shift lever in neutral.

Haul Trucks

- Haul truck operators should be familiar with their equipment and inspect all equipment before use.
- Haul truck operators should ensure all persons are clear before operating truck or equipment. Before moving operators should sound horn or alarm, all equipment should be equipped with head-lights and back up alarm. Head-lights are to be turned on when the truck is in operation.
- Haul trucks or equipment with restricted visibility should be equipped with devices that eliminate blind spots.
- Employees should stay off haul roads. When approaching a haul area, employees should make eye contact and communicate their intentions directly with the equipment operator.
- Haul roads should be well lit, sufficiently wide (at least 50% of the width of the equipment on both sides of road) and equipped with reflectors to indicate access points.
- Haul roads should have adequate right-of-way signs indicating haul directions.

Concrete and Masonry Construction Activities

- Protruding reinforcing steel (rebar), onto which personnel could fall, must be guarded to eliminate the hazard of impalement
- Personnel shall maintain a distance from formwork and shoring being removed from concrete structures to avoid being struck by debris.
- Personnel shall not enter limited access zones during masonry wall construction.

Aerial Lifts

- Formal/documented pre-use inspection is required before operating the equipment to ensure the equipment is in safe operating condition.
- Only trained and authorized personnel are permitted to operate aerial lifts.
- Personnel shall wear a full body harness and attach their lanyard to the boom or basket; never attach to an adjacent structure.
- Personnel shall remain in the basket at all times and shall not climb on the lift to gain access to elevated work location.
- Personnel shall always stand on the floor of the basket and not on the guardrails, planks, ladders or other devices to extend reach.
- Aerial lifts shall be positioned on level surfaces when possible and the brakes shall be set. If outriggers are provided, they shall be positioned on solid surfaces or cribbing. Wheel chocks shall be installed before using lifts on inclines.

- Lifts shall be provided with upper and lower controls and these controls shall be tested for proper function before each days use. The lower controls shall not be operated unless permission has been obtained from personnel in the lift, except in the case of emergency.
- Boom and basket load limits, as specified by the manufacturer, shall be known and shall not be exceeded.
- Aerial lifts shall be prohibited from moving with workers in the basket, unless specifically designed for this type of operation.
- Personnel shall not work on elevated platforms when winds exceed twenty (20) miles per hour.
- Lifts shall be lowered before moving horizontally.
- An aerial lift shall not be used as a material hoist.
- Aerial platforms shall not be used within 15 feet of open energized overhead electric lines.
- Operator(s) shall survey the area before rolling over it and verify load capacity of covers, gratings, floor plates and plywood (is it cribbed-up).
- Tying off to an adjacent pole, structure, or equipment while working from an aerial lift shall NOT be permitted.

Vehicles and Traffic

- Vehicular traffic on or within the plant premises shall only be authorized for delivery and pickup of contractor material or equipment
- All vehicles shall have the engine turned off while unloading materials (the only exception to this requirement shall be concrete trucks)
- Vehicles shall not be parked or left unattended, except in designated parking areas
- All vehicles brought on site, including scooters, welding machines, cranes, aerial platforms, forklifts, backhoes etc….. must be identified with company name or unique number or letter
- Site speed limit is 20 MPH
- Seat belts must be worn when driving on site
- Many different types of mechanized equipment are utilized which when used properly, makes your job easier and allows you to perform your work task in a better and more efficient manner. There are dangers involved with each piece of equipment and it is only as safe as the person operating it. Most of the equipments either have a travel alarm or a back-up alarm system.
- Only those persons qualified / certified by training or experience shall be authorized to operate any piece of equipment whether the equipment is a pick-up truck, forklift, crane, JLG, Scissors lift, backhoe, front loader, etc.

Demolition

The demolition Subcontractor working on this project will provide OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR with a demolition safety plan prior to the start of work.

OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR will use this plan to verify that the Subcontractor is implementing its safety precautions during this activity. In addition, the following safety precautions shall be implemented by all personnel.

- Remain a distance from the demolition zone to reduce exposure to fragmentation of glass, steel, masonry, and other debris during demolition operations.
- Do not enter the demolition zone unless completely necessary, and only after the competent person has assessed the condition of the structure and has authorized entry.
- Follow all requirements established by the competent person. The competent person shall inform personnel of the areas that are safe to enter and the areas where entry is prohibited. When possible, the competent person should escort OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR personnel while in the demolition zone.

- All demolition activities that may affect the integrity of the structure or safety of personnel must cease until personnel have exited the demolition zone.
- Stay as clear as possible of all hoisting operations. Loads shall not be hoisted overhead of personnel

Railroad track safety

- Obey all signs and always look both ways before crossing railroad tracks when walking and driving – the railroad has the right-of way.
- Do not go under, over, on or in a locomotive or railcar.
- When parking or staging material next to railroad tracks, allow for at least eight (8') from the centerline of the track.
- Do not stand or walk parallel between rails of the tracks.
- Lockout out rail switch or install rail stops with warning flags and lights approximately 200' ahead of the work area if equipment or materials are staged on the railroad tracks or within eight (8") of the center of the tracks.

Hexavalent Chromium (Cr VI) Exposure

The OSHA permissible exposure limit (PEL) and ACGIH Threshold Limit Value (TLV) for Chromium VI is 5 ug/m^3 (insoluble) and 1 ug/m^3 (soluble) with an action level (AL) of 2.5 ug/m3 for insoluble and 0.5 ug/ m^3 for soluble. Hexavalent Chromium is considered a Human Carcinogen.

The precautions listed below shall be followed when exposed to Cr VI:

- Exposure assessments must be performed for workers who may be exposed to Cr VI above the AL.
- Avoid exposure by inhalation, skin and eye contact with fume, liquid and/or particulate Cr VI.
- Respiratory protection and other exposure controls selection shall be based on the most recent exposure monitoring results obtained from the competent person.
- Do not enter regulated work areas unless training, medical monitoring, and PPE requirements established by the competent person have been met.
- Do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in regulated areas.

(Controlling) Lead Exposure during Demolition Operations

Subcontractor specified Activity Hazard Analysis lead-exposure-control procedures will be implemented during demolition operations involving potential exposure to lead including:

- Site personnel lead-awareness training.
- Site personnel hand-washing facilities.

The selection of respiratory protection and other exposure controls will be based on the most recent exposure monitoring results obtained from the lead-exposure-competent person.

PCB/Ballast Handling

Fluorescent lighting used in many older buildings use ballast resistors that contain PCB oil. PCB is colorless to light-colored, viscous liquid with a mild, hydrocarbon odor.

When work requires the handling or removal of fluorescent ballast resistors, extra care and attention needs to be taken. While ballasts are usually well sealed, it is not uncommon to find a ballast resistor that has leaked.

- A survey must be made to determine whether ballast resistors contain PCB fill.
- Leaking resistors must be identified and handled with appropriated PPE.
- Exposure Routes are inhalation, skin absorption, ingestion, skin and/or eye contact
- Prevent skin contact by using chemical resistant gloves, wear eye protection, and thoroughly wash hands before eating or smoking.
- Ensure eyewash is available.

- In the event of exposure, follow the following First Aid procedures:
  Eyes: Irrigate immediately
  Skin: Soap wash immediately
  Ingestion: Seek medical attention immediately

Dispose of PCB ballast resistors in accordance with Federal, State and Local environmental regulations.

Noise

Each worker is responsible for:
- Wearing hearing protection when in work environments exceeding 85 dBA.

Pressure Line/Vessel Systems

- Operate and maintain pressure vessels, pumps and hosing in accordance with the manufacturer's recommendations.
- Do not exceed the rated pressure of the vessels and hosing of the system.
- The system must be provided with a pressure relief valve/controller that safely reduces the system pressure to within the system rated pressure.
- The pressure relief valve must be rated at no more than 110% the rated pressure of the system and must be tested at regular intervals.
- Each vessel must be equipped with a functioning pressure gauge to monitor pressure.

Visible Lighting

- While work is in progress outside construction areas shall have at least 33 lux.
- Construction work conducted inside buildings should be provided with at least 55 lux light.
- The means of egress shall be illuminated with emergency and non-emergency lighting to provide a minimum 11 lx measured at the floor. Egress illumination shall be arranged so that the failure of any single lighting unit, including the burning out of an electric bulb will not leave any area in total darkness.

Manual Lifting

Proper lifting techniques must be used when lifting any object.
- Plan storage and staging to minimize lifting or carrying distances.
- Split heavy loads into smaller loads.
- Use mechanical lifting aids whenever possible.
- Have someone assist with the lift -- especially for heavy or awkward loads.
- Make sure the path of travel is clear prior to the lift.

Waste Handling

Novelis Wastes are defined as wastes that exist onsite prior to the performance of the Work. Disposition of Novelis wastes will be performed as prescribed in site procedures and be managed only by Novelis authorized waste facilities. In the absence of specific procedures, disposition will be coordinated with the Novelis Environmental Department.

Contractor Wastes are defined as wastes that are generated as a result of the performance of the Work. Disposition of Contractor Wastes are the responsibility of the Contractor, including permitting, waste characterization and the use of approved shipping containers. Novelis reserves the right to disapprove disposal facilities or technologies. Use of Novelis disposal facilities for Contractor Wastes is prohibited unless approved by the NPM.

All waste will be placed in authorized waste containers acceptable for offsite disposition. Use of containers other than those approved for the storage of the waste generated is prohibited.

Contractor shall identify any waste that is required to be drummed prior to the performance of the Work. Contractor shall notify the NPM and make arrangements to obtain labels from Novelis. Drums shall be labeled with the date, Contractor name, P.O., source of waste, and contents to facilitate characterization (if required) and disposition.

Hazardous wastes, including PCB wastes shall be promptly identified and managed in full compliance with all applicable regulations.

Scrap steel generated by the performance of the Work is the property of Novelis and will be segregated in accordance with the Novelis Scrap Metal procedure.

Universal Wastes (e.g., bulbs, batteries, mercury-containing devices) generated during the performance of the Work must be managed in accordance with all applicable legal requirements, including labeling and storage.

Disposition of waste oil generated onsite will be coordinated with the Novelis Coolant House. Offsite disposition is prohibited unless specifically authorized by the Novelis Environmental Department.

Disposition of fill materials must be coordinated through the Novelis Environmental Department.

Clean out of concrete trucks is permitted in designated areas only and does not include dumping of excess quantities of concrete. Contact the Novelis Project Manager prior to concrete delivery to define an acceptable clean out location.

Spill Prevention

Secondary containment is required for all Contractor fuel storage tanks used onsite. All tanks and storage containers must be properly labeled with the working capacity, tank contents, and include warning information. Contractor shall furnish a Material Safety Data Sheet (MSDS) for all chemicals brought onsite and a 24-hour emergency contact number.

Contractor shall notify the Novelis Environmental Department prior to mobilizing a storage tank exceeding fifty-five (55) gallons capacity to the site. Contractor shall be required to submit a spill prevention plan for Novelis approval and demonstrate that adequate spill response capabilities are available in the event of an accidental release.

Contractor shall immediately report any spill or release to the Novelis Environmental Department. The Contractor is solely responsible for responding to a spill resulting from negligence or Contractor equipment malfunction. The Contractor is solely responsible for remediation and restoration of the Site to prerelease conditions.

Water Discharges

The Novelis Environmental Department shall be notified prior to the discharge of water from any operation. The Novelis Environmental Department will work with the contractor to define the acceptable water quality of the discharge and the appropriate routing.

Contractor is responsible for maintaining the job site to prevent materials that could negatively impact water quality (e.g., solids, oils, chemicals) from reaching storm water conveyance systems. This also includes all piles of materials stored outside.
Contractor shall provide sediment and erosion controls for any Work that results in the disturbance of exterior surfaces.

Contractor shall coordinate with the Novelis Environmental Department if the size of the disturbance requires an environmental permit prior to construction.

2.2 General Hazards

General Practices and Housekeeping

- Good housekeeping must be maintained at all times in all project work areas.
- Common paths of travel should be established and kept free from the accumulation of materials.
- Keep access to aisles, exits, ladders, stairways, scaffolding, and emergency equipment free from obstructions.
- Specific areas should be designated for the proper storage of materials.
- Tools, equipment, materials, and supplies shall be stored in an orderly manner.
- As work progresses, scrap and unessential materials must be neatly stored or removed from the work area.
- Containers should be provided for collecting trash and other debris and shall be removed at regular intervals.
- All spills shall be quickly cleaned up. Oil and grease shall be cleaned from walking and working surfaces.

Hazard Communication / Global Harmonized System (GHS)

- The Site Safety Manager (SSM) will confirm that an inventory of chemicals brought on site by Novelis Subcontractors is available.

The Novelis Subcontractors will:

- Label chemical primary and secondary containers with the identity of the chemical and with hazard warnings.
- Give employee's required chemical-specific HAZCOM/GHS training using Attachment 3.
- Store all materials properly, giving consideration to compatibility, quantity limits, secondary containment, fire prevention, and environmental conditions.
- Chemicals being brought on the premises require approval prior to being used. Submission of materials should be provided.

Heat Stress

- Provide adequate shelter/shade to protect personnel against radiant heat (sun, flames, hot metal).
- Observe one another for signs of heat stress. Persons who experience signs of heat syncope, heat rash, or heat cramps should consult their supervisor to avoid progression of heat-related illness.

SYMPTOMS AND TREATMENT OF HEAT STRESS					
	Heat Syncope	Heat Rash	Heat Cramps	Heat Exhaustion	Heat Stroke
Signs and Symptoms	Sluggishness or fainting while standing erect or immobile in heat.	Profuse tiny raised red blister-like vesicles on affected areas, along with prickling sensations during heat exposure.	Painful spasms in muscles used during work (arms, legs, or abdomen); onset during or after work hours.	Fatigue, nausea, headache, giddiness; skin clammy and moist; complexion pale, muddy, or flushed; may faint on standing; rapid thready pulse and low blood pressure; oral temperature normal or low	Red, hot, dry skin; dizziness; confusion; rapid breathing and pulse; high oral temperature.
Treatment	Remove to cooler	Use mild drying	Remove to	Remove to cooler area.	Cool rapidly by

SYMPTOMS AND TREATMENT OF HEAT STRESS					
	area. Rest lying down. Increase fluid intake. Recovery usually is prompt and complete.	lotions and powders, and keep skin clean for drying skin and preventing infection.	cooler area. Rest lying down. Increase fluid intake.	Rest lying down, with head in low position. Administer fluids by mouth. Seek medical attention.	soaking in cool– but not cold– water. Call ambulance, and get medical attention immediately!

Monitoring Heat Stress

These procedures should be considered when the ambient air temperature exceeds 70°F, the relative humidity is high (>50 percent), or when workers exhibit symptoms of heat stress.

The heart rate (HR) should be measured by the radial pulse for 30 seconds, as early as possible in the resting period. The HR at the beginning of the rest period should not exceed 100 beats/minute, or 20 beats/minute above resting pulse. If the HR is higher, the next work period should be shortened by 33 percent, while the length of the rest period stays the same. If the pulse rate still exceeds 100 beats/minute at the beginning of the next rest period, the work cycle should be further shortened by 33 percent. The procedure is continued until the rate is maintained below 100 beats/minute, or 20 beats/minute above resting pulse.

Cold Stress

- Be aware of the symptoms of cold-related disorders, and wear proper, layered clothing for the anticipated fieldwork. Appropriate rain gear is a must in cool weather.
- Wind-Chill Index is used to estimate the combined effect of wind and low air temperatures on exposed skin. The wind-chill index does not take into account the body part that is exposed, the level of activity, or the amount or type of clothing worn. For those reasons, it should only be used as a guideline to warn workers when they are in a situation that can cause cold-related illnesses.
- Observe one another for initial signs of cold-related disorders.

SYMPTOMS AND TREATMENT OF COLD STRESS			
	Immersion (Trench) Foot	**Frostbite**	**Hypothermia**
Signs and Symptoms	Feet discolored and painful; infection and swelling present.	Blanched, white, waxy skin, but tissue resilient; tissue cold and pale.	Shivering, apathy, sleepiness; rapid drop in body temperature; glassy stare; slow pulse; slow respiration.
Treatment	Seek medical treatment immediately.	Remove victim to a warm place. Re-warm area quickly in warm–but **not** hot–water. Have victim drink warm fluids, but **not** coffee or alcohol. Do not break blisters. Elevate the injured area, and get medical attention.	Remove victim to a warm place. Have victim drink warm fluids, but **not** coffee or alcohol. Get medical attention.

Procedures for Locating Buried Utilities

Do not begin subsurface construction activities (e.g., trenching, excavation, drilling, etc.) until a check for underground utilities and similar obstructions has been conducted. The use of as-built drawings and utility company searches must be supplemented with a geophysical or other survey by a qualified, independent survey Subcontractor to identify additional and undiscovered buried utilities.

Procedure

The following procedures shall be used to identify and mark underground utilities during subsurface construction activities on the project:

- The survey Subcontractor shall determine the most appropriate geophysical technique or combinations of techniques to identify the buried utilities on the project, based on the survey Subcontractor's experience and expertise, types of utilities anticipated to be present and specific site conditions.
- The survey Subcontractor shall employ the same geophysical techniques used on the project to identify the buried utilities, to survey the proposed path of subsurface construction work to confirm no buried utilities are present.
- Identify customer specific permit and/or procedural requirements for excavation and drilling activities. For military installations contact the Base Civil Engineer and obtain the appropriate form to begin the clearance process.
- Contact a specialty contractor in this profession or utility companies or the state/regional utility protection service at least two (2) working days prior to excavation activities to advise of the proposed work, and ask them to establish the location of the utility underground installations prior to the start of actual excavation. The National One Call Stakeout Requests: 1-800-962-7962 or 811 is the starting point for this step.
- Schedule the independent survey.
- Obtain utility clearances for subsurface work on both public and private property.
- Clearances are to be in writing, signed by the party conducting the clearance.
- Underground utility locations must be physically verified by hand digging using wood or fiberglass-handled tools when any adjacent subsurface construction activity (e.g. mechanical drilling, excavating) work is expected to come within 5 feet of the marked underground system. If subsurface construction activity is within 5 feet and parallel to a marked existing utility, the utility location must be exposed and verified by hand digging every 100 feet.
- Protect and preserve the markings of approximate locations of facilities until the markings are no longer required for safe and proper excavations. If the markings of utility locations are destroyed or removed before excavation commences or is completed, the Project Manager must notify the utility company or utility protection service to inform them that the markings have been destroyed.
- Conduct a site briefing for employees regarding the hazards associated with working near the utilities and the means by which the operation will maintain a safe working environment. Detail the method used to isolate the utility and the hazards presented by breaching the isolation..
- Monitor for signs of utilities during advancement of intrusive work (e.g., sudden change in advancement of auger or split spoon during drilling or change in color, texture or density during excavation that could indicate the ground has been previously disturbed).

2.2.7 Crane Airspace / Overhead Work Policy

This procedure applies to all employees and contractors performing any work more than ten (10) feet above floor level, any work conducted from Aerial Lift Platforms and/or any work conducted on or above any crane rails. This includes any work between the inside columns of the crane rail support steel at or above an elevation of ten feet below the crane rail.

Crane Airspace Overhead Work is defined as the performance of any work on or above crane rails, or between the inside columns of the crane rail support steel, at or above an elevation of 10 feet below the crane rail. Note that Crane Airspace Overhead Work is usually also Overhead Work, requiring compliance to the requirements of both.

Particular attention must be given to overhead work performed on or around cranes. The following procedures will be adhered to prior to and during Crane Airspace Overhead Work (the

performance of any work on or above crane rails, or between the inside columns of the crane rail support steel, at or above an elevation of 10 feet below the crane rail). The Crew Leader directing the work, or designated person, shall ensure that each of the following steps occurs:

- Notify the area Novelis Operations Leader or the Operations Coordinator and/or Area Crew Leader prior to entering the work area and inform them of the work being undertaken.
- Personally contact the area overhead crane operator(s) to advise them when, where and the duration of said work will be performed.
- Place a caution tag at the crane operator's control of each crane in the bay to serve as a reminder.
    - The caution tag will give location of work, probable duration and show signature of person performing the work, date and time of placement. The caution tag will be removed upon completion of work, or at end of crew leader's shift, whichever comes first, and repeated as necessary.
- For all cranes in the bay physically isolate them from the work area by electrical lockout, crane stops or equivalent.

OR

- The department performing the work will arrange for a stand-by person who will be in direct radio contact with all of the crane operators for cranes in the bay and permanently stationed in direct view of the work crew.
    - At no time while the crew is conducting elevated work shall the designated stand-by person leave his post.
    - Three-way communication must be established and maintained among spotter, crane operator(s) and person(s) performing the work".

2.2.8 Procedures for Overhead Power Lines

Proximity to Power Lines

No work is to be conducted within 50 feet of overhead power lines without first contacting the utility company or Plant/Project Electrical Engineer to determine the voltage of the system. No aspect of any piece of equipment is to be operated within 50 feet of overhead power lines without first making this determination.

Operations adjacent to overhead power lines are PROHIBITED unless one of the following conditions is satisfied:

- Power has been shut off, positive means (such as lockout) have been taken to prevent the lines from being energized, lines have been tested to confirm the outage, and the utility company has provided a signed certification of the outage.
- The minimum clearance from energized overhead lines is as shown in the table below, or the equipment will be repositioned and blocked to ensure that no part, including cables, can come within the minimum clearances shown in the table.

MINIMUM DISTANCES FROM POWERLINES

Powerlines Nominal System Kv	Minimum Required Distance, Feet
0-50	10
50-200	15
200-350	20
350-500	25
500-750	35

750-1000	45
>1000	Specified by utility owner / operator or qualified PE

(These distances have been determined to eliminate the potential for arcing based on the line voltage.)

- The power line(s) has been isolated through the use of insulating blankets which have been properly placed by the utility. If insulating blankets are used, the utility will determine the minimum safe operating distance; get this determination in writing with the utility representative's signature.

All inquiries regarding electric utilities must be made in writing and a written confirmation of the outage/isolation must be received by the OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR Construction Manager prior to the start of work.

2.3 Biological Hazards and Controls

Bloodborne Pathogens

Exposure to blood borne pathogens may occur when rendering first aid or CPR, or when coming into contact with landfill waste or waste streams containing potentially infectious material. Exposure controls and personal protective equipment (PPE) are required. Hepatitis B vaccination must be offered before the person participates in a task where exposure is a possibility.

2.4 Drugs and Alcohol

The use, possession, sale, or exchange on Company premises, at any time, of intoxicants such as alcohol beverages, stimulants, or drugs of any kind, will not be tolerated. Violators will be banned from working on the premises and may be subject to prosecution.

Subcontractor's Policy Statement

A Subcontractor's policy statement is required to be submitted to OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR and should detail prohibited conduct and ramifications, and:

- Prohibit drug, alcohol, and/or controlled substances use or abuse
- Prohibit involvement in the manufacture, distribution, dispensation, possession, sale, or use of illegal drugs in the workplace
- Describe disciplinary actions
- Stipulate that Subcontractor shall pay for all testing

3.0 Project Organization and Personnel

3.1 Field Team Chain of Command and Communication Procedures

Novelis Project Contacts

Novelis Project Manager: Todd Gertz
- Cell Phone: 812-249-8992

Novelis Engineering Leader: Jerry McManus
- Cell Phone 315-529-0344

Novelis Project Safety Leader: TBD

- Cell Phone TBD

OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR

Project/Engineering Manager: TBD

- Cell phone: TBD

Construction Manager: TBD

- Cell phone: TBD

Site Safety Manager: OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR TBD

The OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR project manager (PM) is responsible for providing adequate resources for project-specific oversight of the safety management process. The PM has overall management responsibility for the tasks listed below. The PM may explicitly delegate specific tasks to other staff, as described in sections that follow, but retains ultimate responsibility for completion of the following:

- Provide oversight of Novelis Subcontractor HS&E practices per the Construction Safety Plan
- Ensure that the overall, project HS&E goals are fully and continuously pursued

Site Safety Staffing

- If the contractor's work force is less than 25 employees, the Company's Safety Representative must visit the site no less than twice per month.
- If the contractor's work force (including subcontractors) is greater than 25 employees, then a dedicated competent Safety person must be on the site full time. In addition, the Company's Safety Representative must visit the site no less than once per month.
- If the contractor's work force (including subcontractors) is greater than 50 employees, then a dedicated competent Safety person must be on the site full time. In addition, the Company's Safety Representative must visit the site no less than twice per month.
- The contractor must have a "competent person" on site for all scaffolding or excavation work as required by OSHA. The dedicated safety personnel will not be allowed to oversee these activities as the "competent person" but may assist in the implementation of the plan.

The OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR HS&E Director is responsible for:

- The contractors must submit one hard copy and three electronic copies of the contractor's site specific safety plan. This must be submitted two weeks prior to the start of work.
- Review and accept or reject Novelis Subcontractor pre-qualification questionnaires.
- Support the SSM's oversight of Subcontractor (and lower-tier Subcontractors) HS&E practices and interfaces with on-site 3rd parties per the Construction Safety Plan (CSP)

The SSM is responsible for verifying that the project is conducted in a safe manner including the following specific obligations:

- Review and accept or reject Project Contractor's training records and site-specific safety procedures prior to start of Subcontractor's field operations
- Verify this Construction Safety Plan (CSP) is current and amended when project activities or conditions change.
- Verify OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR site personnel and Project Contractor personnel read this CSP and sign Attachment 1 Subcontractor Sign-Off Form prior to commencing field activities.
- Craft workers and employees must have a minimum of OSHA 10-hour training.

- Foreman must have completed the OSHA 30-hour training.
- Verify OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR site personnel and Subcontractor personnel have completed any required specialty training (e.g., fall protection, confined space entry).
- Audit and verify compliance with the requirements of this CSP and applicable Subcontractor health and safety plan(s).
- Act as the project "Hazard Communication Coordinator" and perform the responsibilities outlined in Section 2.2.2
- Act as the project "Emergency Response Coordinator" and perform the responsibilities outlined in Section 5.
- Post OSHA job-site poster; the poster is required at sites where project field offices, trailers, or equipment-storage boxes are established. (Posters can be obtained by calling 800/548-4776 or 800/999-9111).
- Verify that safety meetings are conducted and documented in the project file initially and as needed throughout the course of the project (e.g., as tasks or hazards change)
- Verify that project H&S forms and permits, found in Attachment 5 are being used as outlined in Section 2.
- Manage the site and interfacing with 3rd parties in a manner consistent with our contract agreements.
- Coordinate with the HSE Director regarding OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR and Subcontractor operational performance, and 3rd party interfaces.
- Obtain monthly man-hours worked and maintain a man-hour and injury performance log.
- This will also include the creation of a monthly EHS Performance report.
- Provide Project Contractors with a competency based project EHS orientation to all project contractors and Novelis personnel working on the project and issue unique colored and numbered hard hat stickers to identify who has completed the orientation. Orientations are typically provided on Mondays and Wednesdays at 7 am and also for special occasions.
    - SSM will take a digital photo of each individual completing the orientation program. The digital photo(s) will them be saved and labeled with the trainees name and company name. The labeled photos are then emailed to Novelis Security and they will create the photo ID badges for future project security gate entry and exit.
- This will also include the maintenance of a Project Orientation training log.
- Ensure that the overall, job-specific, HS&E goals are fully and continuously pursued.
- Provide assistance with accident investigation and ensure a draft of the accident is formally submitted within 24-hours of the event.
- In the event of an incident, the SSM is responsible for contacting the Project Manager. In general, the Project Manager will contact Novelis Project Team Manager and Novelis Project EHS Coordinator.

SSM Record Retention Requirements

- Maintain a Master Index/Inventory of the Project Contractors material safety data sheets for the duration of the project.
- Collect and retain completed Hot Work Permits and Pre Task Safety Plans for 1-year.
- Complete and retain any required environmental erosion control and secondary containment inspection records for 1-year.

The training required for the SSM is as follows:

- Safety Coordinator-Initial and Safety Coordinator-Construction
- OSHA 10 hour course for Construction
- First Aid and CPR
- Relevant Competent Person Courses (excavation, confined space, scaffold, fall protection, etc.).

4.0 Personal Protective Equipment (PPE)

Note that PPE is required when exposed to the general hazards listed below. Because certain tasks (e.g., welding, energized work, etc.) require specialized PPE, refer to Section 2 for task-specific PPE requirements.

PPE Specifications [a]

Hazard	PPE
General entry to active construction site.	ANSI approved Safety-toe leather work boots, safety glasses with sideshields, and hardhat.
Working in or near traffic –or—working in or near heavy equipment work zones.	High visibility, reflective vest.
Working around heavy equipment or other noisy machinery, or if you must raise your voice to be heard while communicating with persons near you, hearing protection is required.	ANSI approved ear plugs or earmuffs.
Severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns and harmful temperature extremes.	Kevlar leather palmed gloves and arm guards are required for using utility knives, handling metal banding, and aluminum scrap/sheet.
Potential for head injury from impact, falling or flying objects.	ANSI approved hardhat.
Flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation and when cutting metal banding.	ANSI approved safety glasses with side shields, safety goggles, face shield, or welding glasses. Face shield may be used only in conjunction with the use of other protective eyewear.

5.0 Emergency Response Plan

5.1 Pre-Emergency Planning

- The SSM will complete the applicable pre-emergency planning tasks before starting field activities then coordinate emergency response with onsite parties, the facility, and local emergency-service providers as appropriate.
- Review the facility emergency and contingency plans.
- Determine what onsite communication equipment is available (e.g., two-way radio).
- Confirm and post emergency telephone numbers, evacuation routes, assembly areas, and route to hospital; communicate the information to onsite personnel.
- Review changed site conditions, onsite operations, and personnel availability in relation to emergency response procedures.
- Where appropriate and acceptable to Novelis, inform emergency room and ambulance and emergency response teams of anticipated types of site emergencies.
- Communicate emergency procedures for personnel injury, exposures, fires, explosions, and releases through the project orientation program.
- Rehearse the emergency response plan before site activities begin, including driving route to hospital.

The SSM will evaluate emergency response actions and initiate appropriate follow-up actions.

5.2 Emergency Equipment and Supplies

Subcontractors will determine and provide an appropriate level and distribution of supplies and equipment as necessary for activities.

Sample Emergency Equipment and Supplies	Location

10 lb. class A,B,C fire extinguisher	Field Office and field
First aid kit	Field Office
Eye Wash bottle(s)	Field Office
Potable water	Field Office
Bloodborne-pathogen kit	Field Office
Additional equipment (specify):	

5.3 Incident Response

In fires, explosions, or chemical releases, actions to be taken include the following:

- Shut down operations and evacuate the immediate work area.
- If working on the East side of the plant near Remelt, check wind direction and go up-wind if there is a chlorine leak.
- Notify appropriate response personnel (reference Attachment 4).
- Account for personnel at the designated assembly area(s).
- Assess the need for site evacuation, and evacuate the site as warranted.

5.4 Emergency Medical Treatment

The procedures listed below may also be applied to non-emergency incidents. Injuries and illnesses must be reported to OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR and Novelis representatives as listed in Attachment 4

- Notify appropriate emergency response authorities listed in Attachment 4 (e.g., 911).
- The SCM and or Subcontractor Safety representative will assume charge during a medical emergency until Emergency Medical Services Team arrives.
- Prevent further injury.
- Initiate first aid and CPR where feasible.
- Make certain that the injured person is accompanied to the medical facility by an immediate employer representative.
- In the event of an incident, project contractors shall contact the SSM and provide them initial notification of the event who was injured, extent of injury, what and where it happened and any other pertinent information) The SSM is responsible for contacting the Project Manager. In general, the Project Manager will contact Novelis Project Team Manager and Novelis Project EHS Coordinator and provide them a preliminary description of the event.
- A formal incident shall be provided to Novelis within 24-hours after the accident.

5.5 Evacuation

- Evacuation map displaying the routes and assembly areas (and alternative routes and assembly areas) are to be specified on a site map.
- Evacuation route(s) and assembly area(s) will be designated by the SSC before work begins.
- Personnel will assemble at the assembly area(s) upon hearing the emergency signal for evacuation.
- The SSC will remain on the site after the site has been evacuated (if safe) to assist Novelis Emergency Team Incident Commander and advise them of the nature and location of the incident.
- The SSC will account for all personnel in the onsite assembly area.
- A designated person will account for personnel at alternate assembly area(s).
- The SSC and Subcontractor Safety representative will document the incident as soon as possible after it occurs and submit a report to the PM who will forward to Novelis.

5.6 Incident Notification and Reporting

Investigations for injury cases, near miss accidents, serious fires, property damage and environmental spills (e.g., hydraulic oil, antifreeze, chemicals, etc.) regardless of quantity spilled, shall be performed.

- In the event of an incident, project contractors shall contact the PM and SSM immediately and provide them with an event description: who was involved, what happened, extent of the spill, damage or injury and when it happened and any other pertinent information. The PM will contact Novelis Project Team Manager and Novelis Project EHS Coordinator and provide them a preliminary description of the event.
- A formal incident shall be provided to Novelis Project safety Coordinator within 24-hours after the accident.
- Gather all relevant facts, focusing on fact-finding, not fault-finding, while answering the who, what, when, where and how questions (take measurements, pictures, obtain equipment models and unique equipment numbers, obtain weights if it applies, etc.).

6.0 Attachments

Attachment 1: **Subcontractor Signoff Form**
Attachment 2: **Project-Specific Chemical Product Hazard Communication Form**
Attachment 3: **Chemical-Specific Training Form**
Attachment 4: **Emergency Contacts**
Attachment 5: **Hot Work Permit and Pre Task Safety Plan Form**
Attachment 6: **Monthly Power Cord Inspection Color Code Chart**
Attachment 7: **Pre Task Plan (PTP)**

ATTACHMENT 1

SUBCONTACTOR SIGNOFF FORM

Health and Safety Plan

The OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR project employees and Novelis Subcontractors and Project Service/Equipment suppliers listed below have been provided with a copy of this CSP, have read and understood it, and agree to abide by its provisions.

Project Name: Site Infrastructure Improvements **Project Number:**

INDIVIDUAL'S PRINTED NAME	INDIVIDUAL'S SIGNATURE	COMPANY	DATE

ATTACHMENT 2

Project-Specific Chemical Product Hazard Communication Form

This form must be completed prior to performing activities that expose personnel to hazardous chemicals products. Upon completion of this form, the SSM shall verify that training is provided on the hazards associated with these chemicals and the control measures to be used to prevent exposure to OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR and Subcontractor personnel. Labeling and MSDS systems will also be explained.

Project Name: Site Infrastructure Improvements **Project Number:**

MSDSs will be maintained at the following location(s):

Hazardous Chemical Products Inventory

Chemical	Quantity	Location	MSDS Available	Container labels	
				Identity	Hazard

ATTACHMENT 3- CHEMICAL-SPECIFIC TRAINING FORM-

Location:	Project # :
HCC:	Trainer:

TRAINING PARTICIPANTS:

NAME	SIGNATURE	NAME	SIGNATURE

REGULATED PRODUCTS/TASKS COVERED BY THIS TRAINING:

The Hazard Communication Coordinator (HHC) shall use the product MSDS to provide the following information concerning each of the products listed above.

☐ Physical and health hazards

☐ Control measures that can be used to provide protection (including appropriate work practices, emergency procedures, and personal protective equipment to be used)

☐ Methods and observations used to detect the presence or release of the regulated product in the workplace (including periodic monitoring, continuous monitoring devices, visual appearance or odor of regulated product when being released, etc.)

Training participants shall have the opportunity to ask questions concerning these products and, upon completion of this training, will understand the product hazards and appropriate control measures available for their protection.

Copies of MSDSs, chemical inventories, and Subcontractor's written hazard communication program shall be made available for employee review in the facility/project hazard communication file.

Attachment 4
Emergency Contacts

Medical Emergency – 911
Facility Medical Response #:
Local Ambulance #:

Local Hospital
TBD

HSE Director
Name: OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR TBD

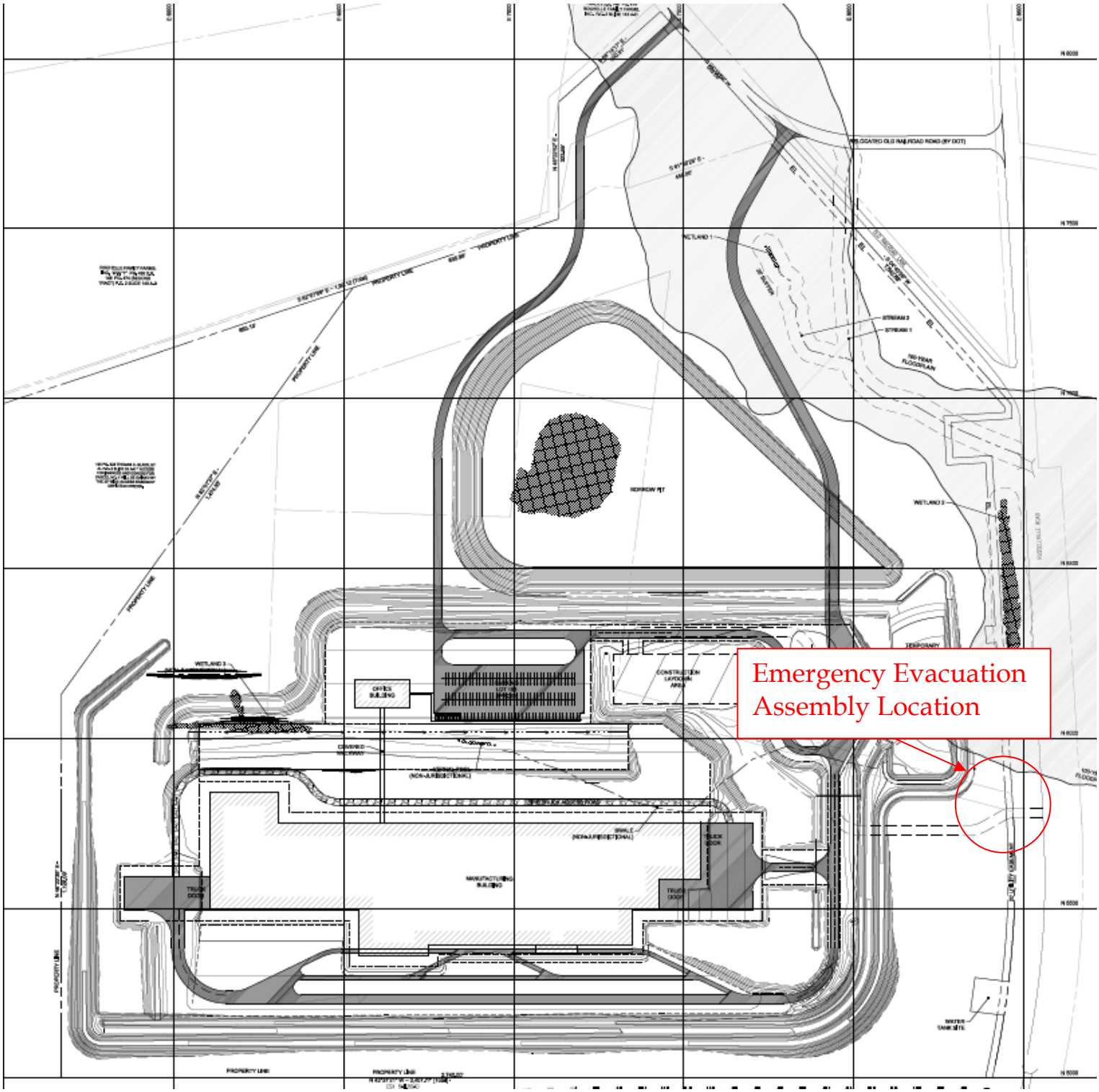
Site Safety Manager (SSM)
Name: OWNER'S CONSTRUCTION MANAGEMENT CONTRACTOR TBD
Phone:

Novelis Project Safety Coordinator
Name: TBD
Cell Phone: TBD
Office: TBD

Evacuation Assembly Area(s): US Route 79 Entrance to the Site

Facility/Site Evacuation Route(s): TBD

Emergency Evacuation Assembly Location



Attachment 5 - Hot Work Permit

Hot Work Permit

BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED?
IS THERE A SAFER WAY?

This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch Applied Roofing and Welding

INSTRUCTIONS
1) Permit Writer:
- A) Inspect the jobsite.
- B) Identify all necessary precautions on this form.
- C) Verify the precautions have been taken.
- D) Compete, sign and retain PART 1.
- E) Issue PART 2 to person doing work.

2) Person doing Hot Work Signs the Permit, agreeing to abide by the precautions.

3) Fire Watch:
- A) Maintain Log of Fire Watch on reverse
- B) Sign Log at completion of work
- C) Ensure Monitoring Requirements are met

Hot Work Being Done By (include person's name):

❑ Employee _____

❑ Contractor _____

Date	Time	Job NO.
Location/Building and Floor		
Nature of Job		

I VERIFY THE ABOVE LOCATION HAS BEEN EXAMINED, THE PRECAUTIONS CHECKED ONTHE REQUIRED PRECAUTIONS CHECKLIST HAVE BEEN TAKEN TO PREVENT FIRE, UNNECESSARY PRECAUTIONS HAVE BEEN MARKED "NA", AND PERMISSION IS AUTHORIZED FOR THIS WORK
Signed: (Permit Writer)

EMERGENCY NOTIFICATION PROCEDURES
EMERGENCY PHONE # IS TBD

____ Fire watch knows where phone is.
____ Fire watch knows where nearest fire alarm pull box is.

GUTHRIE MANDATORY REQUIREMENTS
No Hot Work on Recirculation System Cooling Tower
No combustible clothing (white suits, etc.) worn by persons performing Hot Work

REQUIRED PRECAUTIONS CHECKLIST
Permit Writer Checks all when in compliance, or writes NA in blank.

❑ Available sprinklers, hose streams, and/or extinguishers are in-service/operable.
❑ Hot Work equipment (tanks, gauges, hoses, welders, leads) in good repair.
❑ ____ Flammable, Combustible and/or Toxic coatings on hot work surfaces have been removed.

Requirements within 35 ft. (11m) of work

❑ ____ Flammable liquids, dust, lint and oily deposits removed.
❑ ____ Explosive atmosphere in area eliminated.
❑ ____ Floors swept clean
❑ ____ Combustible floors wet down, covered with damp sand or fire-resistive sheets.
❑ ____ Remove other combustibles where possible. Otherwise protect with fire-resistive tarpaulins or metal shields.
❑ ____ All wall and floor openings covered.
❑ ____ Fire-resistive tarpaulins suspended beneath work
❑ ____ If Fire/smoke detection system is in use, ensure work will not cause system to trip. If disabling is necessary, contact onsite supervision.
❑ ____ Protect or shut down ducts and conveyors that might carry sparks to distant combustibles.

Work on walls or ceilings

❑ ____ Construction is noncombustible and without combustible covering or insulation.
❑ ____ Combustibles on other side of walls moved away.

Work on enclosed equipment

❑ ____ Enclosed equipment cleaned of all combustibles.
❑ ____ Containers purged of flammable liquids/vapors.

Fire watch/Hot Work area monitoring

❑ Fire watch will be provided during and for 60 minutes after work, including any coffee or lunch breaks.
❑ Fire watch is supplied with 2 suitable extinguishers and/or charged small hoses. Extinguisher Type Required: _____
❑ Fire watch is trained in use of this equipment.
❑ ____ Fire watch is required for adjoining areas, above, and below.
❑ Monitor Hot Work area for 4 hours after fire watch is completed. See Permit Writers notes and describe Monitoring on back of this form.

Department Specific Precautions Taken

Not Applicable
Other Precautions Taken

❑ _____
_____
_____

Permit Expires:	Date	Time	AM PM

I AGREE TO ABIDE BY THE CONDITIONS OF THIS PERMIT.
Signed: (Person doing Hot Work)

Audit of Hot Work Site

Audit Conducted By: _____
Date/Time: _____
Issues: _____
_____
_____
If problems exist, revoke permit, notify permit writer and do incident report documenting problems.

Fire Watch Log – Mandatory

Name	Start Time	Stop Time

Fire Watch Signoff:
Work area & all adjacent areas to which sparks and heat might have spread were inspected during the watch period and were found fire safe.

Signed: _____ Time Hot Work Completed: _____

Post Job Monitoring – Permit Writer's Notes and Permittee Plans

Describe Who, How, When.

Final Checkup:
Work area was monitored for 4 hours following Hot Work and found fire safe.

Signed: _____

FIRE/EMERGENCY – DIAL 911

Contact On-site supervision.

Attachment 6 - Monthly Power Cord Inspection Color Codes

Color scheme recommended by the National Electric Contractors Association

- January — White
- February — White & Yellow
- March — White & Blue

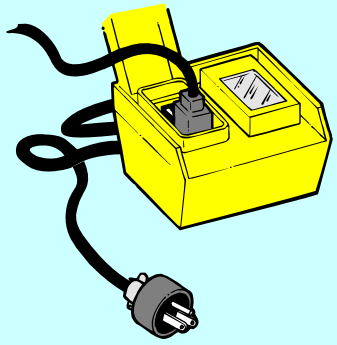
- April — Green
- May — Green & Yellow
- June — Green & Blue

- July — Red
- August — Red & Yellow
- September — Red & Blue

- October — Orange
- November — Orange & Yellow
- December — Orange & Blue

Equipment to be repaired should be tagged in **brown**

Wrap the appropriate color tape on the end of of the cable after testing



ATTACHMENT 7- Pre Task Plan (PTP)

New Construction Pre Task Plan (PTP)

Date: Lead/Foreman:

Task Description:

Task Location/Section:

Evaluating your work Area (Circle YES or NO)							
Have you walked the area?	YES	NO		Do you have the required PPE?	YES	NO	
Are you working on live energized equipment?	YES	NO		Are the required material and tools provided?	YES	NO	
Does this task require special training (e.g., respiratory protection, NFPA 70E)	YES	NO		Have tools , equipment and rigging equipment been inspected before each use?	YES	NO	
Is air monitoring required?	YES	NO		Should the Safety Department be involved in the planning?	YES	NO	
Is a work permit required for this task (e.g. hot work, confined space, etc.)?	YES	NO		Is there a safety issue that has not been addressed? If YES, Contact your company foreman or safety representative.	YES	NO	
Have communications been made with other crafts and machine operators working in the immediate area?	YES	NO		Are controls in place to prevent a fall from an elevation of 4' or greater (elevated platforms, wall opening, hole(s), etc)?	YES	NO	
Have you discussed a "rescue plan" if a coworker falls while wearing wearing fall arrest equipment?	YES	NO		While donning fall arrest equipment, have you considered the risk of a swing hazard?	YES	NO	
Have you identified the potential fall path(s) & distance from work area to floor or lower level or obstruction?	YES	NO		While donning fall arrest equipment, have you identifed other moving equipment, high heat exposures, chemicals, slippery walking working surfaces?	YES	NO	
Are fall protection anchor points available that support 5,000 lb per user?	YES	NO		Have you identified how 100% tie-off will be maintained to eliminate the risk of falls while ascending/descending the work area?	YES	NO	

Potential Hazard Checklist (place a checkmark if applicable)										
Pinch points			Inadequate Access			Hazardous chemicals		Falls from elevation		**List PPE Required for Task**
Themal Burns			High noise levels			Heat exhaustion		Confined spaces		
Particles on eye(s)			Falling objects			Cold Stress		Slips, trips, falls		
Elevated Work			Manual lifting			Sharp objects/tools		Inhalation hazards		
Poor Houekeeping			Chemical spills			Radiation		Hot Work		
Electrical shock			Metal Sheet			Rergonomics		Line of Fire		
Chemical burns			Moving equipment			Lockout Tagout		Excavation/trenching		
Fire/explosion			Mobile equipment			Ladders & Scaffolds		Other: (list)		
Slippery work surface			Laceration hazards			Cranes				

Description of Work Performed	Hazards Associated with Each Step	Required Action to Eliminate or Control Hazards

Work Crew Sign-off (signature)	